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SMITHSONIAN

CONTRIBUTIONS TO KNOWLEDGE.

—
VOL. X.
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EVERY MAN IS A VALUABLE MEMBER OF SOCIETY, WHO, BY HIS OBSERVATIONS, RESEARCHES, AND EXPERIMENTS, PROCURES
KNOWLEDGE FOR MEN.—SMITHSON.

CITY OF WASHINGTON:
PUBLISHED BY THE SMITHSONIAN INSTITUTION.

MDCCCLVIII.



X



ADVERTISEMENT.

THIS volume forms the tenth of a series, composed of original memoirs on different branches of knowledge, published at the expense, and under the direction, of the Smithsonian Institution. The publication of this series forms part of a general plan adopted for carrying into effect the benevolent intentions of JAMES SMITHSON, Esq., of England. This gentleman left his property in trust to the United States of America, to found, at Washington, an institution which should bear his own name, and have for its objects the “*increase and diffusion of knowledge among men.*” This trust was accepted by the Government of the United States, and an Act of Congress was passed August 10, 1846, constituting the President and the other principal executive officers of the general government, the Chief Justice of the Supreme Court, the Mayor of Washington, and such other persons as they might elect honorary members, an establishment under the name of the “SMITHSONIAN INSTITUTION FOR THE INCREASE AND DIFFUSION OF KNOWLEDGE AMONG MEN.” The members and honorary members of this establishment are to hold stated and special meetings for the supervision of the affairs of the Institution, and for the advice and instruction of a Board of Regents, to whom the financial and other affairs are entrusted.

The Board of Regents consists of three members *ex officio* of the establishment, namely, the Vice-President of the United States, the Chief Justice of the Supreme Court, and the Mayor of Washington, together with twelve other members, three of whom are appointed by the Senate from its own body, three by the House of Representatives from its members, and six persons appointed by a joint resolution of both houses. To this Board is given the power of electing a Secretary and other officers, for conducting the active operations of the Institution.

To carry into effect the purposes of the testator, the plan of organization should evidently embrace two objects: one, the increase of knowledge by the addition of new truths to the existing stock; the other, the diffusion of knowledge, thus increased, among men. No restriction is made in favor of any kind of knowledge; and, hence, each branch is entitled to, and should receive, a share of attention.

The Act of Congress, establishing the Institution, directs, as a part of the plan of organization, the formation of a Library, a Museum, and a Gallery of Art, together with provisions for physical research and popular lectures, while it leaves to the Regents the power of adopting such other parts of an organization as they may deem best suited to promote the objects of the bequest.

After much deliberation, the Regents resolved to divide the annual income into two equal parts—one part to be devoted to the increase and diffusion of knowledge by means of original research and publications—the other half of the income to be applied in accordance with the requirements of the Act of Congress, to the gradual formation of a Library, a Museum, and a Gallery of Art.

The following are the details of the parts of the general plan of organization provisionally adopted at the meeting of the Regents, Dec. 8, 1847.

DETAILS OF THE FIRST PART OF THE PLAN.

I. TO INCREASE KNOWLEDGE.—*It is proposed to stimulate research, by offering rewards for original memoirs on all subjects of investigation.*

1. The memoirs thus obtained, to be published in a series of volumes, in a quarto form, and entitled "Smithsonian Contributions to Knowledge."

2. No memoir, on subjects of physical science, to be accepted for publication, which does not furnish a positive addition to human knowledge, resting on original research; and all unverified speculations to be rejected.

3. Each memoir presented to the Institution, to be submitted for examination to a commission of persons of reputation for learning in the branch to which the memoir pertains; and to be accepted for publication only in case the report of this commission is favorable.

4. The commission to be chosen by the officers of the Institution, and the name of the author, as far as practicable, concealed, unless a favorable decision be made.

5. The volumes of the memoirs to be exchanged for the Transactions of literary and scientific societies, and copies to be given to all the colleges, and principal libraries, in this country. One part of the remaining copies may be offered for sale; and the other carefully preserved, to form complete sets of the work, to supply the demand from new institutions.

6. An abstract, or popular account, of the contents of these memoirs to be given to the public, through the annual report of the Regents to Congress.

II. TO INCREASE KNOWLEDGE.—*It is also proposed to appropriate a portion of the income, annually, to special objects of research, under the direction of suitable persons.*

1. The objects, and the amount appropriated, to be recommended by counsellors of the Institution.

2. Appropriations in different years to different objects; so that, in course of time, each branch of knowledge may receive a share.

3. The results obtained from these appropriations to be published, with the memoirs before mentioned, in the volumes of the Smithsonian Contributions to Knowledge.

4. Examples of objects for which appropriations may be made:—

(1.) System of extended meteorological observations for solving the problem of American storms.

(2.) Explorations in descriptive natural history, and geological, mathematical, and topographical surveys, to collect materials for the formation of a Physical Atlas of the United States.

(3.) Solution of experimental problems, such as a new determination of the weight of the earth, of the velocity of electricity, and of light; chemical analyses of soils and plants; collection and publication of articles of science, accumulated in the offices of Government.

(4.) Institution of statistical inquiries with reference to physical, moral, and political subjects.

(5.) Historical researches, and accurate surveys of places celebrated in American history.

(6.) Ethnological researches, particularly with reference to the different races of men in North America; also explorations, and accurate surveys, of the mounds and other remains of the ancient people of our country.

I. TO DIFFUSE KNOWLEDGE.—*It is proposed to publish a series of reports, giving an account of the new discoveries in science, and of the changes made from year to year in all branches of knowledge not strictly professional.*

1. Some of these reports may be published annually, others at longer intervals, as the income of the Institution or the changes in the branches of knowledge may indicate.

2. The reports are to be prepared by collaborators, eminent in the different branches of knowledge.

3. Each collaborator to be furnished with the journals and publications, domestic and foreign, necessary to the compilation of his report; to be paid a certain sum for his labors, and to be named on the title-page of the report.

4. The reports to be published in separate parts, so that persons interested in a particular branch, can procure the parts relating to it, without purchasing the whole.

5. These reports may be presented to Congress, for partial distribution, the remaining copies to be given to literary and scientific institutions, and sold to individuals for a moderate price.

The following are some of the subjects which may be embraced in the reports:—

I. PHYSICAL CLASS.

1. Physics, including astronomy, natural philosophy, chemistry, and meteorology.
2. Natural history, including botany, zoology, geology, &c.
3. Agriculture.
4. Application of science to arts.

II. MORAL AND POLITICAL CLASS.

5. Ethnology, including particular history, comparative philology, antiquities, &c.
6. Statistics and political economy.
7. Mental and moral philosophy.
8. A survey of the political events of the world; penal reform, &c.

III. LITERATURE AND THE FINE ARTS.

9. Modern literature.
10. The fine arts, and their application to the useful arts.
11. Bibliography.
12. Obituary notices of distinguished individuals.

II. TO DIFFUSE KNOWLEDGE.—*It is proposed to publish occasionally separate treatises on subjects of general interest.*

1. These treatises may occasionally consist of valuable memoirs translated from foreign languages, or of articles prepared under the direction of the Institution, or procured by offering premiums for the best exposition of a given subject.

2. The treatises to be submitted to a commission of competent judges, previous to their publication.

DETAILS OF THE SECOND PART OF THE PLAN OF ORGANIZATION.

This part contemplates the formation of a Library, a Museum, and a Gallery of Art.

1. To carry out the plan before described, a library will be required, consisting, 1st, of a complete collection of the transactions and proceedings of all the learned societies in the world; 2d, of the more important current periodical publications, and other works necessary in preparing the periodical reports.

2. The Institution should make special collections, particularly of objects to verify its own publications. Also a collection of instruments of research in all branches of experimental science.

3. With reference to the collection of books, other than those mentioned above, catalogues of all the different libraries in the United States should be procured, in order that the valuable books first purchased may be such as are not to be found elsewhere in the United States.

4. Also catalogues of memoirs, and of books in foreign libraries, and other materials, should be collected, for rendering the Institution a centre of bibliographical knowledge, whence the student may be directed to any work which he may require.

5. It is believed that the collections in natural history will increase by donation, as rapidly as the income of the Institution can make provision for their reception; and, therefore, it will seldom be necessary to purchase any article of this kind.

6. Attempts should be made to procure for the gallery of art, casts of the most celebrated articles of ancient and modern sculpture.

7. The arts may be encouraged by providing a room, free of expense, for the exhibition of the objects of the Art-Union, and other similar societies.

8. A small appropriation should annually be made for models of antiquity, such as those of the remains of ancient temples, &c.

9. The Secretary and his assistants, during the session of Congress, will be required to illustrate new discoveries in science, and to exhibit new objects of art; distinguished individuals should also be invited to give lectures on subjects of general interest.

In accordance with the rules adopted in the programme of organization, each memoir in this volume has been favorably reported on by a Commission appointed

for its examination. It is however impossible, in most cases, to verify the statements of an author; and, therefore, neither the Commission nor the Institution can be responsible for more than the general character of a memoir.

The following rules have been adopted for the distribution of the quarto volumes of the Smithsonian Contributions:—

1. They are to be presented to all learned societies which publish Transactions, and give copies of these, in exchange, to the Institution.
2. Also, to all foreign libraries of the first class, provided they give in exchange their catalogues or other publications, or an equivalent from their duplicate volumes.
3. To all the colleges in actual operation in this country, provided they furnish, in return, meteorological observations, catalogues of their libraries and of their students, and all other publications issued by them relative to their organization and history.
4. To all States and Territories, provided there be given, in return, copies of all documents published under their authority.
5. To all incorporated public libraries in this country, not included in any of the foregoing classes, now containing more than 7000 volumes; and to smaller libraries, where a whole State or large district would be otherwise unsupplied.

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(* Deceased)

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¹ Each memoir is separately paged and indexed.

SMITHSONIAN CONTRIBUTIONS TO KNOWLEDGE.

NEREIS

BOREALI-AMERICANA :

OR,

CONTRIBUTIONS TO THE HISTORY OF THE MARINE ALGÆ
OF NORTH AMERICA.

BY

WILLIAM HENRY HARVEY, M.D., M.R.I.A., F.L.S.,

PROFESSOR OF BOTANY IN THE UNIVERSITY OF DUBLIN; HONORARY MEMBER OF THE LYCEUM OF NATURAL HISTORY, NEW YORK, ETC., ETC.

PART III.—CHLOROSPERMÆ.

[ACCEPTED FOR PUBLICATION, SEPTEMBER, 1857.]

COMMISSION
TO WHICH THIS PAPER HAS BEEN REFERRED.

DR. JOHN TORREY,
DR. ASA GRAY.

JOSEPH HENRY,
Secretary S. I.

SUB-CLASS III.

CHLOROSPERMEÆ, OR GREEN ALGÆ.

DIAGNOSIS. *Plants* almost always grass green ; rarely olivaceous, or lurid purple, still more rarely red. *Propagation* either by simple cell-division ; by the transformation of the colouring matter of the cells of the whole frond, or of some of the cells, into *zoospores* ; or rarely by ordinary *spores* developed in proper spore-cases. *Antheridia*, containing spermatozoids, have been observed in some. *Marine*, or living in fresh-water streams, ponds, and ditches, or in damp situations.

It is difficult, in a few words, to give such a diagnostic character of the Algæ included in this sub-class as shall comprise all the exceptional cases. The general *idea* of the group is that it shall contain Algæ of a herbaceous or grass green colour, propagated by zoospores, or by the transformation of some considerable portion of the whole of the endochrome into spores, without these spores being developed within proper spore-cases, distinct from the ordinary cells of the frond. In the great majority of these plants both characters are found ; but some few genera and species which agree with the rest in the dispersed fructification, or in being propagated by zoospores, are of a purple or red colour, thereby approaching the Rhodosperms in appearance ; while others are olivaceous, and thus seem to approach the Melanosperms. It does not appear to be desirable, for the mere variation in colour, to separate plants which are in other respects so closely allied as are the *Porphyra* to the *Ulva*, or the red *Palmellaceæ* to those of a green colour. It would be necessary, were we to remove these aberrant genera and species to the Rhodosperms, to construct special Orders to receive them, nor could we place these new Orders in the series of Orders as at present constructed ; but must establish for them a new division of the sub-class, which would be characterised by the absence of cystocarpic fruit and of tetraspores ; that is to say, by the absence of the fructification common to the whole of this sub-class. Thus it would appear that these purpurascens Algæ are more removed from true Rhodosperms, notwithstanding the red colour of their spores, than from Chlorosperms ; and consequently we retain them in this division. A graver anomaly, as it appears to me, occurs in the genera which produce *spores* of the ordinary character (not *zoospores*) contained within proper cysts. These have been removed by Endlicher and others to the Melanospermic sub-class ; and certainly they show a considerable approach to that group. But on the other hand, in the characters of their vegetation, in the structure, habit, colour, and general aspect of the frond they are so closely united to true Chlorosperms, that I am unwilling to separate them ; particularly as they do not seem to be equally nearly related to true Melanospermeæ. These exceptional genera were formerly included in *Siphonaceæ*, and are in this work separated under the name *Dasycladaceæ*.

The Chlorosperms are decidedly the lowest or simplest in structure not only of the Algae, but of all plants. A very considerable number of them have the frond composed of a single utricle or cell, and all cell-division in such plants issues in the production of new unicellular fronds. The Orders *Diatomaceæ* and *Desmidiaceæ*, of which some hundreds of genera, and perhaps thousands of species are now known to Botanists, are of this character. In the whole of these, the frond consists of what may be called a bivalve cell; the primordial utricle being single while the cellular envelope is divided into two halves by a medial line. When such a cell is about to be multiplied by dividing into two, the two halves of the old cell remain unchanged, and a new growth of two new half-cells originates at each side, along the medial line. While this growth is going on, the old half-cells are gently pushed asunder, and when it is completed, a separation takes place, and two new fronds float apart, each of them composed of an old half-cell and a new growth which gradually acquires all the characters of the opposing valve. But the unicellular structure is not confined to such minute *atoms* as the Diatomaceæ, or such imperfect organisms as the *Protococcus* and its allies. Many of the larger Chlorosperms are essentially unicellular, and in some of these the vegetable cell is found of very much larger size than in any other plants. In *Codium*, *Vaucheria*, and *Bryopsis* single cylindrical cells may be obtained several inches in length, and frequently of considerable diameter. In *Valonia*, saccate cells sometimes as large as a walnut and often as large as a hazel nut, are found. *Botrydium*, a little siphonaceous Alga common on damp ground in Europe, exhibits within the compass of a single branching cell all the ordinary organs of a compound vegetable, as much specialized as is possible within such narrow limits: thus, it has a descending axis or root, an ascending axis or stem, and a vesicular body, within which its spores are developed. In *Caulerpa*, however, if the frond in that genus be really constructed by the evolution of a single cell, we have the vegetable cell assuming its highest development and attaining gigantic size. These unicellular (?) fronds are sometimes two feet in length, and excessively branched; with specialized root, stem, branches, and leaves.

The ordinary fructification of the Chlorospermæ consists of *zoospores*, or spores endowed with ciliary motion, which have already been spoken of in the General Introduction, (Part I. pp. 13-14). These are usually of very minute size, and are formed within the cells of the frond, by the transmutations of the whole cell-contents. Myriads of moving granules are thus evolved, each of which is pointed at one end, and there furnished with two or four vibratile hairs, which act like oars, and drive the granule through the water. In one instance (*Hydrodictyon*) the zoospores, whilst still retained within the walls of the mother-cell, arrange themselves into a young frond, which issues from the cell perfect in all its parts. But usually they are dispersed in the water, and swim about until they commence germination. In some cases, a solitary zoospore and that of large size, clothed all over its surface with cilia, is formed from the mass of endochrome of the parent-cell. And often, as in *Zygnema* and its allies, the spore is the result of the union of the matter of two cells.

Among the more interesting observations recently made on the development of these Algae, Pringsheim's memoirs on the fertilization of their spores by means of spermatozooids are specially worthy of notice. Male organs of unquestionable character have

now been discovered in several, leading to the inference that they exist in all. In some cases the spermatozoids are directly formed within the cells of the frond, from which they are dispersed in the water, and find their way to the enlarged cell in which the nucleus of the future spore, or rather *sporangium*, is contained, and which they penetrate, and effect the fertilization of the contents. In other cases there are formed within the cells of the frond and emitted into the water, solitary male-producing bodies resembling zoospores in form, but of smaller size, to which Pringsheim gives the name *androspores*. These *androspores*, after swimming freely for some time, like the zoospores, affix themselves (in *Eilognium*) to the surface of the enlarged cell containing the female nucleus, or in its immediate neighborhood; and then develop into minute frondlets, consisting of two or three cells, the lowest of which contains endochrome, and acts as a mother-cell, while the uppermost becomes an *antheridium* in which spermatozoids are formed. After a time both the female-cell and the antheridium open at the summit; the spermatozoid is liberated and enters the aperture of the ovarian cell and fertilizes the enclosed nucleus; from which there results the large, immoveable spore characteristic of the genus. The whole process is described and its various stages elaborately figured in Pringsheim's memoir, republished in a French translation in *An. Sc. Nat.* 4th ser., vol. 5, p. 250, t. 15, to which I must refer for a fuller account. A previous memoir by the same author in *An. Sc. Nat.*, vol. 3, describes the fertilization of the spores of *Vaucheria* by an analogous process. Various memoirs have also recently appeared by Thuret, and by Derbes and Soliere, describing the process of the fertilization of the spores, and the development of the frond in other classes of the Algæ; and from the large number of species which have been investigated by these excellent observers, we may perhaps be warranted in drawing the general inference, that a process of fertilization, by two opposing sexes, exists in all the Algæ. It certainly exists in the Melanosperms, Rhodosperms, and in many of the inferior Chlorosperms. There is much variety, however, in the appearance of the *antheridia* in different classes; in some no spermatozoids have yet been discovered, in others they are of considerable size, and very active and well formed. In some cases each spore is separately fertilized; in others it is a body which afterwards develops spores. One important observation has been made by Pringsheim which is specially interesting from its bearing on the disputed question of the origin of the embryonic vesicle in the higher plants, namely, that in no instance has he observed any growth to proceed from the spermatozoid, but that its function seems to have been performed when its contents have mixed with those of the nucleus; the spermatozoid itself being wholly absorbed and dissolved in the mass.

Much still remains to be done in tracing the development of these Algæ, more especially in studying the transformations which many of them undergo. Very many have two or three different modes of re-producing the species, as by self-division, by zoospores or gemmæ, and by properly fertilized spores; and the individuals resulting from these various modes of growth are not always similar. Thus there is in many an "alternation of generations," to be studied, such as has been noticed among lower animals; and probably when the subject has been properly worked out, a large number, not only of species, but of genera, especially among the fresh water kinds, must be erased from our lists. It now appears probable to Pringsheim that many of the minute

unicellular Algæ of Braun are the male organs or *androspores* of other Algæ. I think it can hardly be questioned that multitudes of the Palmelloid forms are either spores or imperfectly developed fronds ; and the same is probable of many Confervoids. As yet the subject, except in a few able hands, has been confused rather than rendered more clear by the labour bestowed by authors upon it. There has been too great an anxiety to establish new genera and species, without due regard being had to circumstances of growth and development ; and the unfortunate student who now attempts to study the fresh water Algæ is oppressed by an accumulating mass of bad species and genera, which all have to be in some degree mastered before he can make *clean work*. Add to this, that in the present state of our knowledge it is absolutely necessary, in most instances, to have the living plant at hand, and it will be understood what a difficult task it must be to give a good account of the Chlorospermatous series of the Algæ.

No one can be more sensible than I am myself of the very imperfect nature of the sketch attempted in the present memoir. I write at a distance from my subject, and have rarely had more than dried specimens to examine. Though many of them were personally collected by myself in 1850, when travelling in America, on very few have I preserved notes taken from the recent plant. This is perhaps of less account among the marine kinds, which formed the staple of my personal collections, for the marine species recover their characters on re-immersion much more perfectly than the fresh water kinds. But the want of living specimens has seriously barred my attempts to describe the fresh water species, with the exception of such easily preserved kinds as *Hydrodictyon*, *Batrachospermum*, *Lemanea*, *Petalonema*, &c. The Zygnemacæ, of which I have received several, and which are probably numerous in America, so completely lose their distinctive characters in drying, that I have been forced to omit them altogether. So also it has happened with the species of *Oscillatoria*, and of the Confervoid Algæ generally. I must therefore leave the task of describing the fresh water Algæ of America to other hands ; to some one living among them, and having eyes fully open to the difficulties of his task, and zeal and ability to work it faithfully. And here I cannot omit a slight tribute to the memory of one in whom were combined in no common degree the qualifications which make an able naturalist, and who, had he lived, would probably have taken up the broken thread.

I allude to the late Professor J. W. BAILEY of Westpoint, one of the earliest explorers of American Algæ, and whose very able memoirs on the *Diatomacæ* have won for him an imperishable name in the annals of science. To me his loss is more personal than to most of his botanical friends, for from the hour we first met there grew up between us a warm friendship which death has interrupted, but which I trust it has not ended. He it was who first suggested to me a Memoir on the American Algæ ; he arranged with the Smithsonian Institute the terms of its publication ; he supplied me with a multitude of specimens ; and to his influence I owe the assistance I have received from many American algologists who looked up to him for direction in their studies. He was, as far as the Algæ are concerned, my chief American referee, to whom I could apply when seeking information on local matters, connected with this branch of study. With him I constantly associated my work, and to his approbation I looked forward as

the most grateful reward of my labours ; and now that he is removed, my interest in the work has sensibly flagged, and I am not sorry that it is brought to a conclusion.

Since the previous part was issued, two other of my correspondents have been numbered with the dead—Professor TUOMEY of Alabama, and Dr. BLODGETT of Key West, to both of whom I was indebted for very valuable contributions of specimens. Many of these have been noticed in the two former parts, and several more will be found described in the present. It has given me a melancholy pleasure to perpetuate the memory of the assistance I obtained from these gentlemen, by giving their names to the only new genera described in the present part.

Whilst thus I have to deplore the loss of a dear friend, and of two of my most valued correspondents, I have to acknowledge obligations to two new contributors of specimens, Mr. SAMUEL ASHMEAD of Philadelphia, and Mr. A. D. FRYE of New York. From Mr. Ashmead I have received a collection of the Algæ of New Jersey, and a very interesting series of those of Key West, including some new species ; the most remarkable of which are a new *Caulerpa*, and a new and very beautiful *Dasya*. To Mr. FRYE I have to return my thanks for a collection of the Algæ of California, very well prepared, communicated to me through Professor Henry in 1854 ; and to this gentleman I also owe an apology for not having mentioned his name in a previous notice of Californian Algæ, which were sent to me by Captain Pike of New York in 1852, and which I supposed had been collected by him. A letter addressed by Mr. Frye to Professor Henry, and forwarded to me since the publication of the notice referred to, informs me that the packet of Californian Algæ attributed to Captain N. Pike was collected by Mr. Frye, and indeed formed part of a fasciculus exhibited by Mrs. Frye at the American Institute in 1851, and for which she obtained a gold medal. There were several other exhibitors at the fair, but Mrs. Frye's were considered the most rare. "After the close of the fair," says Mr. Frye, "I furnished Mr. Pike with a large number of specimens which I collected in California. He professed to send them to Professor Harvey of Dublin, stating to me that he would send them in my name, and that I should be credited for them in Professor Harvey's work. In looking over the work I found Professor Harvey received a collection of Californian Algæ, and they were credited to Captain Pike. I was told by Mr. Pike and other algologists in New York that mine was the only collection they had ever seen or heard of from the Pacific, and I had made the first collection in California. This, I think, after making much enquiry is correct, as I cannot find that there has as yet been any brought from thence except mine, which I collected with my own hands. I exhibited them to the ladies where I was then boarding, at Jones's Hotel in San Francisco : they afterwards borrowed them to show at their parties, and sent a gentleman, Mr. W. Ball, to purchase 20 specimens for 20 dollars—which I furnished to them, and also spent several days in teaching him how to collect and prepare them. I should be glad if Professor Harvey could know the facts, as I think he would be glad to give me credit for the specimens." Justice to Mr. Frye compels me to give these facts as much publicity as my former erroneous notice has obtained. The plants were sent to me by Captain Pike, without mentioning any other person, and I naturally supposed they had been collected by himself. Nor did I hear of Mr. Frye as a collector of Algæ, until his letter, quoted above, was received on my return from

Australia in 1856. I now take the earliest opportunity of acknowledging the merit of his package, and trust that he will acquit me of any intentional suppression.

Should I be favoured with any further donations of specimens from America, I trust that I may be correctly informed of the circumstances under which they were obtained. Justice shall then be fully done to the merits of the collectors. The Algæ of the Pacific coast have as yet been very imperfectly explored, and probably many curious and beautiful species, still unknown to botanists, remain to reward the future exertions of Californian collectors. Possibly, in the collections of those Californian ladies and gentlemen mentioned by Mr. Frye, new species remain undescribed and unrecorded; and should these remarks meet the eye of any one possessed of such things, and who may wish to see them duly published, I shall be glad to receive and acknowledge all contributions of Algæ if sent to me through Professor Henry or Professor Asa Gray: and the donors may rest assured that all such communications will be faithfully acknowledged.

W. H. H.

TRINITY COLLEGE, DUBLIN.
1 Dec. 1857.

SYNOPSIS OF THE ORDERS OF CHLOROSPERMEE.

1. SIPHONEE. *Rooting* or basifixed. *Fron*d simple or compound, formed either of a single, filiform, branching cell, or of many such cells united together in a spongy frond. (*Marine or fresh-water.*)
2. DASYCLADEE. *Rooting*. *Fron*ds consisting of a simple or branched inarticulate axial thread, whorled with articulated ramelli. *Spores* spherical, developed in proper fruit-cells. (*Marine.*)
3. VALONIACEE. *Rooting*. *Fron*ds polymorphous, formed of large vesicated cells, filled with watery endochrome. (*Marine.*)
4. ULVACEE. *Basifixed*. *Fron*ds tubular or flat, membranous, formed of minute quadrate cells. (*Marine or in fresh water.*)
5. BATRACHOSPERMEE. *Basifixed*. *Fron*ds filiform ; the axis inarticulate, composed of minnte cylindrical or polygonal cells, naked, or whorled with articulated ramelli. *Spores* in moniliform strings, naked. (*In fresh water.*)
6. CONFERVACEE. *Basifixed* or floating. *Fron*ds filamentous, articulated. *Endochrome* diffused. *Zoospores* minute, formed in all the cells. (*Marine or in fresh water.*)
7. ZYGNEMACEÆ. *Floating*. *Fron*ds filamentous, articulated. *Endochrome* of some definite figure. *Zoospores* large, formed by the union of two endochromes (of different cells), or by the bisection of a single endochrome. (*In fresh water.*)
8. HYDRODICTYEE. *Floating*. *Fron*d forming a net-work with polygonal meshes ; each side of the mesh formed of a single cell. *Viviparous*. (*In fresh water.*)
9. OSCILLATORIACEE. *Basifixed* or free. *Fron*d formed of subsimple filaments, having a membranous inarticulate tubular sheath, enclosing an annulated medulla, composed of very short, lenticular, cellules.
10. NOSTOCINEÆ. *Basifixed* or free. *Fron*ds consisting of moniliform jelly-coated threads, free or enclosed in a gelatinous matrix.
11. DESMIDIACEE.* Microscopic, unicellular, green ; wall of the cell membranous : growth by semiscission of the cell, and the evolutions of two new half-cells at the medial line.
12. DIATOMACEE.* Microscopic, unicellular, yellow-brown ; wall of the cell silicious : growth and fructification as in the preceding Order.
13. PALMELLACEE. *Cells* globose, or ellipsoidal, free, or lying in a gelatinous matrix, not forming either threads or membranes. *Propagation* by division of the endochrome.

* These Orders are not included in the present work. The North American species have been ably worked out by the late Professor J. W. Bailey of Westpoint, whose numerous memoirs on the subject have a world-wide reputation. The species are all of microscopic size, and some of them, from their extreme minuteness, and the delicate sculpturing on their cell walls, form admirable *test-objects* for microscopes.

ORDER I.—SIPHONACEÆ.

Siphonææ and *Caulerpeæ*, *Grev. Alg. Brit.* p. 183. *J. Ag. Alg. Medit.* p. 17. *Endl. 3rd Suppl.* p. 16. *Dne. Class.* p. 32; (also *Halymedææ*, *Dne.*) *Lindl. Veg. Kingd.* p. 18, and *Vaucherieæ*, in part, p. 22. *Vaucherieæ*, *Caulerpeæ*, *Codicæ* (in part), *Kütz. Sp. Alg.* pp. 486, 494, 500.

DIAGNOSIS. Green, marine or fresh water Algæ, naked or coated with carbonate of lime, composed either of a single, filiform, branching cell, or of many such cells united together into a spongelike frond.

NATURAL CHARACTER. *Root*, where it is developed, formed of many branching fibres interwoven together and entangled; sometimes penetrating deeply into the sand in which the plant grows, and attaching itself to the separate grains of sand, which serve further to consolidate the mass of fibres. *Frond* very variable in appearance, and differing much in complexity of structure, but always formed of very long, branching, inarticulate filaments, which arise from the continued growth and evolution of a single, undivided cell. In the genera of simplest structure, such as *Bryopsis* and *Vaucheria*, the frond consists of a single branching filamentous cell, with a thin, membranous, hyaline cell-wall; its cavity being filled with a granular semifluid colouring matter or endochrome, which may be wholly discharged if the tube be wounded and slightly pressed. In *Bryopsis* the unicellular fronds stand apart from each other, though many often rise nearly from the same base. In *Vaucheria* several such fronds are interwoven together at the base, but remain distinct in their upper branches. In *Chlorodesmis* there is a further union of many such threads, whose lower portion unite together to form an evident stipes or trunk, which is crowned with a pencil of free filaments; the whole frond resembling a little tree. This habit, however, is not so obvious in the American species as it is in *Ch. comosa*, the first described species of the genus. Again, in *Codium*, we find a structure essentially the same as in *Vaucheria* and *Chlorodesmis*, but the union of the filaments is still more intimate. To the naked eye, the species of *Codium* resemble green sponges or pieces of green cloth or velvet, having a perfectly definite outline and closely interwoven substance, and it is only when we tear or cut them asunder under the microscope that we perceive their true structure. We then find that all the central part of the substance of the frond is composed of innumerable interwoven, longitudinal branching cells, and that the velvety pile which constitutes the surface is formed of the tips of excurrent branches of the axial cells, lying close together and presenting only their extremities to the eye. In all

these genera the component filaments remain in the ordinary state of cellular tissue, having their membranous walls composed of cellulose, and filled with endochrome. The only further change which the plants of this group exhibit in structure consists in a secretion of carbonate of lime, which in several genera is found coating the external surface of the cells; and sometimes, as in *Halimeda* and some species of *Udotea*, surrounding the cells in such abundance as to cover the whole frond with a smooth coat of plaister, and obliterate all appearance of filaments. In such cases it is necessary, in order to see the structure, to macerate a portion of the frond in hydrochloric acid, until the lime be removed. When so treated, the component cells may be extracted and will be found to be of similar nature to those of *Codium* or *Bryopsis*. Indeed through some species, such as *Udotea membranacea*, there is an almost direct passage into *Codium*.

A more compound structure exists, as will be afterwards more fully described, in the sub-order *Caulerpeæ*, where from the inner face of the cell-wall innumerable branching and anastomosing processes issue, and fill up the cavity of the cell with a spongy, filamentous substance, unlike any structure noticed within the cavity of any other vegetable cells; so far as I am aware. On this remarkable character several authors propose to separate these plants into a distinct Order, and to this proceeding my only objection is that it appears to be an unnecessary multiplication of Orders.

The fructification of these Algæ has been observed in several but not in all, and presents some modifications in the different genera. In some, as in *Bryopsis*, the whole substance of the endochrome in fruiting specimens is changed into minute *zoospores*, which when emitted from the parent have an apparent voluntary movement like that of infusoria; swimming backwards and forwards by means of retractile cilia, which only disappear when the zoospore finds a point of fixture, and commences to germinate. In others, as in *Codium*, similar zoospores are developed within special encysted fruit-cells or vesicles, called by Agardh *coniocystæ*, which arise from the branches and are divided by a diaphragm from the branch on which they are formed. In others, as in *Vaucheria*, zoospores of a higher development are formed within similar cysts; and in this genus the cyst (or ovary) is accompanied by a well formed *antheridium*.

The process of fertilization of the spore in *Vaucheria* has recently been ably investigated by Pringsheim, a French translation of whose memoir on the subject will be found in Ann. Sc. Nat. Ser. IV. vol. 3, p. 363. The existence of two organs in *Vaucheria*, one of which was supposed to be an antheridium, had been noticed originally by Vaucher half a century ago, and they have passed under the eyes of succeeding observers; but no one appears to have actually watched the process of fertilization until it was discovered and published by Pringsheim in 1855. I shall merely give an abstract of the process, referring for full particulars, illustrated by beautifully executed figures, to the above quoted memoir. The *anther* or *corniculum* in *Vaucheria* consists of a small, cylindrical spirally curved or helicoid process rising from one of the branches of the frond, and at first not differing from an ordinary branchlet except in size. But gradually a change takes place in its contents, at first manifested by a loss of colour in the matter filling the upper portion of the young antheridium. Then a diaphragm is formed, which walls off the portion toward the extremity of the antheridium from the

lower half, which retains its union with the branch : and now the change is complete. The anther thus formed consists of an isolated, curved, cylindrical, nearly colourless but not empty cell, supported on a pedicle of variable length and curvature. In the anther-cell spermatozoids are gradually evolved out of the contained matter, and are at maturity emitted through an opening at the summit of the cell. So much for the structure of the anther. The *sporangium*, or female organ, is placed on the branch close to the *antheridium*, and like it, at first consists of a papilla, or minute ramulus rising from the branch. It does not, however, lengthen into a cylinder, but assumes an ovoid form; its contents become dense and granular; a diaphragm separating it from the branch is formed across its base, and thus it becomes a separate egg-shaped cellule, sessile on the branch from which it has been formed. A beak-like attenuation, directed toward the adjacent antheridium, is now formed, and becomes at length perforated. At the same time the antheridium, having curled round, directs its extremity toward the sporangium; its summit opens, and the enclosed spermatozoids are discharged into the water, close to the orifice of the sporangium, which they enter and effect the fertilization of the matter aggregated within. A cell-wall is then formed round the fertilized substance, which thus becomes a spore, which gradually ripens and is detached on the bursting or decay of the membranous cyst within which it was formed. In its process toward ripening it loses its green colour, and at length becomes nearly colourless, except for one or more brown masses which it contains. In this state it remains, often for a considerable time, till germination takes place, when it suddenly resumes its green, and then elongates into a tubular cell, which assumes the form and ramification of the parent plant.

This Order is dispersed, under one or other of its forms, over most parts of the world, and its species are found either in the sea, in fresh water, or occasionally on damp soil; some species of *Vaucheria* and the curious little *Botrydium* being terrestrial. The geographical range of several species is very extensive. *Codium tomentosum* and *Bryopsis plumosa* are common to the Northern and Southern Oceans and to the Eastern and Western Hemispheres, and are both found in the warmest parts of the tropical seas, as well as in high latitudes of the temperate zones. *Caulerpa* is specially characteristic of the tropical ocean, where its species are numerous, some of the more common kinds forming the principal algaoid covering of rocks or sands in shallow water. Some of its species are widely scattered, and others apparently limited to a few spots. Several of the fossil algaoid plants appear to have been *Caulerpeæ*, and the fossil figured by Brongniart (*tab. 9, bis, fig. 1*), under the name "*Fucoides hypnoides*," bears a very striking resemblance to *Caulerpa hypnoides* of the Australian coast.

SYNOPSIS OF THE NORTH AMERICAN GENERA.

Sub-order I. CAULERPEÆ. *Fron*d with prostrate, rooting, primary stems (*sterculi*), and erect branches, membranous, unicellular; cell within filled with a network of branching fibrils.

I. CAULERPA.

Sub-order II. CODIÆ. *Fron*d uni- or pluri-cellular. *Cells* filled with granular endochrome (without internal fibrous network).

* *More or less coated with carbonate of lime.*

II. HALIMEDA. *Fron*d branching, articulate ; the joints flattened.

III. UDOTEA. *Fron*d stipitate, fan-shaped, simple or cleft.

** *Destitute of carbonate of lime, soft and flaccid.*

IV. CODIUM. *Fron*d spongelike, of definite form, composed of closely interwoven, irregularly branching filaments.

V. CHLORODESMIS. *Fron*d stipitate (or sessile), pencil-shaped, composed of dichotomous filaments, interwoven at base, and free in their upper portion.

VI. VAUCHERIA. *Filaments* numerous, tufted and somewhat matted at base, free above, irregularly branched.

VII. BRYOPSIS. *Filaments* free, tufted or solitary, pinnately branched.

I. CAULERPA, Lamour.

*Fron*d consisting of prostrate *surculi*, rooting from their lower surface, and throwing up erect branches (or secondary fronds) of various shapes. *Substance* horny-membranous, destitute of calcareous matter. *Structure* unicellular, the cell (or *frond*) continuous, strengthened internally by a spongy network of anastomosing filaments, and filled with semi-fluid grumous matter. *Fructification* unknown.

The genus *Caulerpa* was founded by Lamouroux in 1810, and referred by him to his family of Ulvaceæ, though with doubt ; for he seems to have thought the structure of these plants so anomalous that he hesitates to pronounce them vegetables, notwithstanding their strictly vegetable form, immobility, and green colour. He had not, however, made himself master of their real structure, for he describes the frond as "consisting of an epidermis, and a cellular tissue consisting of cells so small that it has been impossible to determine their form" (*Ess.* p. 67). Turner appears to have been the first author who noticed the fibrous spongelike network which fills up the cavity of the membranous frond. This he describes under his *Fucus hypnoides*, but in terms which show that he supposed this structure peculiar to that species. To Dr. Montagne we owe the first and best account of the structure of the *Caulerpa*. This able algologist, in a paper read before the French Institute in 1837 and published in *An. Sc. Nat.* for March, 1838, has given a full history of the genus, both as to its organization and what he believed to be its fructification. To this memoir I refer the reader who wishes for full information of all that was then known of these plants, and shall content myself in this place with briefly describing their habit, structure, and geographical distribution.

The character seized on by Lamouroux as essential to a definition of the genus, and happily indicated by him in the name *Caulerpa* (derived from *χαυλος*, a stem, and *ἔρπω*, to creep) consists in the prostrate, primary stems or *sureuli* in which the frond originates, and which are furnished at intervals throughout their length with branching and fibrous roots that penetrate deeply into the sand in which the plant vegetates, or attach themselves firmly to the rock in such species as grow on rocks and corals. These roots are fibrous prolongations of the under surface of the prostrate stems, and are probably, notwithstanding their great development, chiefly useful for fixing the plant in its position. From the upper side of the *sureuli* rise erect branches or secondary fronds, which are very various in form, and are either sessile or supported on stalks or *stipites* of greater or less length. Some recent writers on these plants have proposed to divide the genus into several, assigning to them characters taken from the form and ramification of the branches; and those who wish to know what can be done in this way may consult a memoir by Count Trevisan in the 22nd vol. of Schlechtendahl's *Linnaea*, where subdivision is pushed to an extreme. I have not adopted these views of arrangement, being unwilling to break up what appears a natural assemblage, and thus needlessly to multiply generic names. By employing artificial characters it is very easy to split up any genus of several species, but unless the number of species included in a genus be inconveniently large, it seems undesirable to do so. The genus *Caulerpa*, as defined by Lamouroux, includes about fifty species which agree in all essential characters of structure and development. The differences among them are obviously of a very minor character, and though proper enough for the definition of sections, are we think of too trivial a nature to afford stable generic diagnoses. For instance, let us take one of the proposed new genera, *Corradoria*, which differs from another, *Chauvinia*, merely in having bifarious instead of multifarious leaves or ramenta. But the feebleness of this character is shown by several species which are imperfectly bifarious; so that bifarious and tri- or multifarious ramenta may occasionally be found on one and the same specimen. *C. cupressoides* of the North American coast has ramenta sometimes bifarious, sometimes trifarious; and *C. falseifolia* of the tropical Pacific, which is normally bifarious, is frequently quadrifarious on part of the same individual.

In all the North American species the ramenta are confined to the upright branches or secondary fronds, and the *sureuli* are smooth and glossy except in *C. lycopodium*, where both the *sureulus* and the stalks of the fronds are densely clothed with branching, woolly hairs. In several Australian and some Pacific species the *sureuli* are equally ramentiferous with the fronds, though the ramenta they bear are often of a different shape. The forms and ramifications of the upright fronds are much varied. In our *C. prolifera*, the type of Kützing's genus *Phyllerpa*, we have an example of membranous, expanded, leaflike, simple fronds, perfectly entire at the margin; in *C. denticulata* and *C. scalpelliformis* there are similarly flattened fronds, but deeply pinnatifid; in *C. mexicana* the marginal incisions are so deep that the frond becomes pinnate, and thus we are led, by easy transitions, to *C. taxifolia* and *C. plumaris* where the pinnate character is perfectly developed. Again, in *C. falseifolia*, Bail. & Harv. there is a passage from the species with pinnate fronds to those having filiform ramenta imbricated on all sides; for, as already mentioned, the ramenta on some of the fronds are strictly

distichous, and on others tristichous or quadrifarious. A further step brings us to *C. Selago*, *C. Lycopodium*, and their allies, in which the branches are thickly set with imbricating ramenta; and the highest development of this type is reached in *C. obscura*, *C. Muellerei*, and *C. hypnoides*, where pinnate and imbricated characters are combined. Another group of species, like our *C. paspaloides*, is characterised by having pinnate or multifid ramenta; and in another, the ramenta are baglike, either round, pyriform, or topshaped. Of this type we have an American example in *C. clavigera*, one of the most widely dispersed and most variable of the species. By depressing the apex of a baglike ramentum it becomes top-shaped, and by further depression peltate, and this form distinguishes *C. cheunitzia* and *C. peltata*; and again, peltate ramenta becomes perfoliate in *C. nummularia* and *C. stellata* by the development of young ramenta from the centre of the discs. In such species as *C. ericifolia* and *C. cupressoides* the gradual evolution of ramenta from mere prominent points of the frond is illustrated; and such species lead us to *C. Freycinetii* where the ramenta remain in this rudimentary condition. And thus we are conducted, by almost insensible gradations, through a considerable number of forms, back to those from which we started, and which had naked fronds destitute of ramenta or marginal incisions. And so, after a survey of all the species, we become more reconciled to the generic group as limited by Lamouroux, than if we had merely compared together such extreme forms as *C. prolifera* and *C. paspaloides*.

We have already said that the structure of all these plants is essentially the same. It remains to describe more particularly what that structure is. I am not aware that any observer has yet noted the early development of the frond, nor is the mode of reproduction as yet clearly made out. The spores are presumed to be similar to those of *Bryopsis*, and to be formed in any portion of the gumous matter that fills the frond, and most probably from that of the ramenta. When we take a fully formed frond, distinguishable into creeping stem, roots, upright branches and ramenta, we find that it is every where coated or encased in a homogeneous, hyaline, tough membrane destitute of further structure than this; that it may be seen in the thicker parts to be composed of several layers of cellulose, equally deposited one within another, as in the wood-cells of higher plants. There is no *septum* throughout the plant, and no appearance of cellular structure in the membrane of the walls. The frond, with all its ramifications, is strictly "*continuous*," forming a closed sac; and so far as we know it is formed by the evolution of a single cell, extending itself indefinitely without cell-division, and showing in excess the same structure as we find in a minor degree in such plants as *Botrydium*, *Bryopsis* and the like. This closed sac, frond or cell, in *Caulerpa*, is filled as in *Bryopsis*, with a semi-fluid, semi-gelatinous, bright-green endochrome containing starch-grains mixed with what seem to be oily particles, and obviously highly organized, but its chemical composition remains to be examined. Most probably it is highly nitrogenous, for it bears considerable resemblance in substance to the glairy semi-fluid of many sponges; and hence probably the reason of Lamouroux's supposition that these plants were of a semi-animal nature. If the structure of *Caulerpa* were merely what we have described, a closed membrane filled with gumous matter, it would not essentially differ from that of *Codium* and *Bryopsis*.

But there is found in *Caulerpa* a supplementary structure of a very peculiar and curious kind, which has induced several systematic writers to separate this genus, as the type of a family distinct from the other Siphonææ. An unwillingness needlessly to multiply families, and a belief that *synthesis*, much more than *analysis*, ought to be the study of a system framer, has prevented my adopting these views. The structure alluded to is this : from the inner face of the wall of the membrane covering the frond there issue innumerable, cylindrical, filamentous processes, which seem to be merely internal extensions of the cell walls, and not new cells. These branch and anastomose together into a kind of spongy net-work that fills the whole cavity of the frond, and is bathed and its fibres keep apart by the gummy fluid. This spongy net-work may be regarded as the proper frame-work of the plant, intended to give strength and unity to all parts of the frond. The filaments appear to be tubular, but are empty and colourless. This peculiar modification of structure is so like that of a sponge, that we may almost regard a *Caulerpa* as a vegetable sponge enclosed in a membranous epidermis.

The genus *Caulerpa* is eminently characteristic of the tropical and subtropical oceans and seas of both hemispheres. Very few species extend far into the temperate zone. The most northern are found in the Mediterranean Sea ; and the most southern on the shores of New Zealand. Many species exist on the southern coast of Australia, in lat. 35° or 36° ; but the greater number are found within 35° of the equator. They inhabit the littoral zone, from near high-water to low-water marks ; and some extend into the laminarian zone, or even to that of the Nullipores. Their favorite locality is on hard sand, or on sand-covered rocks ; and in the crevices of coral on the coral reefs, and more particularly in hollows left on the surface of the reef, where the corals have ceased to grow. Most of the American species grow within tide marks, but are not luxuriant except at low-water mark, or a little below it. *C. clavifera* commences to grow nearly at high water mark, and is continued throughout the whole littoral zone and into the laminarian. It consequently varies greatly in size and in general aspect, and accordingly appears under several names in botanical works ; but these “book-species,” however distinct they may look in the herbarium, cannot be recognized on the shore, where all the forms gradually blend together. Some of the species are very local. Others are found in both hemispheres, and in the Atlantic and Pacific Oceans. Of the North American species *C. plumaris*, *C. clavifera*, *C. ericifolia* and *C. cupressoides* are the most widely dispersed, being found in all tropical waters ; *C. prolifera* is found in the Mediterranean Sea ; *C. paspaloides* on the coast of Brazil, while *C. Ashmeadii* and *C. lycopodium*, so far as is yet known, are peculiar to the Keys of Florida. *C. mexicana* very closely resembles *C. asplenioides*, Grev. a native of the Indian Sea, and it is questionable whether these are distinct ; and *C. lycopodium* also is nearly allied to *C. selago*, a native of the Red Sea, but appears to be essentially characterised by its woolly stems. The Red Sea, the Persian Gulf, the shores of tropical Asia and those of New Holland, with the coral reefs of the Pacific furnish many local species, some exceedingly curious and beautiful. Several species are eaten by the natives of the Pacific archipelagoes ; and all furnish a favourite food to the turtle, whose green fat they serve to nourish.

We shall distribute the nine American species into three sections, characterised as follows:—

Sect. 1. PHYLLERPA. Kütz: *Fronde* plano-compressed, or flat, leaflike, very entire.

1. CAULERPA *prolifera*, Lamour.; surculi naked, glabrous; fronds erect, petiolate, flat, leaflike, nerveless, entire, tongue-shaped, rarely once forked, proliferous from the disc or apex. *Lamour. Ess. p. 67. Ag. Sp. Alg. 1, p. 444. Trevis. in Linn. vol. 22, p. 129. Phyllerpa prolifera, Kütz. Sp. Alg. p. 494. Fucus Ophioglossum, Web. and Mohr. Turn. Hist. t. 58. (TAB. XXXVIII. B.)*

HAB. Keys of Florida, on submarine sands. Key West, *W. H. H.*, No. 95. *Mr. Ashmead. Soldier's Key, Professor Tuomey*, No. 83 in part. (v. v.)

Surculi prostrate, throwing out from their under surface branching and fibrilliferous roots, simple or branched, twice as thick as hog's bristle, glabrous, glossy, cylindrical, shrinking, and longitudinally channelled when dry. *Fronde* stipitate, the *stipes* filiform, from a quarter-inch to an inch in length, of equal diameter with the surculi, compressed at the apex, and gradually passing into the base of the oblong or obovate, tongue-shaped obtuse lamina. The *frond* or lamina is flat and leaflike, two to four inches long, from half to three-quarter inch wide, either quite simple or once forked, with a perfectly entire flat margin. Occasionally similar stipitate fronds spring proliferously from any point of the disc or from the base or apex, especially if the latter has been wounded. The *substance* is membranaceous, somewhat horny and translucent, with a very glossy surface when dry. The *colour* is a full grass-green, becoming oil-green and variously tinged with yellow in a dried state. It does not adhere to paper in drying.

This species is rather rare at Key West. My specimens were picked up on the beach, after a southerly gale in the month of February. They closely correspond with specimens from the Mediterranean Sea, where, as well as in the subtropical Atlantic, this plant is not uncommon. *C. prolifera* has a very different habit from the other American species, but is closely related to the Australian *C. parvifolia*, and to *C. anceps* from the coral reefs of the Pacific. It appears to be still more closely akin to *C. costata*, Kütz, a Mediterranean species unknown to me, and said to differ in having a semi-nerved lamina.

PLATE XXXVIII. B. *Fig. 1. CAULERPA prolifera; the natural size.*

Sect. 2. PTLERPA. *Fronde* plano-compressed, inciso-serrate, pinnatifid or pinnate.

2 CAULERPA *Mexicana*, Sond.; surculi naked, glabrous; fronds erect, sessile, pinnato-pinnatifid; rachis (broad), plano-compressed; pinnae opposite, vertically

flattened, two-edged, oblongo-falcate, mucronulate, scarcely constricted at base, their margin entire. *Sonder in Kütz. Sp. Alg. p. 496. (TAB. XXXVII. A.)*

HAB. Keys of Florida, on submarine sands and sand covered rocks. Key West, *W. H. H. (No. 94.) Professor Tuomey, No. 72. Mr. Ashmead. (v. v.)*

Surculi prostrate, extensively creeping, rooting from their under surface, branched, twice as thick as hog's bristle, glabrous, glossy, longitudinally furrowed when dry. *Fronde* springing from the upper surface of the *surculi*, nearly sessile, or on very short stipites, broadly linear (in outline), 4-6 inches long, $\frac{1}{4}$ - $\frac{1}{2}$ inch wide, either simple or with one or two branches, pinnate or rather very deeply pinnatifid, from just above the base to the bifid or emarginate extremity. *Rachis* plano-compressed, from one to two lines wide, somewhat thick and fleshy when recent, horny and longitudinally rugulose when dry, closely set throughout with the opposite, distichous pinnae. *Pinnæ* from two to four times as long as broad, patent, the lower ones somewhat ovate, the upper gradually more and more oblong and incurvo-falcate, vertically flattened, two edged, mucronulate, entire; the margin quite free from denticulations. *Substance* when dry horny, membranaceous and glossy, semi-transparent. *Colour* a brilliant grass green, variously tinged with yellow, and becoming slightly olivaceous when dry.

This beautiful plant abounds at Key West, particularly under the bridge, where it forms widely spreading patches. *Sonder's* specimens were sent from Mexico, but the exact locality is not given. It is nearly related on the one hand to *C. denticulata, Dne.* from the Red Sea; and on the other to *C. asplenioides, Grev.* (in *An. Nat. Hist. vol. 12. tab. 1. f. 1.*) a native of the East Indies, if indeed that species be really different. It also bears much resemblance to *C. taxifolia, Ag.*, but the pinnae are broader, more sharply two-edged, and distinctly mucronulate.

PLATE XXXVII. A. *Fig 1. CAULERPA Mexicana; the natural size. Fig. 2, a pair of pinnae, magnified.*

3. *CAULERPA plumaris, Ag.*; *surculi* naked, glabrous; fronds erect, subsessile, distichously pectinato-pinnate; rachis (narrow) filiform; pinnae opposite, slender, filiform, setaceous, incurved, or subfalcate, either acute or sub-obtuse. *Ag. Sp. Alg. 1, p. 436. Kütz. Sp. Alg. p. 496. Bory, Voy. Coq. tab. 22, f. 4. Corradoria plumaris, Trevis. in Linn. 22, p. 133. Fucus taxifolius, Turn. t. 54 (excl. syn.) Fucus plumaris, Forsk. (TAB. XXXVIII. C.)*

Hab. Sandy shores, on the Florida Keys. Key West, *W. H. H., Professor Tuomey, Mr. Ashmead, (v. v.)*

Surculi prostrate, rooting from the under surface, a line or more in diameter, branched, glabrous, glossy, collapsing, and becoming longitudinally furrowed when dry. *Fronde* numerous, rising from the upper side of the *surculi*, erect, simple or with one or two

branches, scarcely stipitate or sessile, linear (in outline), 2-6 inches long, less than half an inch wide, pectinato-pinnate from a short distance above the base to the extremity. *Rachis* filiform, scarcely thicker than hog's bristle, closely set with pinnae. *Pinnae* opposite, sometimes a little obliquely inserted, setaceous, 2-3 lines long, rarely straight, generally more or less incurved or falcate, their apices sometimes very acute, ending in a sharp mucro, sometimes bluntish. *Substance* when dry horny and semitranslucent. *Colour* a deep and rather dark green, the tips of the pinnae often yellowish or orange.

A native of the tropics generally, both of the eastern and western hemisphere; occasionally straggling into the warmer parts of the temperate zone. It varies much in the diameter of the surculi, and somewhat in the length of the pinnae, but is easily recognised by the closely pectinate fronds, which resemble small green feathers. The specimens from Key West are peculiarly robust, and if compared with some slender varieties from the Pacific, might pass for different. But at Vavau, in the Friendly Islands, where this plant is common, I collected specimens both of the robust and slender form.

Plate XXXVIII. C. Fig. 1. *CAULERPA plumaris*, the natural size. Fig. 2, a pinna, magnified.

4. *CAULERPA Ashmeadii*; surculi naked, glabrous; fronds erect, shortly stipitate, distichously pectinato-pinnate; rachis subcompressed; pinnae opposite (or suboblique), erecto-patent, straight, linear, somewhat incrassated at the very obtuse extremity. (Tab. XXXVIII. A.)

Hab. Key West, rare. *W. H. H., Samuel Ashmead, Esq.* (v. v.)

Surculi prostrate, distantly rooting, one or two lines in diameter, glabrous and glossy, collapsing, and mostly channelled when dry. *Fronds* scattered, rising from the upper side of the surculi, erect, each furnished with a stipes from half an inch to upwards of an inch in length, and closely pectinato-pinnate throughout. Each frond, pinnae included, is about an inch in breadth, and from four to six inches in length. The *pinnae* are half a line in diameter, three-fourths of an inch long, terete, and nearly linear, but more or less thickened towards the extremity, which is very obtuse, without trace of mucro or acumination. The substance when dry is horny and semi-transparent. The colour, when recent, is grass green, but in drying it turns to olive.

The roots, Mr. Ashmead remarks, penetrate so deeply, and fix themselves so firmly in the hard sand, that it is with difficulty obtained, except in fragments. I regard the present as a distinctly marked new species, and have much pleasure in inscribing it to Mr. Samuel Ashmead of Philadelphia, a gentleman who has already made some interesting discoveries among the Algae at Key West, and from whom many more may be expected. It is a much larger and stronger growing plant than *C. plumaris*, and remarkable for the very obtuse and almost club-shaped ends of the nearly straight pinnae.

Plate XXXVIII. A. Fig. 1, *CAULERPA Ashmeadii*, the natural size. Fig. 2, a pinna, magnified.

SECT. 3. CHAUVINIA, Bory ; *Fronds* terete, simple or branched, set with tri-multifarious, leaflike, saccate, or thornlike ramuli (*ramenta*).

5. CAULERPA *clavifera*, Ag. ; *surculi* naked, glabrous, robust ; fronds erect, simple, short or elongate, more or less densely set on all sides with scattered, clubshaped, pyriform, or nearly topshaped ramenta. *Ag. Syst.* 1. p. 437. *Chauvinia clavifera*, Kütz. *Sp. Alg.* p. 498. *Ahnfeldtia racemosa*, A. Lamourouxii, and A. *wifera*, Trevis. l. c. pp, 141-142. *Fucus clavifer*, Turn. *Hist.* t. 57. *F. Lamourouxii*, Turn. t. 229. *F. wifer*, Turn. t. 230.

HAB. Sand covered rocks, about low-water mark, and at a greater depth. Key West and Sand Key, *W. H. H., Professor Tuomey* ; Conch Key and Key Biscayne, *Professor Tuomey* (v. v.)

Surculi robust, glabrous, glossy, one or two lines in diameter, spreading in dense mats, copiously supplied on the under surface with dense, excessively divided, fibrous, and deeply penetrating roots. *Fronds* erect, crowded, varying very much in length, according to the depth of water at which the plant grows, and from other circumstances affecting its luxuriance. Sometimes the erect portion of the frond is scarcely an inch in length, sometimes it is six, eight, or even ten inches long. It varies also in diameter from half a line to a line or more, and is more or less densely set on all sides with scattered, incrassated, very obtuse saccate ramenta. In the variety called *Lamourouxii* these ramenta are inserted in a distant spiral so as to look almost distichous ; in other varieties, and especially in that called *wifer*, they are densely crowded and imbricated, like grapes in a cluster. Numerous intermediate forms connect these extreme ones. The shape of the ramenta is also very variable. When young, they are simply clavate ; but with advancing age they become more and more swollen at the ends, and at length are pear-shaped, or, in some stunted specimens, top-shaped. Stunted specimens somewhat resemble *C. sedoides*, and have been mistaken for that species, which, however, differs in several respects.

This plant is common to the tropics of both hemispheres, and is particularly abundant on the coral reefs of the Pacific, where it puts on many different forms, and varies much in luxuriance. It is one of the species eaten as a salad by the natives, and some of the European residents, of the Friendly and Feejee Islands, who call it *Limu* (Lee-moo). I cannot consent to separate specifically the forms figured by Turner, and above indicated as varieties. I fear also that *C. oligophylla*, Mont., if I rightly understand that species, must be regarded as an extreme form, nearly destitute of ramenta. I gathered what I take to be Montagne's plant at Vavan, in the Friendly Islands, where its peculiarities seemed to arise from the circumstances of its habitat, which was in a very rapid tide-stream between two islets.

6. CAULERPA *Lycopodium* ; *surculi* and *stipites* of the fronds tomentose with brand-

ing hairs ; fronds erect, stipitate, scattered, simple or slightly branched, densely set on all sides with imbricated, erect, setaceous, acute, or mucronulate ramenta. (TAB. XXXVII. B.)

Hab. On sand-covered rocks at Key West, abundant, *W.H.H.* (v.v.)

Surculi prostrate, widely creeping and rooting from the lower side, everywhere densely clothed with woolly, branching hairs, which are slightly viscid and collect particles of sand ; the whole mass of *surculi* forming a dense mat. *Fronds* rather distantly scattered, erect, stipitate. *Stipes* 1-2 inches long, filiform, tomentose, the hairs branching. *Fronde* simple, or rarely once-forked, two to four or six inches long, very densely beset on all sides with slender, setaceous, erect, incurved, imbricated, acute, or mucronulate simple ramenta, which are two or three lines long, and nearly of capillary diameter. *Substance* somewhat horny when dry. *Colour*, a deep and rather a dull green, paler in the *surculi* and stipites.

I had at first taken this plant for *Caulerpa Selago*, but Turner expressly says of that species that the creeping stems or *surculi* are "smooth, shrinking, and wrinkled when dry ;" whereas in our Key West plant they are everywhere densely clothed with branching, woolly hairs. His figure (*Hist. Fuc. t. 55*) also represents the fronds as sessile, or ramuliferous to the very base. With no other species can the present be confounded. *C. Selago* is a native of the Red Sea. Two Australian species, *C. Brownii* and *C. furcifolia*, have been sometimes confounded with it, but in both of these the *surculi* are clothed with ramuli resembling those of the erect branches.

PLATE XXXVII. B. *Fig. 1.* CAULERPA *Lycopodium*, the natural size. *Fig. 2.* whorled ramenta in situ. *Fig. 3.* a ramentum, detached. *Fig. 4.* portion of the woolly stipes. *Fig. 5.* branching hairs from the same. The latter figures more or less magnified.

7. CAULERPA *ericifolia*, Ag. ; *surculi* robust, naked and glabrous ; frond shortly stipitate, irregularly much branched ; branches scattered, repeatedly divided, clothed on all sides with short, ellipsoidal, succulent, mucronulate, erecto-patent ramenta, set in 3, 4, or 5 ranks. *Ag. Sp. Alg. 1, p. 442.* *Chauvinia ericifolia*, Kütz. *Sp. Alg. p. 497.* *Trevis. l. c. p. 137.* *Fucus ericifolius*, *Turn. Hist. t. 56.* (TAB. XXXIX. A).

HAB. Key West, *W. H. H.* Conch Key, *Prof. Tuomey.* (v. v.)

Surculi prostrate, robust, as thick as crow quill or thicker, branched, extensively creeping, glabrous, glossy, shrinking and deeply channelled longitudinally when dry, rooting from the under surface ; the roots distant and very long, branched and fibriliferous. *Fronds* erect, scattered, with short, simple or forked stipites, much and irregularly branched ; branches scattered, once, twice, or thrice compounded, very erect, as are also all their lesser divisions, all the angles being close and acute ; ramenta densely set, tri-, quadri-, or quinquefarius, short, somewhat intricately, the lowermost

reduced to mamillaform tubercles, the upper more perfectly formed, ellipsoidal, saclike, and mucronulate. The branch, including its ramenta, is not more than a line in diameter. The substance is rather rigid, and is horny when dry. The colour is dull green, inclining to olivaceous.

I have much doubt whether this plant, which was originally described and figured by Turner, be permanently distinct from the following, of which it has very much the habit, but from which it differs, at least in typical specimens, by the more numerous rows of the ramenta and their more ellipsoidal shape. Specimens however vary in both these respects, and I could be well content to unite both forms under one specific name.

PLATE XXXIX. A. *Fig. 1.* CAULERPA *ericifolia*, the natural size. *Fig. 2*, small fragment of a branch with its ramenta. *Fig. 3*, a ramentum; the latter figures magnified.

8. CAULERPA *cupressoides*, Ag.; surculi robust, naked and glabrous; frond shortly stipitate, irregularly much branched; branches scattered, once or twice compounded, set with short, conoidal, mucronate, sub-bifarious or bifarious ramenta. *Ag. Sp. Alg.* 1. p. 441. *Chauvinia cupressoides*, Kütz. *Sp. Alg.* p. 497. *Trevis. l. c.* p. 137. *Fucus cupressoides*, *Esper. t.* 161. *Turn. Hist. t.* 195. (TAB. XXXIX. B.)

HAB. Key West, with the preceding. *Prof. Tuomey.* (v. v.)

Except in the less imbricated, di-tristichous, and shorter ramenta, this species does not differ from *C. ericifolia*. But these characters are variable. If the two species be united, the name *cupressoides*, as the older, must be preserved. Both forms are natives of the West Indies, and of the Pacific Ocean. *C. ericifolia* was first brought from Bermuda; and *C. cupressoides* from St. Croix.

PLATE XXXIX. B., *Fig. 1.* CAULERPA *cupressoides*, the natural size. *Fig. 2*, apex of a branch with tristichous ramenta. *Fig. 3*, portion of another branch with distichous ramenta. *Fig. 4*, a ramentum; the latter figures magnified.

9. CAULERPA *paspaloides*, Bory.; surculi robust, naked and glabrous; fronds with a long naked stipes, flabellately branched, the branches once or twice forked, or simple, fastigiate, densely beset in 3 or 4 ranks, with plumose, patent or recurved ramenta; ramenta sub-bipinnate, pinnae opposite turned to one side, subulate or mucronulate, mostly pectinated with similar mucronulate pinnules on their inferior sides. *Chauvinia paspaloides*, *Bory, Coq. p.* 205, *tab.* 23, *fig.* 1. *Kütz. Sp. Alg. p.* 500. *Trevis. in Lín.* 22, *p.* 137. *Caulerpa Wurdemannii*, *Harv. MS.*—Var. β ; ramenta simply pinnate, the pinnae very long and straight, destitute of pinnules.

HAB. Key West, abundantly. *Dr. Wurdemann, W. H. H., Prof. Tuomey. Mr.*

Ashmead. Couch Key and Key Biscayne, *Prof. Tuomey.*—Var. β cast ashore at Key West. *W. H. H.* (v. v.)

Surculi prostrate, robust, sometimes nearly as thick as a goose's-quill, sometimes as a crow-quill, glabrous, glossy, shrinking much in drying and becoming longitudinally furrowed, vaguely branched, rooting at intervals of one or two inches; the root long, branched, and fibrilliferous. *Fronde* rising from the upper surface of the *surculi*, scattered, on long, glabrous, naked stipites, flabelliform in outline, pedate or digitate, the branches spreading, simple or forked, fastigate, densely set throughout with imbricated, four or five-ranked ramenta. *Ramenta* one to four lines long, varying much in length and somewhat in ramulification on different specimens. Normally they are patent or recurved and sub-bipinnate, or pinnate with pectiniform pinnules; that is, the ramentum is oppositely pinnate, the pinnae closely set, straight, subulate, or filiform, mucronulate, and furnished along one (the lower) side with unilateral ramuli of similar form. In different specimens the number and development of the processes of the pinnae vary; sometimes they are 5 or 6, and of considerable length; sometimes but 2 or 3, and these very short. In var. β they are absent altogether, and the ramenta of much greater length than is usual in var. α ; but I have seen specimens so completely intermediate that I dare not make two species of these seemingly different forms, particularly as both occur in the same locality. The normal form has been admirably figured by Bory in the plate above quoted. I fear that *C. phloroides* of that author can only be regarded as a variety of the present species.

II. HALIMEDA. *Lamour.*

Root fibrous, much branched. *Fronde* erect, dendroid, branching, articulato-constricted, with flattened internodes (or *articulations*), coated with a smooth calcareous crust, and composed internally of a plexus of longitudinal, sub-parallel, unicellular, branching filaments. (These filaments, which constitute the medullary stratum of the compound frond, are constricted at intervals, and at each constriction emit a pair of opposite, horizontal, di-trichotomous, corymbose ramelli, whose apices cohere together into a false epidermis or periphery.)

The species comprised in this genus were placed by Ellis and Linnæus in the genus *Corallina*, where they remained till 1812, when Lamouroux very properly separated them to form the present group. The resemblance to *Corallina* is merely external. Both genera have jointed fronds, encrusted with calcareous matter, but here the resemblance ceases. The structure, colour, substance and fructification, which determine affinities, are widely different in *Corallina* from what they are in *Halimeda*. In this

latter genus, after the lime has been removed by acid, there remains a plexus of unicellular, branching filaments, filled with green endochrome, and essentially of the same structure and nature as those of *Codium*. In *C. Opuntia* these filaments are easily extracted, and may readily be pulled asunder; in *C. Tuna* they adhere more closely and require to be carefully manipulated. The *Halimeda*, like the *Caulerpa*, are confined to the warmer portions of the globe, and are particularly abundant on coral reefs, in both hemispheres. As many as thirteen species are described by authors, but several appear to have been founded on very insufficient data; and probably they might be reduced by one-half. *C. Opuntia* is the most widely dispersed, being found abundantly in the tropical Atlantic and Pacific, and in the Mediterranean and Red Seas. *C. incrassata* and *C. Tuna* occur in the Pacific as well as in the Atlantic, but are less universally dispersed than *C. Opuntia*. When seen in herbaria the species are frequently bleached white, but all are of a bright grass-green when growing. They are furnished with deeply descending, fibrous, much branched roots, whose capillary rootlets firmly grasp particles of sand, and with them form a solid ball, not easily broken asunder.

1. HALIMEDA *Opuntia*, Lamour.; frond very much branched, diffuse; articulations reniform, flat, obscurely lobed or repando-crenate along the upper margin. *Lamour. Exp. Meth.*, p. 27, t. 20, fig. 6. *Dne. Cor.* p. 90. *Kütz. Phyc. Gen.* t. 43, fig. 2. *Kütz. Sp. Alg.* p. 504. *Corallina Opuntia*, *Ellis and Sol.* p. 110, t. 20, fig. b. *Ellis, Cor.* t. 25, a. (TAB. XL. B.)

HAB. On rocks and in tide-pools, near high water mark, on the Florida Keys. Key West, *W. H. H.*, *Prof. Tuomey.* (v. v.)

Root deeply descending, fibrous, densely compacted into a fusiform mass, 1-2 inches long. *Stems* very numerous from the crown of the root, weak, but supporting each other by their proximity, and thus forming very dense tufts, much and irregularly branched; the branches spreading. *Articulations*, except one or two of the basal ones, which are oblong or cylindrical, broadly reniform, the more normal ones twice as broad as their length, from $\frac{1}{5}$ to more than $\frac{1}{4}$ inch across, flat, rather thin, but much incrustated with calcareous matter, with a more or less evident or obsolete longitudinal ridge through the middle; the superior margin somewhat repando-crenate or lobed. After the calcareous matter of the frond has been removed by acid, a spongy vegetable structure remains, made up of a plexus of slender, longitudinal, unicellular filaments, constricted at intervals, and at the constrictions emitting a pair of opposite, decomposed, dichotomous, corymboso-fastigiata, horizontal ramelli, whose apices cohere together, and form a thin epidermal or peripheric stratum of cells, over the surface of the frond. When the surface is viewed vertically, the cohering tips of the ramelli appear like the areoli of a continuous membrane. The substance of the filaments is tough, and they are filled with green matter. No fructification has been observed.

PLATE XL. B. *Fig. 1.* HALIMEDA *Opuntia*, the natural size. *Fig. 2,* portion of the branching, unicellular filaments of which the frond is composed; *magnified.*

2. HALIMEDA *incrassata*, Lamour.; fronds solitary, erect, fruticose, somewhat flabelliform, much branched; articulations thickened, the lowermost compresso-terete, quadrate; the middle cuneate; the upper (mostly) compressed, obscurely repando-erenate. *Lam. Exp. Meth. p. 25. Lam. Polyp. p. 307. Dne. Cor. p. 91. Kütz. Sp. Alg. p. 504. Corallina incrassata, Ell. and Sol. p. 111, t. 20, d.—Var. β, monilis; all the upper branches moniliform, composed of small, roundish, beadlike articulations. H. monilis, Lx. Dne., Kütz., &c. Corallina monilis. Ell. and Sol. p. 110, t. 20, Fig. C.*

HAB. Florida Keys. Key West, *W. H. H.* (elicfly var. *β*). (v. v.)

Root a globose or oblong, bulblike, fibrous mass. *Stems* generally single, with a short, undivided, compressed or subterete *bole* (or *stipe*) composed of two or more incrassated and confluent articulations; then expanding and divided into numerous branches, which are repeatedly di-, tri-, or polychotomous at short intervals, spreading generally in one place and thus forming a flabelliform frond. In the lower part of the frond the articulations are very thick and almost confluent, a slender line merely defining the limits between each; they are oblong or quadrate, and more or less cylindrical. The middle articulations are more cuneate and less confluent; and the upper ones, in typical specimens, are still flatter and somewhat erenate-lobate. In the variety most common at Key West, and which constitutes the *H. monilis* of authors, the upper branches are slender and moniliform, composed of small, globose, or truncate, thick articulations of variable size, and somewhat varying in form, the terminal ones on a branch being frequently cuneate. The structure of the frond is similar to that of *H. Opuntia*.

Both varieties, as indicated above, are excellently figured by Ellis and Solander, and by them and succeeding authors are kept as distinct species. Lamouroux indeed observes (*Pol. flex. p. 307*) that the characters attributed to each are frequently confounded on the same specimen. This I find to be the case in specimens collected at Key West, and I have, therefore, united the two forms under one specific name.

3. HALIMEDA *tridens*, Lamour.; frond solitary, erect, flabellately branched; articulations compressed, the lower ones quadrate or oblong; the middle cuneate; the upper three lobed or tri-crenate. *Lam. Exp. Meth. p. 27. Pol. Flex. p. 308. Dne. Cor. p. 91. Kütz. Sp. Alg. p. 505. Corallina tridens, Ell. and Sol. p. 109. Tab. 20, fig. a. (TAB. XLIV. C.)*

HAB. Key West, *Prof. Tuomey.* (v. s.)

Fronds solitary, erect, with a cuneiform stipes composed of several confluent articulations and dividing at the summit into numerous branches, which soon again subdivide in a di-poly-chotomous manner, all the branches lying in one plane, so as to form a flabelliform frond. The articulations are all compressed, the middle ones more or less cuneate; the upper usually tridentate or three-fingered, and frequently bearing articulations from the summit of each lobe. *Colour* rather a bright green. *Calcareous* incrustation thin.

This is nearly related to *H. incrassata*, and perhaps only a variety. But the crust is not so dense, and the distinctly three-lobed upper articulations are characteristic. Ellis's figure correctly represents a small branch.

PLATE XLIV. C. HALIMEDA *tridens*; the natural size.

4. HALIMEDA *tuna*, Lamour.; frond much branched, diffuse, di-trichotomous; articulations flat, thin, very broad, roundish or somewhat reniform, mostly entire; the middle ones sometimes cuneate. *Lamour. Pol. Flex. p. 309, t. 11, fig. 8. Dne. Cor. p. 91. Kütz. Sp. Alg. p. 504. Corallina Tuna, Ell. and Sol. tab. 20, fig. e. Hal. platydisca, Dne. ? p. 90. (TAB. XL. A.)*

HAB. Key West, *W. I. H.* Key Biscayne, *Prof. Tuomey.* (v. v.)

Root deeply descending. *Stipes* scarcely any, consisting of a single, cuneate or flabelliform articulation, which is sometimes more than an inch across, from the upper margin of which spring numerous other articulations, forming the bases of so many irregularly dichotomous branches. The articulations vary much in form and size. Their usual shape is roundish or sub-reniform, and they are from half to $\frac{3}{4}$ inch broad, quite flat, smooth, and thinner than in most species. They are joined together by very much constricted nodes, and are usually broader than their length. In some of my specimens, however, some of the medial articulations are narrow-cuneate or almost clavate. There is less incrustation in this species than in most; the colour is a bright green, and the substance somewhat flexible.

The original *H. Tuna* is a native of the Mediterranean; and possibly the plant now described may be referable to *H. platydisca*, Dne., but some of my Key West specimens so closely resemble what I have received from the Mediterranean, that, habitat apart, I cannot find a character to distinguish them. Others are certainly of larger size, with more discoid articulations. If, however, every slight variation in form and size is to be made the foundation of a new species, and dignified with a special description and name, the number of species to be established would only be limited by the number of specimens examined; for scarcely two are to be found identical at all points.

PLATE XL. A. HALIMEDA *Tuna*, the natural size.

III. UDOTEA. *Lamour.*

Root fibrous, much branched. *Fron*d erect, stipitate, expanded, flabelliform, more or less incrustated with calcareous matter, concentrically zoned, composed internally of a plexus of longitudinal, subparallel, unicellular, branching filaments. *Sporangia* "lateral, globose." (*Kütz.*).

The genus *Udotea* is intermediate between *Halimeda* and *Codium*, differing from the former in habit and from the latter in having the filiform cells of which it is composed incrustated with carbonate of lime. The amount of incrustation varies much in different species. In *U. flabellata*, which very closely agrees in structure with *Halimeda*, the calcareous matter forms a solid, smooth, and somewhat polished crust, completely concealing the filaments of which the frond is constructed; in *U. conglutinata* the lime forms a thin coat round each individual filament, but does not conceal the filamentous structure of the frond; and in *U. Desfontanesii* there is scarcely any calcareous deposit, and except in habit the plant is almost a *Codium*, in which genus it was placed by Agardh. Ten species of *Udotea* are known, all of them natives of the warmer parts of the sea. Our *U. flabellata* is found in the Indian Ocean, and I have received *U. conglutinata* from Port Natal, S. Africa.

1. *UDOTEA flabellata*, Lamour.; stipes simple, short, terete or sub-compressed, expanding into a broadly flabelliform, simple or lobed, wavy, concentrically zoned, smooth frond; the margin either quite entire, undulato-repand, crenate, or deeply lobulate, sometimes proliferous; surface thickly incrustated; concentric zones evident, closely set or sub-distant. *Dne. Cor.* p. 93. *Lamour. Pol. Flex.* p. 311. *Kütz. Sp. Alg.* p. 502. *Corallina flabellata*, *Ell. and Sol. Cor.* p. 124. *tab. 24* (*excellent!*).

HAB. Key West, *W. H. H.* Abundant between Key West and Cape Florida, *Prof. Tuomey.* (v. v.)

Root a fusiform mass of intricately interwoven fibres, one to two inches long. *Stipes* half an inch to an inch long, terete, a quarter-inch or more in diameter, simple, erect, terminating in the broadly cuneate or reniform base of the frond. *Fron*d sometimes six inches across, but our specimens are mostly smaller, usually broader than its length, more or less cuneate at base, the lateral margins prolonged downwards in old fronds, which, therefore, are somewhat reniform; flabellate, either quite entire with a flat margin, or more frequently undulate, lobed at the margin or deeply divided (as Ellis's figure represents) into numerous lacinia, which take the form of the primary frond, and imbricate each other at the edges. The surface is thickly coated with a calcareous crust, and quite smooth; it is marked at short, but very uncertain intervals, with concentric lines or furrows, much more obvious in some specimens than in others, but always to be found. The substance is as thick as calfskin and leathery to the touch.

The *structure*, after removal of the lime, is seen to consist of closely packed, parallel, longitudinal, unicellular filaments, branching and interlaced together, and emitting toward the surface, or periphery, short, horizontal, rootlike, fastigate, branching processes, of whose cohering apices the surface of the frond is composed. *Colour*, a pale grass green, bleaching to a dirty white.

2. *UDOTEA conglutinata*, Lamour. ; stipes short, simple, smooth, expanding into a broadly flabelliform, simple or lobed, flat, scarcely incrustated, strigose frond, composed of longitudinal, parallel, agglutinated, dichotomous filaments, constricted at the furcations. *Lamour. Pol. Flex. p. 312. Kütz. Sp. Alg. p. 502. Corallina conglutinata, Ell. and Sol. p. 125, t. 25, fig. 7. Udotia Palmetta ? Dne. p. 93. (TAB. XL. C.)*

HAB. Key West, *W. H. H.* (v. v.)

Root deeply descending, long and fibrous. *Stipe* terete or compressed, about half-an-inch to $\frac{3}{4}$ inch long. *Frond* flabelliform, 1-2 inches broad, flat, cuneate or cordate at the base, either entire or somewhat lobed, or irregularly torn, but slightly incrustated with lime ; the filaments of which it is composed being everywhere visible, and giving to the surface a strigose, fibrous appearance. These filaments are longitudinal, parallel, conglutinated together, but readily separable when the lime has been removed by acid. They are dichotomous, constricted at the forkings almost as if jointed, very slender, and destitute of lateral horizontal annuli, or of rooting processes. They more resemble the threads of a *Codium* than of a *Udotia*, and may almost be compared to those of a *Penicillus*.

I have not seen any authentically named specimen of Solander and Ellis's plant, but have little or no doubt of the correctness of my reference. The strigose or filamentous surface at once distinguishes our plant from *C. flabellata* ; and Solander truly observes, " We can plainly distinguish all the dichotomous branches" (filaments) " of this Coraline on its surface, which are each of them separately covered with a thin calcareous substance full of pores ; these, by growing so close to one another, become glued or united together by their covering."

PLATE XL. C. *Figs. 1, 2, and 3. UDOTEA conglutinata*, different varieties, the *natural* size. *Fig. 4.* Portions of the branching, unicellular, constricted filaments of which the frond is composed ; *magnified.* *Fig. 5.* Small portions of the same, more highly *magnified.*

IV. CODIUM. *Stackh.*

*Fron*d sponge-like (globular, cylindrical or flat ; simple or branched) composed of a plexus of unicellular, branching filaments, filled with green semifluid endochrome. *Sporangia* lateral, on the ramuli of the filaments (forming the surface of the frond), and containing innumerable zoospores.

The frond in this genus, though it assumes a well-defined shape, characteristic of the particular species, does not form a solid, compact body as in *Udotea*, but consists altogether of innumerable slender, unicellular, branching filaments, inextricably interlaced or woven together. In the centre of the filamentous mass these filaments are threadlike, branching at longish intervals, curled or sinuous, filled with slimy fluid, and only partially supplied with green colouring matter. In the elongated species, as in *C. tomentosum*, these axial filaments take a longitudinal direction ; in the globose ones they radiate from a central point, as in the singular *C. mammillosum* of Australia; and in the incrusting species, like *C. adharens*, they spread horizontally over the surface of the rock on which the plant grows. In all cases they throw out more or less club-shaped ramuli, which spread in a direction vertical with the surface of the frond, and their apices lying close together, but not cohering, constitute the periphery. There is no calcareous incrustation as in *Udotea*, and no false epidermis as in *Hali-meda* ; but with these exceptions there is much similarity in structure. The external habit is remarkably varied. In *C. tomentosum*, the type of the genus, and the most widely dispersed species, the frond is somewhat cylindrical, and dichotomously branched ; in a form (or species ?) called *C. elongatum* a similarly branching frond is extravagantly dilated and flattened especially at the axils ; in *C. laminarioides* a stipitate frond suddenly expands into a flat lamina a foot or two across, resembling nothing so much as a piece of green friese-cloth ; in *C. amphibium* a number of minute papilliform branches rise from a flat adherent surface ; and in *C. adharens* there is a flat, clothlike crust, destitute of branches, and indefinitely covering rocks and woodwork. In *C. bursa* the frond is sessile, gradually becoming globose and at length hollow ; and lastly, in *C. mammillosum* the frond is either exactly spherical or egg-shaped, composed of filaments radiating from a central point, and being, so far as known, destitute of any root-like attachment.

The fructification in *Codium* consists of an oblong, ovate *sporangium*, formed of a single cell, separated from the ramulus near the base of which it is developed, by a diaphragm, and containing, at first, a dense, dark-green endochrome, and finally a multitude of *zoospores*. These latter are ovate, of a deep green colour, with a minute "rostrum" at one end, which carries a pair of cilia, that serve as organs of locomotion till the spore becomes fixed and germinates. This fruit is exquisitely figured by Thuret, in his memoirs on the Zoospores of Algæ, in *An. Sc. Nat. 3rd Series, Bot. col. 14, tab. 23*, where a full account of the evolution is given.

1. *Codium tomentosum*, Stack. ; frond linear, dichotomous, cylindrical or compressed. *Ag. Sp. Alg.* 1. p. 5-12. *Wyatt, Alg. Dawn.* No. 35. *Kütz. Sp. Alg.* p. 500. *Harv. Phyc. Brit.* t. 93. *Fucus tomentosus*, *E. Bot.* t. 712. *Turn. Hist.* t. 135.

HAAB. Apalachicola, *Captain Pike*. Manatee River, *Mr. Ashmead*. Key West, *W. H. H. Sitcha, Ruprecht*. California, *Dr. Coulter*. (Not received from the east coast). (v.v.)

Fronde rising from an expanded, velvety incrustation, solitary, or gregarious, from three inches to one or two feet in length, varying much in diameter, erect, dichotomous, with or without lateral accessory branches. *Branches* cylindrical or compressed, obtuse, clothed with hyaline, spreading, soft, byssoid hairs, which, when the plant is expanded in water, stand out vertically on all sides, and give to the branches the *tomentose* character commemorated in the trivial name. The *axis* is composed of innumerable, interwoven, irregularly branched, slender filaments, from whose sides issue radiating, horizontal, clubshaped ramuli, whose apices, closely placed, but not cohering, form the surface of the spongy frond. To the sides of these ramuli are attached the *sporangia*, which are oval or ovato-lanceolate, and sessile.

It is a singular fact, (if it be *really* a fact) that this well-known and common species, which is found in every latitude from the Equator to the colder parts of the temperate zone, and nearly to the polar basin, is not a native of the *Eastern* coast of North America. It has not been sent to me by any of my correspondents from any part of the Atlantic coast, except from Florida, at the mouth of the Mexican Gulf. There I have myself gathered it. On the west coast it appears to be abundant, and extends as far north as Sitcha. There is nothing to distinguish Californian specimens from those found in Europe, in Ceylon, in Australia, at the Cape of Good Hope, or at Cape Horn, at all which places it is common.

V. CHLORODESMIS. *Bail. and Harv.*

Frond pencil-form, stipitate or sub-sessile, flaccid, without calcareous incrustation, wholly composed of cylindrical, dichotomous, unicellular filaments filled with dense, vivid-green endochrome. *Stipes*, when present, spongy, formed of interwoven threads.

The genus *Chlorodesmis* was founded by the late lamented Professor Bailey and myself on an alga brought by Captain Wilkes from the Feejee Islands, and which I have since collected abundantly on all the coral reefs which I had the opportunity of visiting in the tropical Pacific, where it forms a very striking object on the extreme outer edge of the reef. This original species—*C. comosa*, Bail. and Harv.—has a distinct, and

often elongate, spongy stipes, and a brushlike habit, not unlike that of a *Penicillus*; and few algologists will question its claim to generic distinction. I am not quite sure that I do well in associating the following species in the same genus; but I know not where else to place it, unless indeed in *Vaucheria*. The specimens, however, appear to be scarcely mature; there is a resemblance in the colour and substance, and the habitat is not dissimilar; and I am willing to think that more advanced specimens might exhibit more of the spongy stipe which forms the most tangible character of this genus. The fruit has not been observed.

1. CHLORODESMIS? *Vaucheriaformis*; stipes obsolete; fronds sessile, comose penicillate, fastigiate, dark-green, composed of innumerable, slender, dichotomous, exceedingly lubricous and subgelatinous, unicellular, cylindrical filaments; apices equal, level-topped, obtuse. (TAB. XL. C.)

HAB. On stones, at Brown's Wharf, Key West, *W.H.H.* (v. v.)

Stipes obsolete, consisting in a bulbous mass of interlaced, branching fibres, which throw up the erect and free filaments of which the frond is composed. These filaments form dense pencil-like tufts, about an inch high, and perfectly fastigiate. They are exceedingly slender, cylindrical, of equal diameter throughout, dichotomous, obtuse, gelatinoso-membranaceous, soft, and very lubricous, and filled with a dense, deep-green endochrome. Each filament is strictly unicellular, without articulation or constriction.

Plate XL. C. *Fig. 1.* CHLORODESMIS *Vaucheriaformis*; the natural size. *Fig. 2.* Portion of one of the branching unicellular filaments. *Fig. 3 and 4,* small portions of the same: the latter figures *magnified.*

VI. VAUCHERIA. *D.C.*

Fronds densely cæspitose, and somewhat interwoven; each consisting of a single, irregularly branched, unicellular cylindrical filament. *Cell-wall* very thin and delicate. *Endochrome* granular. *Sporangia* lateral, on the sides of the branches. *Antheridia* cylindrical, hooked, accompanying the sporangia.

The greater number of species of this genus occur in freshwater ponds, ditches, and streams, and probably several may yet be found in North America. I have received from Mr. H. W. Ravenel of South Carolina a specimen of a *Vaucheria* apparently allied to *V. dichotoma*, but not in a state to be recognised. It was found floating in limestone-waters. Dried specimens of this genus are rarely of any use, as the specific character is generally lost in drying.

VII. BRYOPSIS. *Lamour.*

Root fibrous. *Fronds* tufted, each consisting of a single, erect, branching, unicellular, cylindrical filament; branches and ramuli either imbricated or pinnate. *Cell-wall* firmly membranaceous, glistening. *Endochrome* granular and viscid, at length converted into *zoospores*, which escape through apertures formed in the cell-wall.

This genus consists of several littoral Algæ of small size, but among the most elegant of marine plants. They occur in tufts, seldom more than two to four inches in height, and grow either on the rocky margins of clear tide-pools, or epiphytically on other Algæ. The frond is affixed to the rock by a slightly developed fibrous radicle, or simply by a disc, and consists of a single cylindrical elongated branching cell, filled with dense, starchy endochrome of a deep green colour, and destitute of any septum or interruption of the cavity throughout the whole length of the tube. The ramification is very generally on a pinnate type; a primary undivided filament emits lateral virgate branches, also quite simple, and these are generally naked in the lower half of their length, and furnished with lateral, distichous or imbricated ramuli in the upper half. In some species, as in *B. Balbisiæna*, there are either no ramuli or very few; in others, as in *B. myura*, the ramuli are exceedingly numerous and densely set. Very many species have been named and described, with more or less care, by authors; but many rest on very uncertain characters, and I fear that several must be regarded as mere varieties of *B. plumosa*, the original and most widely dispersed species. All are remarkable for a glassy lustre, when dry. They retain their colour, if carefully dried, and adhere closely to paper.

1. BRYOPSIS *plumosa*, Lamour.; frond setaceous, decomposidly much branched: the ultimate branches filiform, virgate, naked in their lower half, and more or less plumosopectinate above; ramuli simple. *Ag. Sp. Alg.* 1. p. 448. *Harv. Phyc. Brit. tab.* 3. *Kütz. Syst. Alg.* p. 493. *Ulva plumosa*, *E. Bot. t.* 2375.—Var. β . *densa*; branches excessively crowded, the ultimate divisions pinnate near the apex, the pinnæ sometimes secund.—Var. γ *secunda*; tufts matted; fronds irregularly much branched; branches flexuous, many of them naked, others set in the upper half with falcato-reflexed, secund (occasionally bilateral) ramuli. (Tab. XLV. A.) Var. δ ; *ramulosa*; branches nearly naked, with a few scattered, secund ramuli. *Bryopsis ramulosa*, *Mont. Hist. Cuba*, p. 16. *Tab. 3. fig. 2.* (TAB. XLV. A.)

HAB. Between tide marks in rock pools. Various localities near New York, common. Charleston, South Carolina, and Key West. Vars. β , γ , and δ , intermixed with the ordinary form at Key West and Sand Key, *W.H.H.* (v. v.)

Root small, scutate, accompanied by lateral, entangled fibres, and sometimes matted.

Fronde 3-6 inches high, setaceous, much branched; normally in a decompound pinnate manner, but very irregularly so. In what we may call typical or normal specimens, the outline of the frond is somewhat pyramidal, the lowest branches being very long and patent, the upper gradually shorter and more erect. In such specimens the branches are sometimes simply, sometimes doubly pinnate; in either case the lower half of the branch or branchlet is bare, the upper plumose, with simple ramuli inserted in nearly distichous order. To describe every variety of ramification different from this, and commonly occurring in this species, would be an endless and useless task; and worse than useless to found new species on such variations. I have endeavoured above to indicate the principal varieties which I have observed among American specimens. The var. γ *secunda* looks very like a distinct species, and had I seen none but carefully selected specimens, possibly I should have so regarded it; but though many specimens may be found strictly conforming to the character assigned, having all their ramuli secund and recurved, others occur, growing intermixed with them, in which the ordinary ramulification is followed. At Key West I collected some specimens which I cannot distinguish from *B. ramulosa*, Mont., and which seem to pass through var. γ and other intermediate forms, into ordinary *B. plumosa*. Having received from Dr. Montagne himself an authenticated specimen of his plant, I can speak with more confidence.

Bryopsis plumosa, under one or other of its many forms, is found in most parts of the world, at least within the temperate and tropical zones. In Europe it occurs as far north as the Faroe Islands (lat. 65°). In the Southern Ocean it extends to Cape Horn, and the Falkland Islands, and to New Zealand. The *B. Rose* of the Southern Hemisphere seems to be merely a luxuriant form, and not a distinct species.

Plate XLV. A. *Fig. 1.* *Bryopsis plumosa*, var. γ *secunda*; the natural size. *Fig. 2* and *3*, secund and bilateral plumules from the same; *magnified*. *Fig. 4.* *B. plumosa*, var. δ *ramulosa*; the natural size. *Fig. 5*, imperfectly pinnulate branch from the same, *magnified*. *Fig. 6*, apex of a branchlet, more highly magnified.

2. *Bryopsis hypnoides*, Lamour.; frond setaceous, decompoundly much branched; branches spreading to all sides; ultimate branches filiform, naked below, beset above with scattered or crowded, irregularly inserted, very slender, byssoid, pinnated ramuli. *Grev. Alg. Brit. p. 180. Harv. Phyc. Brit. tab. 119. Wyatt, Alg. Danm. No. 81. Harv. Man. p. 146.* (quere Lam. *Jour. Bot.* 1809. p. 135?) *B. cupressoides*, Lam. *vide I. Ag.*

HAB. Key West, W.H.H., Dr. Blodgett, Professor Tuomey. (v. v.)

Tufts dense, 4-6 inches high. *Fronde* setaceous, much branched, the branches issuing from all sides of a common stem or central filament, long and virgate, either quite simple, or bearing a second set of similar quadrifarious branches. These branches, as in *B. plumosa*, though sometimes ramulose nearly to the base, are generally naked in

their lower half, and beset with ramuli only above. The ramuli are exceedingly slender, many times more so than the part of the branch from which they spring, and are generally furnished with opposite or scattered, slender pinnules. The colour is a pale yellow green; the substance exceedingly soft and tender.

The figure given in *Phyc. Brit.*, taken from West of Ireland specimens, does not very well represent the Key West plant, which, however, closely resembles specimens from the South Coast of England and coast of Normandy, except that they are rather more luxuriant. This plant is generally of a much paler colour and still softer substance than *B. plumosa*, and is distinguished from the varieties of that plant by its *ramuli* being compound (pinnate), as well as greatly more slender than those of *B. plumosa*.

ORDER II.—DASYCLADEÆ.

Dasycladeæ and Polyphyseæ, Kütz. *Phyc. Gen. p.* 311–312. *Valoniææ*, in part. Kütz. *Sp. Alg. p.* 507. *Part of Siphonææ, Auct. alior.*

DIAGNOSIS. Green, marine Algae, naked, or coated with carbonate of lime, having a unicellular simple or branched axis, which is whorled, either throughout its whole length, or near the summit, with articulated ramelli. *Spores* spherical, developed in proper fruit-cells.

NATURAL CHARACTER. *Root* formed of tubular, elongated, branching fibres more or less matted together. *Fronde* either simple or branched, essentially consisting of an axis and of ramelli. The *axis* is in all cases a continuous tube, without articulation or septum, running throughout the frond, containing endochrome in a young stage, but very frequently found empty in the mature plant; and is apparently formed by the evolution of a single cell. Its walls are thick, tough, and readily seen, when a cross section is examined under the microscope, to be composed of successive concentric layers of cellulose. At regular intervals, either throughout the whole length of the axis, or in its upper half only, the tube is pierced by a circle of holes, and from these holes there issue whorled, articulated, confervoid ramelli, which appear to discharge the functions of leaves, and are sometimes deciduous, sometimes persistent. In the less complex genera, *Polyphyssa* and *Acetabularia*, the ramelli are extremely delicate and fugacious, and are found only on young plants, or during the process of evolution; their position being indicated on plants from which they have fallen, by the circle of holes in which they had been inserted. In *Dasycladus* the ramelli are permanent, and thickly clothe every part of the stem, in whorls sometimes very closely placed, sometimes sub-distant; but there is no connection among the ramelli or between the whorls. In *Ncomeris* the structure of the stem and ramelli is very similar to that of *Dasycladus*, with this difference, that the apices of the ramelli cohere to form an investing membrane or epidermis

which completely encases the frond and conceals its filamentous structure. In *Cymopolia*, again, we have a still further advance in structure; for, not to speak of its calcareous shells, every node of which the branching frond is composed may be compared to the whole frond of a *Dasycladus* or a *Neomeris*. Like them, it is a tubular axis whorled with ramelli; but these latter are so closely placed together that the whorled character is not obvious, and the branch has the mammillated look of a *Codium*, if its calcareous shell be removed; or of a piece of honeycomb, if viewed with the shell still remaining.

The spores are of large size, and are always formed within proper fruit-cells or sporangia, and, so far as I am aware, are destitute of vibratile cilia, and appear to be formed on a much more perfect type than ordinary zoospores. They have a tough, hyaline, membranous coat, and enclose a mass of dense, dark green or brown endochrome. In *Polyphysa* and *Acetabularia* the sporangia spring directly from the axial tube; in *Dasycladus*, *Neomeris*, and *Cymopolia* they are found on the ramelli, and are either special cells, developed in the axils of the ordinary cells (as in *Dasycladus*), or are formed by metamorphose of a division of the ramellus, as in *Cymopolia*.

All the plants of this order, with the exception of *Dasycladus*, secrete carbonate of lime, but in very different proportions. In *Polyphysa* and *Acetabularia* the calcareous matter exists as a thin varnish to the surface of the stem; but in *Cymopolia* it forms as complete a shelly envelope as it does in one of the calcareous polypes, and indeed a dead frond in this genus might readily be mistaken for the husk of a zoophyte: its honeycombed pores closely resembling polype-cells.

All the species are natives of the warmer parts of the sea. *Dasycladus* and *Acetabularia* have representative species in the Mediterranean; and the latter is found also in the tropical Pacific. *Neomeris*, which may probably yet be detected on the Floridan Keys, has species in the West Indies and Pacific Ocean. *Cymopolia* is found in the Carribean Sea, and also at the Canary Islands. *Polyphysa* was discovered by Dr. R. Brown at King George's Sound, and has recently been found at Port Lincoln, Australia, by Mr. Wilhelmi; and at Swan River, by Mr. George Clifton.

I am very unwilling to multiply families, especially among plants of such low organization as the Chlorospermatous Algæ, and yet I have been in a manner compelled to remove from the *Siphonaceæ* both the little group now described, and the following one (*Valoniaceæ*); from the impossibility of devising any diagnostic character which would include the whole. The true *Siphonaceæ* are typically known by being wholly formed of long, tubular branching cells. In the *Dasycladeæ* the axis only is of this character; the rest of the frond consists, as in *Conferva*, of strings of short cylindrical cells; and the spores are of a higher type than in *Siphonaceæ*. In *Valoniaceæ* tubular branching cells are found, if at all, only in the root, or in a spongy caudex, while the principal part of the frond is formed of confervoid filaments. They approach *Dasycladeæ* through *Chamædoris*, and possibly Kützing may be correct in associating them, as he has done in his latest arrangement, with this group; but, ignorant as we are of their proper fructification, I have not ventured to adopt this course. The habit of the true *Valoniaceæ* is dissimilar, and in none of them do we find the ramcliferous internodes which characterise the present family.

SYNOPSIS OF THE NORTH AMERICAN GENERA.

- I. CYMOPOLIA. *Fron*d with a calcareous, branching, articulated shell ; the internodes honeycombed ; apices emitting pencilled ramelli.
- II. DASYCLADUS. *Fron*d soft, unbranched, set throughout with closely placed whorls of trichotomous, horizontal ramelli.
- III. ACETABULARIA. *Fron*d with a filiform, incrusting stipes, terminating in a peltate disc formed of radiating fruit-cells (*sporangia*.)

I. CYMOPOLIA. *Lamour*.

*Fron*d filiform, dichotomous ; its outer crust (or shell) calcareous, thick, distinctly articulate, the articulations everywhere pierced with pores, and the younger nodes fringed with byssoid, multifid fibrillæ. *Inner frond* (enclosed in the crustaceous shell) a membranous, continuous branching hollow tube, nodoso-constricted and moniliform, but not septate ; the *nodes* when young fibrilliferous, at length bare ; the *inter-nodes* whorled with several rows of short, horizontal, 3-4-fid, club-shaped ramelli, which protrude through the pores of the outer crust. *Sporangia* globose, borne on the club-shaped ramelli.

The frond in this genus consists of two distinct and separately organised systems—one mineral, and which wholly disappears when the plant is put into muriatic acid ; the other vegetable, of the same texture, substance, and very similar organization to the frond of the following genus (*Dasycladus*) ; but still more nearly akin to another genus, *Neomeris*, not yet recorded from our shores, but which very probably exists on the Florida reefs, as one of its species is found in the West Indies. For sake of greater clearness, I have, in the above diagnosis, first described the outer crust, or frond, as it appears when lifted from the sea ; and then given the characteristics of the vegetable axis which is brought to light when the calcareous envelope has been removed by acid. When the plant is alive, and seen under water, its green colour, and the rich pencils of delicate, bright green byssoid fibres that crown all the growing branches and their divisions, at once suggest its vegetable nature. But when seen dry and dead on the shore, where all these fibres and the green colour disappear, the resemblance to a porous zoophyte is so great, that it is no wonder that this Alga should, until quite recently, have had a place in the animal kingdom. The pores of the crust may easily pass for polype cells, and the enclosed tube has, when dry, an almost horny consistence.

Two species, *C. barbata* and *C. rosarium* are usually kept up, and Kützing has added a third, *C. bibrabata*, but it seems to me that the differences indicated have reference more to the age and state of individual specimens, than to difference of species. The fringing or non-fringing of the apices with fibrillæ surely depends on the state of the specimen. The fibrills are homologues of leaves, and, like leaves, are deciduous when they have performed their functions. I had abundant opportunities of studying the species at Key West, and see no ground for believing that there is more than one as yet known to botanists.

1. *CYMOPLIA barbata*, Lamour. *Cor. Flec.* p. 293, and *C. rosarium*, l. c. p. 294. Kütz., *Sp. Alg.* p. 511. *Covallina barbata*, *Lin. Syst. Nat. Ed. 12*, p. 1305. *Ellis and Sol. Zoop.* p. 112. *Ellis. Cor.* p. 54, t. 25, f. C. *C. rosarium*, *Ellis and Sol. Zoop.* p. 111, t. 21, fig. h. *Sloane, Nat. Hist. Jamaica*, t. 20, fig. 3. *Cymopolia bibrabata*, Kütz. *Phyc. Gen.* t. 40, f. 2. Kütz. *Sp. Alg.* p. 510. (TAB. XLI. A.)

HAB. Near low-water mark, under the bridge at Key West. W. H. H. (v. v.)

Fronde tufted, at first simple, till they attain to one or two inches in height, then becoming branched, at first by the development of simple alternate branches. These afterwards fork at their extremities, and throw out lateral branches; and by continual repetitions of this process of division the frond at length becomes much branched in a di-trichotomous but irregular order. The tendency to become dichotomous is greater in the older specimens; the branches in all are fastigate. Every part of the frond, except the young tips of the branches, is invested with a thick calcareous, brittle crust, pierced with innumerable horizontal canals, opening at the surface by pores, arranged in transverse rings, which are so closely placed together that the surface appears as if honeycombed. In these canals of the crust the ramelli of the enclosed vegetable lie hid, the points only of their divisions protruding through the pores, and this only in the younger parts, which then have a green colour. The calcareous crust is regularly articulated at short intervals; the internodes in the main stem and branches are about twice as long as broad, those in the young parts of the frond spheroidal and bead-like. The *nodes* are much contracted throughout, and thus each branch looks like a string of beads. In the older parts the nodes are bare; but in the younger, toward the ends of the growing branches, they emit whorls of extremely delicate, byssoid, di-tri-chotomous or multifid, membranaceous fibrills; and whorls of similar fibrills terminate the young branch itself. The branches in the developing plant are thus penicillate or barbed at the extremity. When a piece of a frond is macerated in acid, so as to remove the calcareous crust, the true frond becomes visible. This we must now describe. It consists of a continuous, tubular axis or filament, seemingly formed of a single, cylindrical, branching cell, which runs through every part of the calcareous covering, and whose growing apices, clothed with byssoid fibres, protrude at the ends of the branches. This filament is nodose, annularly constricted at short intervals, corresponding to the articulations of the crust; but there are no inter-

nal septa. The wall is very thick and tough, and is evidently seen, under the microscope, to be formed of concentric layers, deposited one within another, as in the cell-wall of the *Caulerpa*. When a transverse section of a branch is examined, the ring of cell-wall appears as if divided into numerous cells, corresponding in number to the ramelli that issue from it; the apparent septa of these supposed cells being placed opposite the insertion of the ramelli. This would suggest a structure not very different from what I have just described; namely, that the axial tube was not a single cell, but a tube formed by the lateral cohesion of a number of small, cylindrical, longitudinal cells, placed in a circle; a structure not very different from what occurs in *Batrachospermum*. After repeated examinations and dissections I am disposed to think that the appearance of cell-division in the wall is deceptive, and that what look like septa are prolongations inwards, through the wall, of the bases of the ramelli. The internodes of the axial filament are beset with very closely placed whorls of horizontal ramelli, each composed of a primary, and 3 or 4 secondary, clavate cells; the primary cell issuing from the substance of the wall of the axial tube, and forming the basal portion of the ramellus; the secondary cells springing from its apex. The primary cell is obconical; the secondary more clavate, and inflated at the point. *Fructification* takes place by the transformation of one of the secondary or terminal cells of the ramellus, which is changed into a spherical *sporangium*, filled (at first) with dense, dark green granular matter, surrounded by a pellucid margin, and raised on a short stalk. Whether it eventually contains *spores* or only *zoospores*, I have not determined; analogy with *Dasycladus* would lead us to the former inference. The *colour* of the frond, when growing, is a pleasant, and rather a full, yellow green; when dry, the calcareous crust fades to a dirty white, and the tufts of byssoid apical fibrills become brown or black, staining the paper to which they adhere.

Ellis's figures, quoted above, are both characteristic; and so also is that in Sloane's Jamaica, though rude and without analysis. Lamouroux strangely misquotes, under his *C. rosarium*, Sloane, Tab. 20, fig. 4, which is a very fair representation, not of a *Cymopolia*, but of *Amphiroa fragilissima*.

PLATE XLI. A. *Fig* 1. *CYMOPHOLIA barbata*; the *natural* size. *Fig* 2. Apex of a branch, crowned with its pencil of byssoid fibres. *Fig* 3. Transverse section of a branch, from which the calcareous shell has been removed. *Fig* 4. Small portion of the same, showing a *sporangium* formed from one of the peripheric ramelli. *Fig* 5. Portion of a longitudinal section of a branch, to show the insertion of the horizontal ramelli, and the holes on the inner face of the cell wall. *Fig* 6. Byssoid fibres from the apical pencil. *Fig* 7. Tips of the same; the latter figures more or less highly *magnified*.

II. DASYCLADUS. *Ag.*

*Fron*d destitute of calcareous crust, soft, and flaccid, cylindrical or club-shaped, unbranched, composed of a tubular, unicellular filiform axis, beset throughout with closely placed whorls of trichotomous, horizontal, articulate ramelli. *Sporangia* globose, affixed to the nodes of the ramelli, and containing, at maturity, very numerous spherical spores.

Small, densely tufted, erect plants, with almost spongy fronds, so densely are the ramelli frequently inserted. Their substance is very soft and flaccid, but tough, and the colour a full dark green. The membrane composing the frond is every where hyaline, and becomes glassy when dry; the colouring matter is viscid and granular as in *Bryopsis*. The genus was founded by Agardh on *D. clavaformis*, a common Alga in the Mediterranean; and Meneghini has described a second species from the Adriatic. I now venture to add a third, which I was formerly disposed to consider as identical with *D. clavaformis*.

I. DASYCLADUS *occidentalis*; whorls sub-distant; apices of the ramelli very obtuse. (TAB. XLI. B.)

HAB. On rocks between tide marks, on the Florida Keys. Key West, *Dr. Wurde-*
mann, W. H. H. Key Biscayne, *Prof. Tuomey.* (v. v.)

Root discoid, throwing out a few clasping fibres. *Fron*ds mostly densely tufted, sometimes solitary, 1–2 inches high, clavate, from a line to nearly half-an-inch in diameter (including ramelli) erect, straight or curved, destitute of calcareous incrustation; consisting of a filiform, unbranched, unicellular axis, whorled throughout with densely inserted polychotomous ramelli. The axial filament varies in diameter from the thickness of a human hair to twice the diameter of hog's bristle; it is cylindrical, with a continuous cavity filled with endochrome, and seems to be developed from a single cell. Its wall is very thick, tough, and composed of several distinct layers of cellulose, concentrically deposited. The filament is marked externally, at short intervals, varying in distance in different specimens, with transverse rings or *nodes*, which give an appearance of joints (but there are no internal septa); and immediately above each node from six to twelve horizontal ramelli are inserted in a whorl, and in denuded specimens their places are indicated by a whorl of disc-like scars surmounting the node. The ramelli vary much in length and in density. In some specimens the internodes are so short that the frond seems continuously clothed, like the spongy frond of a *Codium*, from base to apex; the axis being completely concealed by the ramelli. In others the internodes are as much as a line in length, and the whorls appear sub-distant, like those of a *Myriophyllum*. Sometimes the ramelli are scarcely a line long; in other specimens they are 2–3 lines or more. In all cases they are tri-dichotomous, twice or

thrice compounded and articulated ; being formed of two or three series of nearly cylindrical cells, four to six times longer than broad, filled with dark green slimy endochrome. The terminal cells are very obtuse. *Fructification* is formed at the axils of the ramelli, where two or three supplementary cells are developed and become spherical *sporangia*, by absorbing all the endochrome of the cells from which they spring, and finally that of the whole frond. When ripe, these sporangia are membranous bags, stuffed with innumerable spherical spores. *Colour*, a deep grass-green. *Substance*, soft and somewhat gelatinous.

This species closely resembles, in habit and structure, *D. clavaformis* of the Mediterranean ; but the ramelli, even in the densest specimens, are much more distantly placed than in that plant, and the apices (or terminal cells) of all the American individuals I have examined are perfectly blunt ; not mucronulate, as they are in *D. clavaformis*. If this distinction prove constant, the species will be sufficiently characterised.

PLATE XLI. B. *Fig. 1.* DASYCLADUS *occidentalis* ; the normal form. *Fig. 2.* An attenuated and depauperated variety ; both figures the *natural* size. *Fig. 3.* Transverse section of the frond, showing a whorl of trichotomous ramelli. *Fig. 4.* Portion of a fertile ramellus with *sporangia*. *Fig. 5.* A *sporangium*. *Fig. 6.* Spores from the same ; all the latter figures *magnified*.

III. ACETABULARIA. *Lamour.*

Root scutate. *Frond* stipitate, umbrella-shaped, thinly incrustated with calcareous matter. *Stipes* tubular, unicellular, cylindrical, when young emitting whorls of byssoid fibrills at and below the summit ; when mature, crowned with a peltate disc, formed of numerous radiating cuneiform cells. Cells of the disc at first containing granular endochrome, which is afterwards changed into spherical spores.

The two species which are included in this genus are among the most elegant and singular of the Algæ, resembling delicate fungi of the genus *Agaricus*, more nearly than any marine production. This is, however, descriptive only of the fully grown plant, for in the young state, the peltate umbrella which crowns the stipes is not found. In the youngest specimens which I have examined (represented at fig. 2 in our plate) the upper part of the stipe is beset at sub-distant intervals with whorls of extremely slender byssoid fibrills, above the last of which a young disc is commencing to be formed. In older plants these fibrills drop away, and their position is indicated by an annular row of holes, the tube being also swollen at each whorl, so as to appear jointed. There are no septa, however, and the tube is continuous, at least to the base of the young disc. When the disc is further advanced, a dense pencil of fibres springs from its centre, on its upper surface, or from what may be called its *umbo*, and which is

really the growing point of the frond. I regard the disc as being properly a whorl of *sporangia*, united by their edges; each radiating cell constituting a sporangium. The discs, after they have developed spores, are deciduous; and new ones are successively formed, one above the other, as the stipe lengthens.

1. *ACETABULARIA crenulata*, Lamour.; margin of the peltate disc minutely crenulate; the cells apiculate (when young). *Lam. Pol. Flea. p. 6, Tab. 8, fig. 1.* Kütz., *Sp. Alg. p. 510.* (TAB. XLII. A.)

HAB. Rocks and corals, within tide marks, on the Florida reefs. Key West, *W.H.H., Prof. Tuomey* (v. v.)

Root minute, discoid. *Fronds* scattered or tufted, two or three inches high, consisting of a slender, setaceous stipe, thinly coated with carbonate of lime, and bearing at its summit a peltate disc or cup, radiated like an agaric, and formed of clavato-cylindrical cells cohering by their edges, and filled with green endochrome. The stipes, when deprived of its lime by maceration in acid, forms a membranous, cylindrical tube, destitute of markings, slightly enlarged upwards, having near its summit one, two, three, or more (according to age) annular swellings, from which issue whorls of very delicate, polychotomous, byssoid ramelli, and terminating in the first formed disc, from whose centre a pencil of similar byssoid fibres is produced. In further growth, the stipes proceeds through the first disc upwards for a distance of 1-2 lines, where another annulus emits a second whorl of filaments, above which a second disc is formed; and thus, by successive apical growths new discs succeed each other, the older falling off as the younger are formed. In old specimens, therefore, you find the upper part of the stipe furnished with 4-5 or more annuli, marked with scars of the fallen ramelli and discs. In full grown specimens, the peltate disc, or circle of sporangia, is nearly half-an-inch in diameter. At first the matter contained in its cells is fluid and homogeneous. Eventually nuclei are formed in it, and the contents of each cell is converted into numerous globose spores, the whole endochrome being consumed in the process. The cell-wall of the stipe is thick and concentrically striate.

This species very closely resembles *A. Mediterranea*, from which it is distinguished by the minutely crenulate margin of the disc. In *A. Mediterranea* the margin is quite entire.

Plate XLII. A. *Fig. 1.* *ACETABULARIA crenulata*; the natural size. *Fig. 2.* Apex of a young frond, before the development of the peltate disc. *Fig. 3.* A young disc, within which is a pencil of byssoid fibres. *Fig. 4.* A mature disc. *Fig. 5.* Apex of one of the radiant cells, from a young disc in which they are mucronate. *Fig. 6.* One of the radiant cells of a mature disc, converted into a *sporangium*, and full of spores. *Fig. 7.* Spores from the same: all the latter figures magnified.

ORDER III.—VALONIACEÆ.

Valoniæ, in part, Kütz. *Sp. Alg.* p. 507. *Anadyomeneæ*, *Dictyospheriæ*, and part of *Codiæ*, Kütz. *l. c.* *Siphonæ*, in part, *Auct. alior.*

DIAGNOSIS. Green marine Algae, naked or encrusted with carbonate of lime, with fibrous roots. *Fronde* polymorphous, formed of large vesicated cells filled with watery endochrome; either consisting of a single cell, or of several united into filaments, or into net-works or membranous leaf-like expansions.

NATURAL CHARACTER. *Root* in most cases well developed, and consisting of a plexus of tough fibres, forming a mat, and either penetrating the sand or grasping firmly to the rock or stones on which the plant grows. *Fronde* very variable in form, and in complexity of structure. In *Valonia* the whole frond, in some species, consists of a single vesicated cell, which is often of large size, upwards of an inch in length, and three-quarters of an inch in diameter, filled with a thin, watery endochrome. In other species of that genus, several such cells are strung together so as to form confervoid branching filaments. In *Dictyosphaeria*, a number of large globose cells cohere together in a single stratum, and thus form a tessellated or honey-combed membrane. In *Anadyomene*, the membranous expansion is formed in a different manner, namely, by the lateral cohesion and anastomosis of a branching filament; and in *Microdictyon*, a network is formed in a similar way, the difference from *Anadyomene* being, that the branches of the generating filament stand apart, leaving open spaces between their anastomosing ramuli. A further advance in structure occurs in *Penicillus*, where the frond has a dendroid habit; the trunk of the treelike body being composed of branching, unicellular filaments like those of a *Codium*, and the head of confervoid, articulated filaments like those of *Valonia*. This spongy caudex, or trunk, appears to me to be merely an exaggeration of the rooting processes, common to most plants of the family. A more definite stipes, or true stem, is found in *Chamaedoris*, *Apjohnia*, and *Struvea*, the most highly organised genera of the Order, and those which connect it with the *Dasycladæ*. In these the stipe is monosiphonous, and is developed nearly to its full size before any part of the capitulum makes its appearance. In the early stage these plants are not to be known from the simple *Valoniæ*, and like them consist of a single cell rising from a branching root.

In this description of the fronds of the Order I omit the curious plant which will be

found described below under the name *Blodgettia*, because it is not quite certain whether it be properly a member of this series; or possibly the type of a separate family.

The fructification of none of these plants is satisfactorily known.

All are natives of tropical and sub-tropical latitudes. The Penicilli or *Merman's Shaving Brushes* are characteristic of coral reefs, and are found in the Caribbean Sea, and on the shores of Australia and of the Indian archipelago. *Anadyomene* is common to the Mediterranean Sea, the Gulf of Mexico and the shores of Brazil. *Dictyosphaeria* is tropical and Australian. *Valonia* is found in most western oceans, and ought to occur on the Floridan Keys, though not yet found there. *Microdictyon* is generally a deep water production, lying at the bottom in 5-10 fathoms; but it sometimes occurs at low water mark. Species of it, all very similar to each other, have been found in the tropics of both hemispheres and in the Mediterranean; and one is very abundant in Port Jackson, Australia. *Struvea* is confined to the West coast of Australia, and *Apjohnia* to the Southern coast. *Chamedoris* is Caribbean; and *Acrocladus*, Næg., a closely allied form, is found in the Mediterranean.

TABLE OF THE NORTH AMERICAN GENERA.

* *Dendroid*; stipitate, crowned with tufted filaments.

I. CHAMEDORIS. *Stipes* monosiphonous, annulated; head very dense.

II. PENICILLUS. *Stipes* formed of innumerable interwoven filaments, spongy; head brush-like.

** *Confervoid*; densely tufted.

III. BLODGETTIA. *Fronde* filamentous, articulated, branching, densely tufted.

*** *Membranous*, leaf-like.

IV. ANADYOMENE. *Membrane* erect, flabellately veined; veins articulated, confervoid, radiating from the base toward the margin.

V. DICTYOSPHERIA. *Membrane* amorphous, wholly formed of spherical cells lying in a single stratum.

I. CHAMEDORIS, Mont.

Root much branched. *Fronde* stipitate, dendroid. *Stipes* at first clavate, then cylindrical; tubular, unicellular, horny-membranous, annularly constricted and corrugated, at length crowned with a dense fascicle of confervoid, much branched, articulate ramelli. *Fruit* unknown.

Young and full grown specimens of the little Alga which constitutes the present genus are so unlike that they might readily pass for different entities. The frond originates in a dense mass of branching, horny-membranous, intricate, rooting fibres, from which spring erect unicellular branches, or fronds. These are at first quite simple and naked; but afterwards develop from their summit two or three very closely placed whorls of much branched ramelli, which form a dense, fasciculate capitulum. The frond is then mature and resembles a little tree; or perhaps, more justly, a little mop. The genus was founded by Montagne in 1842, by a separation from *Penicillus*.

1. *CHAMLEDORIS annulata*, Mont. *An. Sc. Nat. Ser. 2, vol. 18, p. 261.* Kütz. *Sp. Alg. p. 509.* *Nesaea annulata*, Lamour. *Pol. Flex. p. 256.* *Corallina peniculum*, Ell. and Sol. *Zoop. p. 127, tab. 7, fig. 5-8 and tab. 25, fig. 1.* (TAB. XLII. B.)

HAB. Key West, rare. *W. H. H., Dr. Blodgett.* (v. v.)

Root composed of many branching and clasping, tufted fibres, which issue from the base and lower part of the stipes, and at length form a dense mat. *Fronds* tufted, 2-3 inches high, nearly a line in diameter, tubular, simple, membranaceous or somewhat horny, destitute of calcareous incrustation except in old age, when they are thinly coated toward the base; cylindrical, annularly constricted at short intervals as if jointed, the internodes most apparent on old specimens, when the annular constrictions are deeper. In the young state the frond consists merely of such an annulated tube, formed of a single cell. When this has attained the height of two or three inches, it ceases to grow longer; a septum is formed just below the summit, and a new cell begins there to develop. This second cell is very short, and again divides, once or twice, vertically; so that the original tubular cell (now to be called the *stipe*) is crowned with two or three minute cells, placed one above the other (TAB. XLII. *fig. 3*), the terminal one being attenuated and pointed. These cells remain short and rudimentary, but from their nodes dense whorls of *ramelli* begin to grow (*fig. 4*), which finally constitute a dense, mop-like capitulum. When fully grown the capitulum is an inch or more in diameter, globose, very dense, composed of innumerable, crowded and interwoven, much branched, irregularly dichotomous, articulated filaments. The articulations are cylindrical, constricted at the nodes and many times longer than broad; but variable in length. *Colour*, a bright, grass-green. *Substance*, membranaceous, rather rigid and tough, not adhering to paper in drying. Thin slices of the tube, when examined under the microscope, show concentric lines of growth, as in *Dasycladus*, &c.

This plant is rare at Key West, and none of my specimens are fully grown. It is a native of the West Indian Islands.

PLATE XLII. B. *Fig. 1.* *CHAMLEDORIS annulata*, the *natural* size. *Fig. 2.* A young, unicellular frond, previous to the formation of the capitulum. *Fig. 3.* Apex of a frond in a more advanced stage, showing the newly formed axial cells of the future capitulum. *Fig. 4.* Apex of a still more advanced young frond, with the capitulum beginning to be

formed. *Fig. 5.* Portion of the capitular filament; the latter figures more or less magnified.

II. PENICILLUS. *Lamarck.*

Root fibrous, much branched, matted. *Fronde* stipitate, dendroid. *Stipes* erect, cylindrical or compressed, incrustated, wholly composed of numerous longitudinal, unicellular branching filaments woven together into a compact spongy mass; and crowned with a dense pencil of confervoid, articulate ramelli, whose branches are either free, or cohere together in fan-shaped laminae, and are invested with a porous pellicle of carbonate of lime.

If Mer-men have beards and shave them, the Algæ included in this genus may serve as shaving brushes. The *root* is much branched and its fibres matted together, and generally penetrates deeply into the sand in which the plant grows. The *stipe* is more or less coated with carbonate of lime, and composed of a multitude of closely placed and densely interwoven longitudinal, unicellular filaments, which send off laterally, throughout their length, short, fastigiate, corymbose ramelli, that unite together to form a periphery. Thus far we have a structure closely agreeing with that of a *Codium*. But from the apex of this compact, spongy *stipe* there springs a dense tuft or capitulum, composed of dichotomous, articulated, free filaments; and the whole frond bears a striking resemblance to a shaving brush. The habit is similar to that of *Chamaedoris*, from which the spongy, multicellular *stipe* distinguishes it; and to *Chlorodesmis*, which differs in having a capitulum formed of unicellular filaments.

The species naturally arrange themselves in two groups, or sub-genera, which Kützing has separated; a separation which is hardly needed, where the species are so few in number and so closely related in structure.

SECT. 1. HALIGRAPHIUM, Endl. (*Corallocephalus*, Kütz.); branches of the capitulum free.

1. PENICILLUS *dumetosus*, Dne.; *stipes* short, thick, somewhat compressed, velvety; filaments of the capitulum loosely spreading, ultra-setaceous, flaccid, deep-green; their joints cylindrical, many times as long as broad, equal, obtuse, strongly constricted at the nodes. *Dne. Cor. p. 97.* *Nesera dumetosa*, Lamour. *Polyp. p. 259. pl. 8, fig. 3.* *a. B. Corallocephalus dumetosus*, Kütz. *Sp. Alg. p. 506.* (Tab. XLIII. A.)

HAB. Key West and Sand Key, *W.H.H.* Soldier's Key, *Prof. Tuomey.* (v. v.)

Root, a dense mass of fibres deeply sinking in the sand. *Stipes*, 1-3 inches long, half-inch to nearly an inch in thickness, sometimes rather hollow in the centre, more or

less compressed, erect, coated with a velvety scurf, and partially incrustated with calcareous matter ; nearly destitute of lime when young, much incrustated with it in old age. This stipes is composed of innumerable, densely packed, longitudinal, unicellular fibres which closely adhere by lateral branching processes, and are interlaced together. The outer strata of these fibres emit, to form the periphery of the stipes, innumerable short, lateral, horizontal, multifid, fastigate ramelli, whose apices, lying close together, give the velvety appearance to the surface. As long as these longitudinal filaments cohere into a stipes they are unicellular ; but when they become free at the apex of the stipes, they are articulated, or pluricellular ; and a capitulum of confervoid filaments completes the frond. According to the age of the specimen, the filaments of the capitulum are more or less developed ; in young specimens they are less than an inch long ; in older and full-grown ones they vary from 3 to 6 inches. They are densely, but not intricately tufted, thicker than hog's bristle, dichotomous, radiating to all sides, equal and obtuse ; their articulations are cylindrical, and many times longer than broad. The colour is a full, deep green, and they are very thinly incrustated with lime ; the crust pierced with minute pores. The primordial utricle separates readily from the cell-wall, and is firmly membranous.

PLATE XLIII. A. *Fig. 1, 2, 3.* *PENICILLUS dumetosus*, of different ages : the natural sizes. *Fig. 4.* Portion of one of the dichotomous filaments of the capitulum. *Fig. 5.* Small portions of the same, after the calcareous coating has been removed, showing a pitted surface ; the latter figures more or less *highly magnified*.

2. *PENICILLUS capitatus*, Lamk. ; stipes long or short, cylindrical or clavate, terete, incrustated, smooth ; filaments of the globose capitulum densely crowded, fastigate, capillary, rigid, pale green, their joints cylindrical, many times as long as broad, obtuse, constricted at the nodes. *Dne. Cor. p. 97.* *Nesaea Penicillus*, *Lamour. Pol. flex. p. 258.* *Corallina Penicillus*, *Ell. and Sol. p. 126, tab. 25, fig. 4, 5.* *Corallocephalus Penicillus*, *Kütz. Sp. Alg. p. 505.* (TAB. XLIII. B.)

HAB. Key West, *W. H. H., Prof. Tuomey.* (v. v.)

Root very large, two inches long or more, deeply descending, very fibrous and densely matted. *Stipes* from one to four or five inches long, a quarter to a third of an inch in diameter, mostly cylindrical and equal throughout, occasionally compressed and widened upwards, thickly incrustated with calcareous matter, and having a smooth and sometimes a polished surface. *Capitulum* very dense, mostly globose, sometimes oblong and rarely somewhat diffuse, fastigate, one or two inches in diameter, composed of innumerable, curved, densely packed and often entangled, capillary filaments which are encrustated with calcareous matter to an extent that makes them rigid. The structure is similar to that of the preceding species ; and the calcareous incrustation is similarly dotted or pitted. The length of the articulations varies much ; usually

they are many times as long as broad ; but now and then a short, globose articulus is interposed between the two long ones. *Colour*, a pale green.

PLATE XLIII. B. *Figs. 1, 2, 3.* PENICILLUS *capitatus*, different varieties ; the *natural* size. *Fig. 4.* Portion of a dichotomous filament from the capitulum. *Fig. 5.* Small portion of the same, after the lime has been removed ; the latter figures more or less highly *magnified*.

Sect. 2. HALIPSYGMA, Endl. (*Rhipocephalus*, Kütz.) ; branches of the capitulum cohering in flabelliform laminae.

3. PENICILLUS *Phœnix*, Lamk. ; stipes elongate, terete, incrusted, smooth ; capitulum ovoid or oblong, its filaments incrusted, very slender, dichotomous, cohering by their edges into many distinct, flat, cuneate, level-topped, spreading laminae. *Dne. Cor. p. 98. Lamk. An. Mus. 20, p. 299. Corollina Phœnix, Ell. and Sol. p. 126, t. 25, fig. 2-3. Nesaea Phœnix, Lamour, l. c. p. 256. Rhipocephalus Phœnix, Kütz. Sp. Alg. p. 506. (TAB. XLIII. C.)*

HAB. Key West, *W. H. II.* Dredged in 3½ fathoms off Soldier's Key, *Prof. Tuomey.* (v. v.)

Root somewhat fusiform, dense, descending. *Stipes* cylindrical, 1-3 inches long, a quarter inch in diameter, thickly incrusted with calcareous matter, the surface smooth, composed as in the rest of the genus of many slender longitudinal branching and ramelliferous threads. The filaments of the capitulum are thickly incrusted with calcareous matter, and disposed in many flat, cuneate, flabelliform laminae ; their ramifications lying close together, and cohering laterally by means of the incrustation. On removing the carbonate of lime the cohesion of the filaments is destroyed. The articulations are many times longer than broad, cylindrical, and much constricted at the nodes.

PLATE XLIII. C. *Fig. 1.* PENICILLUS *Phœnix*, the *natural* size. *Fig. 2.* Portion of one of the fanlike laminae of the capitulum. *Fig. 3.* Cells from the same, after the removal of the lime ; the latter figures more or less *magnified*.

III. BLODGETTIA, *Harv. (n. gen.)*

Fronde caspitose, branching, confervoid, articulate. *Articulations* unicellular, filled with grumous, viscid endochrome ; the cell-wall formed of separable membranes,

the outer of which are hyaline and homogeneous, the innermost traversed by parallel, longitudinal, anastomosing veinlets. *Spores* seriated in moniliform strings, and developed from the veinlets of the inner cell-wall (!)

The highly curious little Alga on which the present genus is founded so closely resembles a *Cladophora* that it will readily pass for one, unless it be very closely examined under a powerful microscope. Indeed so great is the resemblance to a branched *Conferva* that I formerly distributed it to my friends with the manuscript name of *Cladophora cæspitosa*, under which it was my intention to have described it in the present work; nor did I discover my error until I commenced making sketches for the plate now given. I was then first struck by the peculiar opacity of the dissepiments; and afterwards by what looked like a compound cellular structure in the walls of the cells. On applying a higher power, other characters came out which induced me to dissect one of the articulations, when I discovered the curious structure of the inner membrane or primordial utricle; in which (as far as I can make out) the spores are developed. To see the structure, as above described, the readiest mode is to proceed as follows. Cut off a portion of one of the long cells which terminate the branches; place it on the table of a dissecting microscope, moisten it, and you may readily express the viscid endochrome, which generally contains, besides the usual starch and chlorophyll grains, a number of pyramidal crystals; but these are probably adventitious. When the endochrome has been pressed out, the structure of the inner membrane of the cell-wall may be partially seen; but to see it clearly, the outer coats must be removed. This may readily be done, either by tearing, with a pair of dissecting needles, or by making a longitudinal section through the cell, when the different coats easily separate, on the section being *teased* in a drop of water. The outer coat, or coats (for there are *two* or more, though the secondary ones sometimes elude detection, owing to their extreme tenuity) are quite transparent and structureless, as is usually the case in the walls of cellular tissue. But the inner coat offers a peculiarity of structure which I have not noticed in any other Algæ, nor have heard of its occurrence in the cells of any other plant. At first sight the membrane seems to be composed of numerous minute, elongated fusiform cellules, not unlike the wood-cells of phanerogamous plants, but totally unlike any algæ-cells known to me. Careful examination has however convinced me that the appearance of cellular structure is deceptive; and that the membrane itself is homogenous, but traversed by slender filaments or nerves, which anastomose together, forming areolæ which look like cells. These filaments give off *free* ramuli whose apices swell into spores; and (probably) by repeated cell division produce the strings of roundish *spores*, which are so conspicuous in most of the areolæ. The appearance of the whole membrane with its spores is as if a number of the *asci* of a lichen were placed side by side; the true structure, however, I need hardly say, is widely different.

The generic name is bestowed as a grateful tribute to the memory of the late DR. BLODGETT of Key West, who had zealously collected and studied the Algæ of the reefs where this plant grows, and to whom I am indebted for many specimens of the rarest Algæ of the Florida Keys.

1. *BLODGETTIA confervoides*, Harv. (TAB. XLV. C.)

HAB. At Key West, on rocks near low-water mark. *Dr. Wurdeman, W. H. H., Prof. Tuomey.* (v. v.)

Fronds filamentous, densely tufted; the tufts spreading extensively, from an inch to an inch and half in height, very dense, pulvinate and fastigiata. *Filaments* rigid, not collapsing when removed from the water, about as thick as hog's bristle, sparingly branched, decumbent at base, then ascending, and the tips erect. The main divisions and primary branches are very patent, either arching backwards or quite recurved. They are destitute of branches along their lower or outer side, and more or less furnished with unilateral ramification on the upper; generally with a long excurrent point destitute of ramuli. Often the filament has but a single series of simple, second ramuli; but in luxuriant specimens there is a second series of similar second ramuli. *Articulations* variable in length, dark coloured, with opaque dissepiments, and not collapsing when dry, contracted at the nodes, three to six times as long as broad; the terminal cell always very much longer than the rest, and frequently 10-12 times as long as its diameter. *Apices* very blunt. The articulations are filled with dense, viscid endochrome full of large green granules, and frequently containing also prismatical crystals. The membranous cell-wall is divisible into three or more separate membranes, one concentrically placed within the other. The outer are hyaline without obvious structure; but the inner one is reticulated with very slender nerelike fibres, which run longitudinally through the membrane parallel to each other, and are connected by oblique crossbars; so that the surface is divided into narrow, pointed areolæ. The *spores* are seriated in moniliform strings, four or more in each string, and attached to short free veinlets which issue from the veins of the inner cell-wall. The *colour* when recent is a very dark green; when dry it becomes more olivaceous. The substance is very firm, and the plant imperfectly adheres to paper in drying.

PLATE XLV. C. *Fig. 1.* *BLODGETTIA confervoides*; the natural size. *Fig. 2.* Pectinated branch. *Fig. 3.* Apex of the long terminal cell of the branch, the lower portion represented with the outer cell-coats exfoliated. *Fig. 4.* Portion of the membrane of the innermost cell-coat traversed by slender fibres, bearing strings of *spores* (?). *Fig. 5.* One of the moniliform strings, apart. *Fig. 6.* Some of the crystals found in the cells. All the latter figures more or less highly magnified.

IV. ANADYOMENE, Lamour.

Root fibrous. *Fronde* stipitate, membranaceous, leaf-like, flabellately veined; the veins confervoid, radiating from the base to the margin, pedately multifid, excessively branched, and everywhere closely anastomosing. *Fructification* unknown.

The frond in this genus is thin and membranous, and at first view resembles that of an *Ulva*, except that it is traversed everywhere by branching veins. When more closely examined it is easily perceived that the membrane is wholly formed by the anastomosis and lateral cohesion of the branches and ramuli of a much branched, articulated, confervoid filament, composed of large, oblong cylindrical cells; as more fully detailed in the subjoined description. As Professor J. Agardh remarks (*Alg. Medit.* p. 24), it is nearly related to *Valonia*, from which it differs chiefly in the lateral cohesion of the branches of the generating filaments, and to which it bears the same relation that *Codium* does to *Vaucheria*. It is still more nearly related to *Microdictyon*, where the fronds form an open network.

1. ANADYOMENE *flabellata*, Lamour.; frond flattish or undulate, the veins multipartite. *Lamour. Pol. Flex.* p. 365, *tab.* 14, *fig.* 3. *Bory, Fl. Mor.* t. 41, *fig.* 5, *Kütz. Sp. Alg.* p. 511. *A. stellata*, *Ag. Sp. Alg.* 1, p. 400. (TAB. XLIV. A.)

HAB. Key West, on tidal rocks, common. *Dr. Wurdeman, W.H.H., Prof. Tuomey.* (v. v.)

Root consisting of a mat of branching, articulate, confervoid filaments, emitting erect branches which develop into flat, flabelliform, membranous fronds. *Fronds* tufted, 1-4 inches long and as much in width, rigidly membranaceous, shortly stipitate; the stipes uni- or pluri-cellular; lamina at first flabelliform and entire, afterwards undulate and more or less deeply lobed at the margin; wholly composed of radiating, multifid, branching, confervoid filaments, whose distichous branches closely cohere throughout, and whose ramuli as constantly anastomose and coalesce. In other words, the membrane is composed of longitudinally seriated, cylindrical cells, several series radiating from the base toward the circumference in a flabellate manner, and dividing and subdividing digitately throughout the whole length of the series; each cell emitting from its summit 5-7 or more similar cells, which in their turn put forth another series, and so on. In this way the frond increases in length. It is widened by the gradual evolution of other cells formed along the sides of contiguous parallel cells in a pinnate order. At first these lateral or transverse cells are very minute and placed opposite each other. They gradually lengthen, anastomose and coalesce, and at length form a reticulated space of a narrow wedge-form between each pair of tubular, longitudinal cells. The cuneate space looks like a membrane, but is really constituted of closely placed, transverse bars, leaving narrow slits between them, as may be readily seen by examining a dried specimen when the substance shrinks. In a moist state, by the swelling of the cells, the slits close up, and the frond appears as if continuously membranous. The tubular, longitudinally seriated cells, or those that form the veins and nerves of the frond, seem to continue to lengthen during the whole growth of the lamina; they are short in young plants, longer in others, and in old plants are many times longer than their diameter. The cell-wall in these cells is thick and tough, and when viewed under a

moderately high magnifying power it appears to be transversely striate. The primordial sac readily separates from the outer cell-wall.

This plant was first noticed in the Mediterranean Sea, where it grows in the fissures of littoral rocks in many places. It occurs also in Brazil, from whence I possess a specimen; and is found generally throughout the West Indian Islands. Our Key West specimens are rarely more than two inches high and about three in breadth. The largest specimen I possess was given me by the late Mr. Menzies, as having been dredged in twenty fathoms in the Gulf of Mexico. This specimen measures six inches across, and its venation offers some peculiarities; which perhaps may lead to its specific separation. In our Key West plants the seriated cells of the principal veins stand apart from each other, or are in single file, leaving wedgeshaped spaces between. In Mr. Menzies' specimen the principal veins are partly unicellular, partly formed of several parallel, closely placed cells, without interspaces. The structure is easily seen, but difficult to describe in intelligible language. Should subsequent observations establish this plant as a species, it may be called *A. Menziesii*.

PLATE XLIV. A. *Fig. 1.* ANADYOMENE *flabellata*, full grown; and *Fig. 2*, a young plant; the *natural* size. *Fig. 3* represents *Fig. 2*, *magnified*, to show the structure of the frond.

V. DICTYOSPILÆRIA. *Dne.*

Root consisting of a few grasping processes. *Frond*, a decumbent, amorphous membrane composed of a single series of vesicated, sub-globose, tough-coated cells, filled with green, fluid endochrome. *Fructification* unknown.

The plant for which this genus was defined by DeCaisne was formerly referred to *Valonia*, to which no doubt it is closely allied, but from which it differs by the greater lateral coherence of the cells which compose the frond, and also by the structure of these cells. It is of common occurrence throughout the tropics of both hemispheres. On the coast of Australia a second species is equally common, differing from *D. favulosa* in the frond being never vesicated, and in the component cells being very much smaller, the surface flatter, and the frond having a silky lustre. This I have elsewhere described under the name *D. sericea*.

1. DICTYOSPILÆRIA *favulosa*, *Dne.*; frond at first globose and hollow, afterwards irregularly torn, expanded; the vesicated cells globoso-hexagonal, convex, and very prominent. *Dne. An. Sc. Nat. Ser. 2. vol. 17, p. 328. Kütz. Sp. Alg. p. 512. Valonia favulosa, Ag. Sp. Alg. 1. p. 432. (Tab. XLIV. B).*

HAB. Key West, W.H.H., *Prof. Tuomey*. (No. 103). (v. v.)

Fronds at first globose, like tubers, heaped together, hollow and empty or filled with sea-water, attached to the rock and to each other by a few short, rooting processes; at length irregularly torn, and then forming expanded, cartilaginous, or skinlike coarsely reticulated membranes. The membrane is wholly composed of a single layer of large, globose, or by mutual compression hexagonal cells, which closely cohere by their sides, leaving the convex ends of the cell free, and these form the surface of the membrane, which when dry resembles a piece of fish skin, or a miniature honeycomb. When the cells have been separated, each is seen to be marked at the line of junction by a double row of circular discs. In full grown cells the primordial utricle is easily separable from the outer cell-wall, and contains a green, granular endochrome; from which, by cell-division, four new cells are formed, and thus the frond extends by repeated quadrisection of its component cells. The cell-wall is very tough and semifibrous in texture, more like an animal than a vegetable membrane; and I have seen hairlike processes issue from it internally, analogous perhaps to the fibrous processes of the membrane of *Caulerpa*. I cannot say whether this be a constant character. It was observed in specimens from the Pacific brought home in spirit, and cannot be readily ascertained from dried specimens.

PLATE XLIV. B. *Fig. 1.* *DICTYOSPILERIA favulosa*, the natural size. *Fig. 2.* Portion of the surface, showing the division of the cells. *Fig. 3.* One of the cells of which the frond is composed, removed; the latter figures *magnified*.

ORDER IV.—ULVACEÆ.

Grev. Alg. Brit. p. 168. *Hook. Br. Fl.* 2, p. 309. *Harv. Man.* p. 211. *J. Ag. Alg. Médit.* p. 14. *Endl. 3rd Suppl.* p. 18. *Ulvaceæ et Enteromorpheæ*, Kütz. *Spec. Alg.* pp. 471-475.

DIAGNOSIS. Green or purple, marine or fresh water Algæ, composed of small, polygonal or quadrate cells, forming expanded membranes or membranous sacs or tubes; rarely arranged in filaments. *Fructification*, zoospores formed in the cells of the frond.

NATURAL CHARACTER. *Root* a small disc, or point of attachment. *Frond* formed of small, often very minute, roundish, quadrate or polygonal cellules cohering together into thin, filmy membranes, of no very definite form, and either expanded into broad leaves, contracted into narrow ribbons, or forming tubes which are either simple or branched. In those of lowest organization, such as *Tetraspora*, the frond is of a nature so loosely gelatinous that it can only by courtesy be called a membrane, and the cells which give it consistency are widely separated by transparent jelly. In *Prasiola* the

cells are closer, with narrower hyaline interspaces, and the gelatine has a firmer consistence, more like that of ordinary cellulose; and in *Ulva* there is perfect cohesion between thin-walled cells, and the membrane formed by them is firm, and often rigid and tough. Perhaps in all cases the cells multiply by a fissiparous division into four, the old cell dividing longitudinally and transversely. This is very obvious wherever the cells stand sufficiently apart, as in *Tetraspora* and *Prasiola*, and in the more transparent *Enteromorphae*; but is less evident in the ordinary marine *Ulva*. Most of the *Ulvaceæ* have the brilliant, grass-green common to the Chlorosperms; but in the genera *Porphyra* and *Bangia* the frond assumes a more or less pure dark-purple hue, and hence some authors have removed these genera to the Rhodosperms. But I cannot think such removal natural or desirable; for there is really no difference between *Ulva* and *Porphyra* in structure or fructification, and the occurrence of a purple colour, or even of a purer red, is by no means limited among *Chlorosperms* to these plants. We frequently find purple colours in *Batrachospermæ*, especially in *Thorea*; they occur also in *Oscillatoriaceæ* and in *Palmellaceæ*; and in the latter, and also in the spores of *Ædognia* a pure carmine or scarlet is often seen.

The fructification of the *Ulvaceæ* consists in zoospores, which are formed indifferently in all or in any of the cells of the frond, and are furnished with two or four cilia. Their development and germination are beautifully figured by Thuret in his valuable memoir on the zoospores of Algae, in *An. Sc. Nat. Ser. 3, vol. 14*.

Ulvaceæ are universally dispersed either in salt or fresh waters throughout the world, and several are found on damp soil, or in half inundated places. All the genera and most of the species are cosmopolitan. Their specific characters are difficult to fix, and authors differ very much in their opinions respecting them. Kützing describes a multitude of species, which other writers find it difficult to separate, even as varieties. The form of the frond, in the foliaceous species, is assuredly a most uncertain character; and the comparative size and branching of the tube, in the tubular, equally variable.

SYNOPSIS OF THE NORTH AMERICAN GENERA.

* *Porphyreæ*: frond purple.

I. PORPHYRA. Frond leaf-like, purple.

II. BANGIA. Frond filiform, purple.

** *Ulveæ*: frond green.

III. ENTEROMORPHIA. Frond membranous, tubular, simple or branched.

IV. ULVA. Frond membranaceous, leaf-like.

V. TETRASPORA. Frond gelatinous, expanded.

I. PORPHYRA. *Ag.*

*Fron*d membranaceous, flat and leaf-like, purple. *Fructification*, dark purple granules (spores) arranged in fours, dispersed over the whole frond.

The species of this genus are difficult to determine, and I am induced, in this place, to unite the *P. vulgaris* and *P. laciniata* of authors, which I have elsewhere (*Phyc. Brit.*) figured and described as distinct. They appear to me to run one into another; and if we contend for two species, with equal justice might we make half-a-dozen. Both are indifferently used in England in the preparation of "marine sauce," or laver, which is often brought to table as an accompaniment to roast meat. Kützing describes sixteen species, several of which are probably reducible to the following:—

I. PORPHYRA *vulgaris*, *Ag.*; frond polymorphous, either undivided or cleft into several broad segments; sometimes peltate, fixed by a middle point. *P. purpurea*, and *P. laciniata*, *Ag. Sp. Alg.* p. 190—191. *P. vulgaris*, *Ag. Aufz.* p. 18. *Harv. Phyc. Brit.* t. 211. *P. laciniata*, *Harv. Phyc. Brit.* t. 92. *Wyatt. Alg. Danm.* No. 32. *P. linearis*, *Grev.* *P. amethystea*, *Kütz.*

HAB. Rocks between tide marks. On the eastern shores from Charleston, South Carolina, to the Arctic Regions. Western Coast, from California to Russian America (v. v.).

Very variable in form in different localities and at different stages of growth. In an early state it is either oblong or linear-lanceolate, with an evident though minute stipe, and then it constitutes the *P. linearis* of Greville, which is found truest to its type in the beginning of winter, in situations near high-water mark, where its vegetation is less vigorous. Later in the season the form usually called *P. vulgaris*, as figured in *Phyc. Brit.* t. 211, will be found in the same locality, and also throughout the whole space between tide marks. In this the frond is ovate or ovato-lanceolate, or broadly lanceolate, much waved at the margin, and without obvious stipe, several inches long and 2—3 inches wide. *P. laciniata*, *Ag.*, which merely differs in having a deeply lobed or divided lamina, grows mixed with the simple variety (*P. vulgaris*); and specimens may easily be found which are intermediate in character. The state called *P. umbilicalis* grows on exposed rocks, generally near low water mark, and looks more like a different species than any of the other varieties. In it the frond is always short, usually of a very dull colour, fixed by a point removed from the margin of the lamina, and therefore somewhat peltate, with the upper side depressed or umbilicate in the centre. This variety is rarely more than two or three inches in length. Other varieties attain to 8 or 10 inches or more.

The colour varies with the age and condition of the fronds. Often it is olivaceous green, with little or no trace of purple; but generally it is of a fine dark purple,

especially when in fructification, the colour being wholly derived from the fructifying cells. The colour also generally becomes more intense and more purple after steeping in fresh water, and in the process of drying; and the dried plant has a very glossy surface, like satin. Sometimes it adheres to paper and sometimes not; and it always shrinks considerably in drying.

II. BANGIA. *Lyngb.*

Fronde thread-shaped, tubular, composed of numerous radiating cellules, disposed in transverse rows, and enclosed within a hyaline continuous sheath. *Spores* purple, one formed in each cell of the frond.

This genus was founded by Lyngbye on the *Conf. fusco-purpurea* of Dillwyn, and several other Algæ, both marine and of fresh water, which are more or less nearly allied to it. Some of these have been properly removed. The genus still contains some anomalous species, but the three following appear to me to be con-generic. The genus was first placed by Greville in Ulvaceæ. This position has been questioned, and I was formerly disposed to concur with those who refer it to the neighbourhood of *Lyngbya* in Oscillatorieæ; but a careful examination, especially of *B. vernicularis*, has now convinced me that *Bangia* cannot be far removed from *Porphyra*, to which it bears the same relation that *Enteromorpha* bears to *Ulea*.

1. *BANGIA fuscopurpurea*, Lyngb.; filaments elongated, simple, decumbent, nearly straight, capillary, here and there constricted, forming a brownish-purple, glossy stratum; granules several in each transverse band, dark purple. *Lyngb. Hyd. Dan. p. 83, t. 24. Grev. Alg. Brit., p. 177. Wyatt, Alg. Danm., No. 167. Harv. Phyc. Brit., t. 96. Kütz. Sp. Alg. p. 360. B. atropurpurea, Ag. Syst. p. 76. Alg. Eur. t. 25. Conferva fuscopurpurea, Dillw. t. 92. E. Bot. t. 2055, and C. atropurpurea, Dillw. t. 103. E. Bot. t. 2085.*

HAB. On rocks and wood-work between tide marks. Newfoundland, Herb. *Montagne*. Narragansett Pier, *Prof. Bailey*. Little Compton, *Mr. Olney*. Providence, *M. Charles Giraud*. Lynn, Mass. *Mrs. Estes*. (v. v.)

This is attached to rocks and stones, or to woodwork, and occurs in stratified patches of indefinite extent, of a dark purple colour. The filaments are 2-3 inches long, and float freely in the water, lying down in a fleece when left by the retreating tide. They vary greatly in diameter according to age, and the microscopic characters are equally varied in young and old specimens. In the young state the filament is formed of a

series of very short cells, much shorter than the diameter of the filament; each containing an undivided mass of dark purple endochrome, and at this age the whole structure is very similar to that of *Hormotrichum*. When further advanced, the endochrome divides longitudinally into many quadrate portions, round each of which a cell membrane grows, and they become so many cells arranged in a radiant manner round a central point, and appear, when viewed from the side, as transverse rows of beadlike granules tessellating the filaments. Eventually, from repeated cell division, the arrangement in transverse lines becomes difficult to observe, and the filament looks like a confused mass of tissue. The number of transverse granules seen in each row depends on age. The figure in *Phyc. Brit.* represents an old state of the plant when the granules have multiplied. The colour under the microscope is a beautiful amethystine purple.

I have only received this plant from the above-named American localities, but it is probably to be found along the rocky shores of all the northern States. In the British Islands it grows indifferently in the sea or in fresh water; in the latter case it often occurs on the walls and gates of canal locks, and it may be expected to occur in similar situations in America. The specimen from Newfoundland is in a very advanced stage; the filaments being of large diameter, irregularly constricted, and their granules very numerous in each band, and of minute size. The specimen from Lynn, on the contrary, is very young, with the transverse rows just beginning to be formed.

2. *BANGIA vermicularis*, Harv.; root scutate; filaments basifixed, twisted, setaceous at the base, gradually widening upwards and at last claviform, much incrassated toward the end, undulating, flaccid, with a wide, hyaline, firm investing tube; transverse bands closely placed; granules dark-purple, vertically flattened, few in each whorl toward the base, very crowded and numerous toward the upper portion of the filament. (TAB. XLIX. A.)

HAB. Golden Gate, California, *A. D. Frye* (v. s. in Herb. T. C. D.)

Filaments fixed at the base by a scutate root, and probably freely floating in the water; perhaps tufted, but the specimens received have been pulled asunder. Each filament is about two inches long; at its origin it is of the diameter of human hair; it becomes gradually thicker upwards, until, near the apex, in old filaments, it is at least twice as thick as hog's bristle. The form is therefore linear-clavate, though the club be very slender in proportion to its length. When dried the threads look like sinuous worms, tapering from a thickened apex to a very slender base. A cross section shows a central cavity surrounded by a variable number of radiating, cuneiform, dark-purple endochromes. Toward the base of the filament there are but four of these in a plane; a little higher up there are eight, and in the upper portions they are not only indefinitely numerous in the whorl, but they form dichotomous radiating strings extending horizontally from the central tube to the circumference. They do not cohere in regular moniliform filaments, but there seems a tendency to do so. It is difficult, in this part

of the frond, to see the exact cellular structure, owing to the great transparency of the cell-walls, and the facility with which the endochromes are thrown out of their cavities when cross-sections are moistened.

This is a very distinct species, remarkable for the great diameter of its worm-like filaments, and their clavate form. Notwithstanding its somewhat greater complexity of structure, I think there can be no doubt of its near affinity with *B. fuscopurpurea*.

PLATE XLIX. A. *Fig. 1.* *BANGIA vermicularis*, the natural size. *Fig. 2.* A frond magnified. *Fig. 3.* Base; *4.* middle portion; and *5,* apex of the same. *Fig. 6, 7, 8.* Transverse sections at different heights. *Fig. 9 and 10.* Radiating endochrome-cells, all highly magnified.

3. *BANGIA ciliaris*, Carm.; filaments very minute, (forming a rosy down on the fronds of other Algæ) basifixed, straight; granules either in a single series, or two or three in each transverse row. *Harv. Phyc. Brit. tab. 322. Chauv. Rech. p. 37.*

HAB. Parasitic on *Chondria atropurpurea*, at Charleston, S. C., *W.H.H. (v. v.)*

This forms a very short, bright, rose-red downy pile on the fronds of the *Chondria*. Each filament is scarcely the tenth of an inch in length, and consists either of a single row of cells shorter than their diameter; or of a double or triple series of such cells. Possibly it may be only the very young state of *B. fuscopurpurea*; but the habitat is different, and the colour much brighter.

III. ENTEROMORPHIA, Link.

Frond tubular, membranaceous, green, reticulated. *Fructification*, granules, commonly in fours, contained in the cells of the frond.

The tubular frond distinguishes this genus from *Ulva*. The tube varies greatly in width, in different or even in the same species. Sometimes it is of no greater diameter than that of human hair; and sometimes it is one or two inches across, forming an inflated bag. The species are widely dispersed, extremely variable in ramification and general appearance, and some of them are among the commonest of all littoral algæ. The green stringlike weeds that infest the bottoms of boats and vessels lying in harbour are generally species of this genus, and mostly *E. compressa*, which is found in all parts of the ocean from the Arctic and Antarctic basins to the Equator.

1. *ENTEROMORPHA intestinalis*, Link ; fronds perfectly simple, elongated, becoming inflated, obtuse, tapering extremely to the base. *Link, Hor. Phys. Ber. p. 5. Grev. Alg. Brit. p. 179. Harv. Phyc. Brit. t. 154. Wyatt, Alg. Danm. No. 80. E. Bot. Sup. p. 2756. Kütz. Sp. Alg. p. 478. Ulva intestinalis, Linn.*

HAB. Whalefish Islands, Davis's Straits, *Dr. Lyall.* Boston Bay, *Dr. Gray.* Providence, Rhode Island, *Mr. Obney.* New York Bay, *Mr. Walters, &c.* Beesley's Point, *Mr. Ashmead.* Sullivan's Island, *Mr. Ravenel.* (v. v.)

Very variable in the length and breadth of the frond. Old specimens are often much inflated and bag-like ; the frond being 1-2 inches in diameter. Others, often from the same locality, are not more than quarter of an inch in breadth.

2. *ENTEROMORPHA compressa*, Grev. ; fronds elongated, branched, cylindrical or sub-compressed ; the branches simple or nearly so, long, obtuse, much attenuated at the base. *Grev. Alg. Brit. p. 180 t. 18. Harv. Phyc. Brit. tab. 335. Wyatt, Alg. Danm. No. 168. Kütz. Sp. Alg. p. 480.*

HAB. Sea shores, extremely common. (v. v.)

Under one or other of its many forms this species is found on all parts of the American coast extending also up the estuaries of tidal rivers. Our most northern specimens were collected in Lat. 75° 42' by *Dr. Sutherland.*

3. *ENTEROMORPHA clathrata*, Grev. ; frond tubular, tessellated, cylindrical, slender, very much branched ; branches erect or spreading, sometimes squarrose, more or less beset with slender tapering subulate ramuli. *Grev. Alg. Brit. p. 181. E. clathrata, erecta et ramulosa, Hook. Harv. Phyc. Brit. t. 340, t. 43, and t. 245. Wyatt, Alg. Danm. Nos. 34, 166, and 208. E. clathrata, ramulosa, paradoxa, &c. Kütz. Sp. Alg. p. 479.*

HAB. Rock pools, &c. Rhode Island, *Mr. Obney.* Staten Island, New York, *Professor Bailey.* Red Hook, &c., *Messrs. Hooper and Calverley.* Boston Bay, *Captain Pike.* Beesley's Point, *Mr. Ashmead.* (v. v.)

Very variable in appearance, but generally more slender and filiform than *E. compressa*, and also more cylindrical. It is usually densely tufted, capillary, or setaceous, soft to the touch and very much branched ; the branches either erecto-patent or patent ; sometimes horizontal or squarrose, repeatedly decomposed, and their ultimate divisions furnished with slender ramuli that taper to a fine point, and are not constricted at base. These ramuli are sometimes very numerous, sometimes few, and either short and spine-like or elongated and filiform. When short, horizontally spreading, numerous and

spinelike, the plant becomes *E. ramulosa* of authors. I have seen the varieties *erecta*, *ramulosa* and *clathrata* from the American coast. The cells of which the walls of the frond are composed are larger and more quadrate than those of *E. compressa*; the surface therefore looks tessellated.

4. ENTEROMORPHA *Hopkirkii*, McCalla; frond excessively slender and byssoid, flaccid, very much branched; branches feathery, decompound, erect, attenuated, set with minute subulate ramuli; cellules large, hyaline, each containing one or two minute grains of endochrome; the ramuli formed of a single series of such cells. *Harv. Phyc. Brit. tab. 263.*

HAB. In rock pools between tide marks. Greenport, *Mr. Hooper.* (v. s.)

Tufts very soft, 3-4 inches long. *Fronde* very slender and much branched. The frond of this species is composed of much larger and more hyaline cells than in the preceding, and the endochrome is of very minute size in proportion to the cells in which it is lodged. This species occurs also on the shores of England and Ireland; but is not so common as others of the genus, and appears to be sufficiently characterised by its cellular structure. The ramuli are articulated, like the branches of a *Cladophora*.

IV. ULVA. L.

Frond membranaceous, flat, and leaflike, green. *Fructification*; green granules (spores) often arranged in fours, dispersed over the whole frond.

Under this generic name I still retain the species of the modern genera *Prasiola*, *Ulva*, and *Phycoseris*; the first of which differs from the second in having its cellules arranged in a most obviously tessellated pattern; and the last, from either of the preceding, by its membrane consisting of two layers of cells instead of a single layer. The species of the section *Prasiola* are of minute size, and are found in damp places, on the soil, on old walls and on decaying timber and thatch, &c.; and no doubt several (such as *P. crispa*, *P. calophylla*, &c.) occur in America, but I have not received any American specimens. Kützing describes a *P. mexicana*, Lieb. from Mexico, in words which would apply equally to the *P. crispa* of Europe.

Sect. 1. PHYCOSERIS; membrane formed of a double layer of cellules.

1. ULVA (PHYCOSERIS) *fasciata*, Delile; frond stipitate, cartilagineo-membranaceous, rigid, cleft into several strapshaped segments, which are undulate at the margin, and irregularly toothed or sinuate. *Del. Egypt, p. 153, t. 58, f. 5. Mont. Alg. Alger, p. 151, t. 14, fig. 1-2. Phycoseris fasciata, Kütz. Sp. Alg. p. 477. Ulva divisa, Suhr!*

HAB. California, *Dr. Coulter*. Shores of the Gulf of Mexico, *Dr. Schott*. (v. v.)

More rigid than *U. latissima*, and divided into many long narrow segments, half an inch to an inch wide, and 6-8 inches long or more, preserving a nearly equal breadth throughout, and either simple or forking. Sometimes the lacination is almost pinnate, having an undivided leading segment with lateral and often opposite lesser segments. Sometimes the division extends nearly to the base, and the form is then palmate. The margin is mostly toothed, or cut, and frequently undulate. The colour is a full grass green, and the substance rigid. It does not adhere to paper in drying.

I possess authentically named specimens from Montagne and Von Suhr.

2. ULVA (PHYCOSERIS) *Linza*, Linn.; frond linear-lanceolate, acute, crisped at the margin, composed of two membranes closely applied. *Lin. Sp. Pl.* p. 1633. *Ag. Sp. Alg.* 1, p. 413. *Harv. Phyc. Brit.* t. 39. *Wyatt, Alg. Danm. No.* 164. *Phycoseris Linza* and *P. lanceolata*, *Kütz. Sp. Alg.* p. 475, (and probably others.)

HAB. Rocky shores of British America, and of the north-eastern States. Halifax, *W.H.H.* Boston Bay, *Captain Pike*. New York Bay, *Messrs. Calverley, Hooper, &c.* (v. v.)

Root a small disc. *Frond* 6-12 inches long or more, from half inch to one or two inches in width, linear-lanceolate, tapering to the base, and either blunt or attenuated at the apex, much waved and curled at the margin; formed of two distinct, separable membranes, closely applied and cohering together. *Colour*, a full, brilliant grass green, becoming pale in age. *Substance*, rather soft and thin. It adheres to paper in drying.

Agardh's *U. Bertolonii* appears to me to be a form of this species, which is also nearly allied to *Enteromorpha intestinalis*, with which, if we omit the inflated frond, there is much similarity in form and structure. It is not so common as the following species, but is nevertheless widely dispersed.

3. ULVA (PHYCOSERIS) *latissima*, Linn.; frond polymorphous, very broad, ovate or oblong, simple or lobed, undulate, bright green. *Lin. Fl. Suec.* p. 433. *Ag. Sp. Alg.* 1, p. 407. *Harv. Phyc. Brit. tab.* 171. *Wyatt, Alg. Danm. No.* 33. *Phycoseris gigantea* and others, *Kütz. Sp. Alg.* p. 476.

HAB. Common on the American coast. (v. v.)

*Fronde*s from six inches to two feet in length, from three to twelve inches in breadth, tufted or scattered; very variable in shape, sinuated and wavy or flat, often plaited. *Substance*, thin and soft, very smooth and glossy, like fine green silk. *Colour*, a brilliant green, when growing near high water mark; darker, and often glaucous when obtained from deep water, and sometimes turning brownish in the herbarium.

Specimens are often found pierced with holes, the result either of age or of the attacks of worms. Such individuals constitute the *Phycoseris myriotrema* of Kützing.

Sect. 2. ULVA. Membrane formed of a single layer of cellules.

4. *ULVA lactuca*, Linn. ; "frond at first obovate, saccate, inflated, at length cleft down to the base ; the segments plane, unequal, lacinated, semi-transparent," *Greav. Lin. Sp. Pl.* p. 1632. *Ag. Sp. Alg.* 1, p. 409. *Greav. Crypt. Scot.* t. 313. *Harv. Phyc. Brit.* t. 243. *Kütz. Sp. Alg.* p. 474.

HAB. Boston Bay, *Miss E. H. Brewer.* Indianola, Texas, *Dr. Schott.* (v. v.)

Much thinner and more delicate in substance, and of a paler colour than *U. latissima* ; and clearly characterised, on dissection, by its simpler membrane. It is more transparent, and the cells are more regularly grouped in fours, more distant, with hyaline interspaces. When young it forms a bag, like a very short and broad *Enteromorpha*. It closely adheres to paper in drying.

5. *ULVA bullosa*, Roth. ; frond very delicate, gelatinoso-membranaceous, at first saccate, afterwards bursting, and opening out into a broad, wavy or torn floating membrane. *Roth, Cat. Bot.* 3, p. 329. *Ag. Sp. Alg.* 1, p. 414. *Harv. Man. Ed.* 1, p. 171. *Huss. Br. Fr. Wat. Alg.* p. 297, t. 78, fig. 13. *Tetraspora bullosa*, *Kütz. Sp. Alg.* p. 226.

HAB. In fresh-water ponds and ditches. Whalefish Islands, Davis's Straits, *Dr. Lyall.* (v. v.)

Probably as common in stagnant pools in America as it is in Europe, but I have as yet only seen specimens brought from the Arctic Regions by *Dr. Lyall*. When young it is attached, and somewhat tubular, like large specimens of *Ent. intestinalis* ; but it afterwards bursts open, and then generally floats on the surface, being buoyed up by bubbles of oxygen, which it disengages.

By Kützing this species is referred to *Tetraspora*, from which it scarcely differs by any definite character.

V. TETRASPORA. *Link.*

Frond gelatinoso-membranaceous, tubular, inflated or flat, green. *Fructification*, green granules (spores) arranged in fours, dispersed throughout the hyaline cells of the frond. (*In fresh water.*)

This genus scarcely differs from *Ulva* on the one side and *Palmetta* on the other. The frond is more gelatinous than in *Ulva*; and more membranous than in *Palmetta*. The whole of the endochrome is converted into spores, which are arranged in squares and more distantly placed than in *Ulva*.

1. *TETRASPORA lacunosa*, Chauv. ; frond at first tubular, then flat, or irregularly lobed, membranaceo-gelatinous, pale-green, everywhere pierced with roundish holes of various sizes. *Chauv. Alg. Norm. Breb. Alg. Fal. p. 11, t. 1. Kütz. Sp. Alg. p. 227. T. Godeyi, De Breb. Kütz. Tab. Phyc. t. 30, f. 3. T. perforata, Bailey, M.S.*

HAB. In fresh-water streams. Abundant near Westpoint, *Prof. Bailey*. Providence, Rhode Island, *Mr. Olney*. (v. s. in Herb. T.C.D.)

Frond at first funnel-shaped, afterwards splitting open, and then flat, expanding upwards and irregularly lobed, everywhere pierced with roundish holes of various sizes, large and small intermixed. These holes increase in size and numbers with age, and thus at last the frond becomes an open network. The substance is very gelatinous, but rather firmer than in some other species of the genus. The colour is a pale green; and the hyaline gelatinous membrane is filled with roundish granules set in fours.

Kützing's figure of *T. Godeyi* answers well to our plant. I have not seen any authentic specimens of *T. lacunosa*, which is referred by Kützing to his *T. lubrica*, var. β ., but the description given of it applies to the American plant. When carefully dried, it forms a very pretty object for the Herbarium.

ORDER V.—BATRACHOSPERMEÆ.

BATRACHOSPERMEÆ, *Ag. Syst. p. 23, (partly) Harv. Man. Ed. 1, p. 119. Berk. Crypt. Bot. p. 136, Dne. class, p. 33 (partly.) Kütz. Sp. Alg. p. 535. Lemnier. Ag. Sp. Alg. 2, p. 1. Harv. Man. Ed. 1, p. 118, Dne. Class, p. 31. Kütz. Sp. Alg. p. 527 (partly.)*

DIAGNOSIS. Blackish-green, olivaceous or purplish fresh water Algae, with filiform, branching, inarticulate fronds, composed of small cells; naked, or whorled with moniliform ramelli. *Fructification*; moniliform strings of naked spores, either forming external tufts, or concealed within a tubular frond.

NATURAL CHARACTER. *Root* merely a point of attachment or little disc, by which the frond is firmly fixed to the substances (usually rocks and stones in rapid rivers and

streams) on which it grows. The plants referred to this Order naturally group themselves into two suborders, distinguished from each other by the habit of the frond, but closely related in structure and fructification, and as it seems to me inseparably connected by the genus *Tuomeya*, which unites in itself the characters of the seemingly so dissimilar genera *Batrachospermum* and *Lemanea*. In the first suborder (*Batrachospermeæ vereæ*) the branching filiform frond consists of a solid axis, invested with a gelatinous coating, and composed of vertical, confervoid filaments, strongly glued together. This axis is either, as in *Batrachospermum*, whorled at short intervals with moniliform ramelli, formed of globose cellules strung together; or else, as in *Thorea*, it is uniformly clothed with a villous stratum of byssoid ramelli, formed of cylindrical cellules. The fructification, so far as known in this suborder, consists of globular, very dense tufts of spore-threads, similar in structure to the ramelli, but of more minute size, and far more densely packed together. I question whether they be properly *spores*, probably they are rather highly developed or compound gemmæ. In the second suborder, *Lemaniceæ*, the frond is denuded of confervoid ramelli, and consists altogether of a compound, filiform axis, composed of minute cells. In *Lemanea* the frond is hollow and tubular, the walls of the tube being laxly constructed within; and moniliform strings of spores, similar to those of *Batrachospermum*, are attached to the surface of the tube. This structure is almost the exact reverse of that of *Batrachospermeæ*, where the central axis is most solid, and clothed *externally* with moniliform filaments. In *Tuomeya* the frond has at first the external characters of a *Lemanea*, but is furnished with an *axis* having the structure of a *Batrachospermum*, as if a *Batrachospermum* were developed within the tube of a *Lemanea*; and when fully developed the surface is uniformly coated with minute filaments, as in *Thorea*.

Authors differ much in their views of the proper limits of this Order. Decaisne unites with it *Liajora* and *Dichotomaria* (*Galaxaura*) both of which are undoubtedly Rhodosperms; and *Myriocladia*, which is a Melanosperm. Kützing separates *Batrachospermum* as the type of an Order of which it is the only genus; while he refers *Galaxaura*, *Actinotrichia* and *Lemanea* to his Lemaniceæ; and places *Thorea* with his Chatophoridae. My own views more nearly correspond with those of Mr. Berkeley, who brings *Batrachospermum*, *Thorea*, and *Lemanea* together into one Order. These genera are exclusively fluviatile or lacustrine, so far as I am aware. The *marine* variety "*purpurascens*," Roth, of *Batr. moniliforme* is founded on a figure of Dillenius (*Hist. Musc. t. 7. fig. 40*) which certainly looks very like a *Batrachospermum*, but the original specimen preserved in the Dillenian Herbarium belongs, according to Turner, to *Ceramium diaphanum*. The marine "*Thorea Americana*" of Kütz. is assuredly not a congener with *T. ramosissima*, the type of the genus; but properly referred by Bory, who first described it, to *Chordaria*.

Like most fresh water Algæ, several of the species are widely distributed. *Batrachospermum moniliforme* is found throughout Europe in various parts of Asia, in Tasmania and New Zealand, and in extra-tropical South America; and *B. vagum* and *atrum*, of which as yet I have seen no North American specimens, have nearly as extensive a range. *Lemanea torulosa* occurs in Europe. *Tuomeya fluviatilis* has only as yet been found in North America, but occurs in distant localities (New York and Alabama) and may probably be found to have a much larger area of distribution.

TABLE OF THE NORTH AMERICAN GENERA.

Sub-Order I. BATRACHOSPERMEÆ ; *Fronde* filamentous, gelatinous, externally clothed with minute articulated ramelli.

I. BATRACHOSPERMUM. *Fronde* nodose, ramelli whorled.

Sub-Order II. LEMANIEÆ. *Fronde* cartilaginous, solid or hollow, with a cellular peripheric stratum.

II. TUOMEYA. *Fronde* solid, with a filiform, nodoso-articulate axis.

III. LEMANEA. *Fronde* hollow.

I. BATRACHOSPERMUM. *Roth.*

Root discoid. *Fronde* filamentous, gelatinous, branched, consisting of an articulated longitudinally striated *axis* beset with closely placed whorls of moniliform, free ramelli. *Fructification*, globose clusters of seriated spores, attached to the ramelli. *In fresh water.*

Widely dispersed plants inhabiting clear fresh-water streams and wells in most parts of the world ; rarely found in stagnant waters. Several species have been described, but the characters of many are unsatisfactory. All are exceedingly gelatinous, every part of the frond being invested with a clear, rather firm mucus, and when removed from the water the collapsed branches have the colour and general aspect and feel of *frog-spawn* ; whence the generic name. Kützing, in Plate 8 of his *Phycologia Generalis*, has given figures to illustrate the early development and gradual formation of the frond. At first the young plant consists merely of a string of moniliform cells. Soon there is a distinction into an axis and ramelli, the axis consisting of a series of long, pellucid cylindrical cells, placed one above the other ; and the ramelli being more coloured, formed of roundish cellules, and placed at the nodes of the axial filament, round which they gradually form a whorl. At first these ramelli are simple ; afterwards they are repeatedly dichotomous. The *axis* in the young plant consists merely of a string of naked cells ; in the full-grown frond it is invested with a sheath or outer coat formed of slender filaments which issue from the bases of the whorled ramelli, growing downwards like roots, adherent to the axis and continued to the next node. These give the longitudinally striate appearance to the axial filament ; and in old fronds they constitute the axis itself, which then becomes tubular, from the absorption or rupture of the primordial tube.

1. BATRACHOSPERMUM *moniliforme*, Roth. ; frond irregularly much branched, very

gelatinous; whorls of ramelli globose, distinct, the branches resembling strings of beads. *Kütz. Sp. Alg.* 1, p. 535. *Harv. Man. Ed.* 1, p. 119. *Hass. Brit. Fr. Wat. Alg.* p. 108. *Conferva gelatinosa*, *Dillw. Conf. t.* 32. *E. Bot. t.* 689.

HAB. On stones, &c. in running streams and wells of fresh water. New York, *Prof. Bailey, Mr. Calverley*. Virginia, *Mr. Jackson*. Alabama, *Prof. Tuomey*. South Carolina, *Mr. H. W. Ravenel*. Michigan, *Dr. A. Gray*. (v. v.)

Fronds densely tufted, gelatinous, capillary, irregularly much branched, decompound, the branches tapering to their extremity, beset with short tapering ramelli, which are very patent and once or twice divided. All the branches and ramuli are moniliform, and are composed of a filiform cylindrical axis; set at short intervals with very dense, globose whorls of multipartite, dichotomous ramelli. The axis is formed of an articulated monosiphonous filament, externally coated with a sheath of closely-placed, cohering, longitudinal, parallel, articulated, very slender filaments, derived from the bases of the whorled ramelli, and developed along the internodes from above downwards. The *ramelli* are excessively branched, and composed of short cells much constricted at the points of union; the lower ones are somewhat pyriform, the upper lanceolate. The masses of fructification are very dense, appearing to the naked eye like black grains among the ramelli. When examined, by squeezing between two glasses on the table of the microscope, they are seen to consist of exceedingly densely packed, minute, dichotomous ramelli, radiating from a common centre. These ramelli scarcely differ in structure from those of the ordinary whorls, and can scarcely be regarded as composed of true *spores*; but seem to be rather of the nature of *gemmæ*. The general *colour* of this species varies much: commonly it is a dark slate colour, sometimes it is olive-green, and often becomes purple after having been dried.

B. moniliforme is found in most parts of the world. It is very common in fresh-water streams in Europe; and we have received it from Van Diemen's Land, New Zealand, and Cape Horn.

II. TUOMEYA. *Harv.* (Nov. Gen.)

Fronde cartilaginous, continuous, solid, at first transversely banded, afterwards annularly constricted; composed of a longitudinal axis, and two strata of peripheric cells. *Axis* columnar, consisting of several longitudinal, cohering filaments, beset with closely placed whorls of moniliform ramelli, whose branches anastomose horizontally and vertically into a cellular peripheric membrane, which is coated externally with moniliform filaments, gradually developed. *Fructification* (probably in the superficial filaments.) *In fresh water.*

TUOMEYA *fluvialis*, *Harv.*

HAB. On stones, in rivers and streams. River in Alabama, *Prof. Tuomey*. Near Fredericksburg, Virginia, *Prof. Bailey*. (v. s. in Herb. T.C.D.)

Fronde tufted, an inch or two in height, scarcely as thick as hog's bristle, much and irregularly branched, bushy; the branches alternate or secund, scattered or crowded, twice or thrice divided, and set with scattered, patent ramuli, which are slightly constricted at the insertions, and taper to an obtuse point. When young the branches and ramuli are perfectly cylindrical, and when examined under a low power of the microscope show a surface composed of minute, dotlike cells, placed close together, and marked at short intervals with dark coloured transverse bands. These bands disappear under a higher magnifying power. They are indications of the *nodes* of the axis of the frond, seen through the peripheric stratum. In old, fully developed specimens the branches and ramuli are annularly constricted at short intervals, the nodes becoming swollen, while the internodes remain unchanged. When a young branch is bruised between two pieces of glass the axis may be readily extracted. It consists of several parallel, longitudinal, jointed threads combined together at closely placed *nodes*, from which issue horizontal dichotomous filaments composed of roundish or angular cells. These excurrent filaments spread both horizontally and vertically, and their branches anastomose into a cellular mass or fleshy membrane which forms the inner peripheric stratum. In young plants a portion of the frond, between the axis and periphery, is hollow, but in older ones the cavity is quite filled up with cells. The external surface of the cellular periphery is clothed with a coat of moniliform filaments gradually developed, and forms what is above called the *second* peripheric stratum. These are found only in fully grown specimens; they consist of much smaller cells than those of the inner stratum; they are more strongly coloured, and I consider them to be connected with fructification. The *colour* is a dark olive. The substance is brittle and rigid when dry; and the plant scarcely adheres to paper.

I formerly received specimens of this curious little plant from my late friend Prof. Bailey, under the name "*Lemanea fluvialtilis*;" but, as may be gathered from the above description, it is very different from *Lemanea* in structure and much more nearly related to *Batrachospermum*. The external habit, substance, and colour are however those of a *Lemanea*, and without microscopic examination it might pass for one. The structure is difficult to see and also to describe in words. What I have called the inner peripheric stratum is externally as solid as the walls of a *Lemanea*; the outer periphery consists in a continuous clothing of the external surface of the frond with minute, fastigate, horizontal ramelli, not unlike those of which the globose fructifications of a *Batrachospermum* are made up. In young specimens only can the mode of evolution of the frond be observed; old specimens become completely blocked up with cellular tissue, and seem to be solid in every part when a transverse slice is examined; their axis may, however, be seen by employing a compressing glass.

The generic name is bestowed in memory of the late Prof. Tuomey of Tuscalosa, Alabama, so often mentioned as a valuable contributor to these pages. I have not ventured to make a drawing from the dried specimens which alone I have yet seen.

III. LEMANEA, *Bory.*

*Fron*d cartilaginous, continuous, tubular, branched, its periphery composed of two strata of cells, the *inner* stratum formed of roundish, empty, vesicated cells ; the *outer*, of minute, closely cohering, angular, coloured cellules. *Fruit*, tufts of seriated spores, attached to the inner surface of the tubular frond. (*In fresh water streams and rivers.*)

The species referred to this genus are found in fresh water streams and rivers, attached to stones by a discoid root. They are very dissimilar in appearance from other fresh water algæ, being of a remarkably firm fucoid substance, opaque and closely cellular. In many respects, however, they approach *Batrachospermum*, near which genus I have long considered to be their true systemic position, an opinion which must be considered as confirmed by the discovery of *Tuomeya*, a genus of intermediate structure. Kützing associates *Lemanea* with *Galaxaura* and *Actinotrichia*, two genera that appear to me to belong to HELMINTHOCALADIEÆ, among the Rhodospematous groups. Thwaites has given in the 20th vol. of Linn. Trans. a short account of the early development of the frond in *L. fluviatilis*. The spores at first vegetate into confervoid, slender jointed filaments, with long joints containing a spirally arranged endochrome. These constitute a sort of pro-thallus, or pseudo-colytedonous condition of the plant. After a time thick branchlets, the germs of the permanent frond, spring from the cells of the confervoid filament ; they are at first wholly dependent on the cell from which they rise, but soon acquire rootlets at their base, and rapidly elongating grow into the cellular, opaque, cartilaginous fronds characteristic of the genus. Kützing, *Phyc. Gen.* t. 19, also illustrates the early development, and gives elaborate sections of the cellular structure of the mature frond.

1. *LEMANEA torulosa*, Ag.; frond tufted, subsimple or divided near the base, robust, nodoso-constricted at short intervals, or moniliform, tapering from the base to the apex. *Ag. Sp. Alg.* 2, p. 6. *Act. Holm.* 1814. *tab.* 2, *fig.* 1. *Kütz. Sp. Alg.* p. 528. *L. variegata*, Ag.? *l. c.* p. 7.

HAB. On rocks and stones in rivers and streams. Kentucky, *Dr. Short.* (v. s.)

Root discoid. *Stems* many from the same base, 4-8 inches long or more, twice or thrice as thick as hog's bristle, rising from a very slender, capillary base, and gradually increasing in diameter upwards for about an inch, thence maintaining an equal diameter for $\frac{3}{4}$ of their length, and again tapering off at the extremity ; either quite simple or divided shortly above the base into numerous simple branches. The frond is regularly constricted and swollen at intervals of from one to two lines, so as to be nodose in the younger, and moniliform in the more advanced state, the distances between the swellings as well as their intensity varying in different specimens. The walls of the tubular frond are thick, composed of two layers of cells, the outer layer consisting of very minute and closely crowded radiant, coloured cellules, whose apices unite to form the exterior

coating of the frond, the inner of three or four rows of large, colourless, oblong, irregularly anastomosing cells. The tube is traversed and crossed by a few slender, cylindrical, long jointed filaments issuing from the inner peripheric cells. *Globose* masses of *fructification* are attached to the inner face of the tubular frond, either at the nodes or between them, without any apparent order. They consist (as in *Batrachospermum*) of very densely crowded, moniliform, subsimple strings of cellules radiating from a central point. The general *colour* is olivaceous when recent, and very opaque; it becomes a livid purplish in drying. *Substance* firmly cartilaginous or subcoriaceous. It does not adhere to paper in drying.

Agardh describes a *L. variegata*, "filis moniliformibus variegatis," as sent to him by Muhlenberg, from North America. By the description given it seems merely to differ from the common *L. torulosa* in being variegated with alternate bands of dark and pale, a character most probably dependant on the state of the specimens. I am indebted to Dr. Short of Kentucky, for fine specimens of the ordinary form. *L. fluvialis*, which is the commonest European species, has not been sent to me from America.

ORDER VI. CONFERVACEÆ.

Confervæ, *J. Ag. Alg. Medit.* p. 12. *Harv. Man. Ed. 1 and Ed. 2*, p. 196. *Lindl. Veg. Kingd.* p. 18. *Confervoideæ*, *Endl. 3d Supp.* p. 14. *Confervaceæ*, *Berk. Crypt. Bot.* p. 131. *Confervaceæ and Chatophoroideæ*, (partly) *Dne. class.* p. 31, *Kutz. Sp. Alg.* pp. 363-531.

DIAGNOSIS. Green, marine or fresh water Algæ, composed of articulated threads or filaments, and of cylindrical cells usually longer than their diameter. *Endochrome* diffused, or filling the cavity of the cell. *Zoospores* minute, indefinitely numerous in each cell.

NATURAL CHARACTER. *Root* rarely more than a mere point of attachment, and often perishing on the evolution of the frond, which then floats on the surface of the water. *Frond* in all cases filamentous, composed of strings of truncated, more or less cylindrical cells, placed end to end, and usually longer than their diameter. These cells are never branched, like those of the *Siphonaceæ*, and are usually much shorter in proportion to their diameter than in that order; but as compared with those of most of the filamentous Algæ they are long, varying however extremely in different species. The endochrome generally fills the cavity or primordial utricle of the cell, but varies greatly in density. In some cases it is thin and watery, and in others very dense, granular, and subopaque. It is sometimes arranged in transverse bands. In most cases the cell wall is membranaceous, soft, but of firm texture; but in *Draparnaldia* and *Chatophora*, the filaments are invested with gelatine, and in the latter genus numerous

filaments are enclosed within a common gelatinous envelope, and thus formed into somewhat compound fronds. In the great bulk of the Order no fructification other than minute *zoospores* has been observed. These are formed out of the colouring matter of the cells, are furnished with vibratile cilia, and when they escape from the cell in which they have been organised, enjoy for a time active powers of locomotion. At length fixing themselves to some object they change their form, becoming cylindrical; and then, dividing repeatedly, are changed into articulated filaments similar to those of the parent plant. In the *Confervæ* the frond lengthens in two ways; either by the repeated bisection of all the cells of the frond, as is usually the case in the unbranched species; or by the evolution of new cells, constantly at the apex of the terminal cell, as is common in the branching species. In these latter the cell, after having once formed one or more new cells out of its apex by a cutting off of the summit from the basal portion, remains unchanged, without further growth or cell division. If but one new cell be formed at the apex, the filament will be simple; but in the branched species two or more cells are formed, the central one continuing the frond, while the lateral ones, which spring just below the summit of the old cell, grow out into branches.

The Confervaceæ are almost universally dispersed in water of every character found on the surface of the globe. Many are marine, but perhaps the largest number, at least of individuals, if not of species, are found in fresh water. The marine species usually grow within tidal limits, but several of the *Cladophoræ* occur in the Laminarian zone, and some even at a greater depth. The fresh water species are found in lakes and ponds, in rivers, streams, and wells, and in thermal springs or in mineral waters. A large number of genera and species have been described; but I fear the proper number of both genera and species has been much exaggerated, and that multitudes must be erased from the list whenever the Order shall be carefully revised. The fresh water species have as yet scarcely been attended to in America. I have received very few of these, and most of them in a state unfit for examination. Indeed, dried specimens of such obscure algae are of little value for determining species. A few of the more remarkable are here described; being all those that I can clearly make out from the specimens received. It is, however, often a difficult task either to refer one of these species to its supposed type, or to devise specific characters that shall not be illusory for what appear to be new forms. The characters usually insisted on, namely, the length of the cells as compared with their diameter, the absolute diameter of the cell, and the degree of ramification of the filament, are all subject to much variation. There appear to be no definite limits to any of these characters in any species. We are forced therefore, in describing them, to be content with rude approximations. Figures are of little use, for in many of the species, such as *Cladophora glomerata*, scarcely two specimens are in all respects similar.

TABLE OF THE NORTH AMERICAN GENERA.

Sub-order 1. CHLETOPHOREÆ. Frond invested with gelatine.

I. CHLETOPHORA. Numerous filaments combined into a gelatinous frond of definite form.

II DRAPARNALDIA. Filaments separate, fasciculately ramulose.

Sub-order 2. CONFERVEÆ. Frond destitute of a gelatinous coating.

III. CLADOPHORA. Filaments tufted, erect, branched.

IV. CHLETOMORPHIA. Filaments unbranched, membranaceous, with a thin cell-wall.

V. HORMOTRICHUM. Filaments unbranched, gelatino-membranaceous, with a thick cell-wall ; nodes constricted.

VI. RHIZOCLONIUM. Filaments decumbent, spuriously branched, the branches few and rootlike.

I. CHLETOPHORA. *Ag.*

Frond gelatinous, polymorphous, of definite form ; the gelatine traversed by many filaments aggregated together and issuing from a common base. *Filaments* articulated, branched ; articulations of the branches nearly hyaline, those of the ramuli filled with green endochrome. *Sporangia* globose, attached to the ramuli. *Zoospores* formed in the articulations. (*In fresh water.*)

The species form gelatinous masses, of definite or sub-indefinite form, attached to sticks, water-plants, or stones, in stagnant or running water. The gelatine is colourless, tolerably firm and tenacious, and when a portion is placed under the microscope is seen to be traversed in every part with slender, articulated, branching filaments, variously arranged. The filaments are dimorphous, that is, their main divisions are formed of differently shaped cells from those that compose the ramuli. The latter alone contain much endochrome. *Fructification* has, as yet, been seen only in very few species. In some stage of growth the terminal cell of the ramuli is tipped with a very long, hyaline bristle, whence the generic name, from *χαιτη*, a bristle, and *φορεω*, to bear. The two following species have been sent me from America ; both are common European plants. Probably several others occur in American waters.

I. CHLETOPHORA *endiviaefolia*, Ag. ; frond elongate, irregularly much branched ; branches linear, scattered, or fasciculate, very patent, dichotomous or pinnate, or secundly ramulose ; longitudinal filaments parallel, hyaline, or transversely banded,

emitting at short intervals tufts of multifid bright-green ramuli. *Ag. Syst. Alg.* p. 28. *Lyngh. Hyd. Dan.* t. 65, fig. C. *Kutz. Sp. Alg.* p. 532. *Hass. Brit. Fr. W. Alg.* p. 125, t. 9, fig. 1-2.

HAB. On sticks and stones, in running streams and ponds. Near West Point, *Prof. Bailey*. Cumberland, Rhode Island, *Mr. Olney*. South Carolina, *Mr. Ravenel*. (v. v.)

Fronde gelatinous, varying greatly in size and in ramification; the younger specimens thicker, with fewer branches; the older attenuated and compound. The American specimens before me are 1-3 inches long, and from 1-2 inches in the expansion of the branches. Their fronds are not more than half a line in diameter, linear, filiform, and excessively branched, the branches very much crowded on a prolonged axis, from which they issue without order and are directed to all sides. They are sub-dichotomous, and more or less densely set with divaricated, simple or forked ramuli. When a portion of a branch is examined with a magnifier, it is seen to be composed of several parallel, longitudinal, articulated filaments, lying apart from each other, being separated by a gelatinous matrix; their cells are 4-6 times as long as broad, hyaline or marked with a central transverse band of granules, and they emit, at short intervals, horizontally spreading, multifid, coloured ramuli. The branching of the ramuli is irregular, and between fasciculate and pinnate, the ramification being sometimes densely crowded, sometimes distant. The cells of these ramuli are filled with green endochrome; they are 2-3 times as long as broad, and the terminal cells, which are short, are either simple or carry at their summit a long bristle-shaped acumination. *Substance* gelatinous. The plant closely adheres to paper in drying.

This species occurs in fresh-water ponds and streams in all parts of Europe, and its many minor varieties have received several names. All agree in microscopic structure. The ramification of the gelatinous matrix alone is variable, and that is a character of very little moment. Professor Bailey's specimens are labelled "*Batrachospermum Americanum*, Schweinitz;" a synonym referred by Agardh to his *Draparnaldia opposita*, which is quite different from the Alga now described.

2. *CHELETOPHORA pisiformis*, Ag.; frond globose, carnosogelatinous, formed of numerous erect, radiating, sub-parallel filaments emitting to the circumference dichotomomultifid patent branches. *Ag. Syst.* p. 27. *Hass. Brit. Fr. Wat. Alg.* p. 128, t. 9, fig. 5-6. *Kutz. Sp. Alg.* p. 532.

HAB. On sticks, in fresh-water ponds and ditches. Dr. Witt's Meadow, New York, *Prof. Bailey*. (v. v.)

Fronde the size of a pea, or less, globose, several occurring together on the same stick, gelatinous, but rather firm, bright green. When bruised between two glasses, and examined under the microscope, the gelatinous matrix which forms the globe is seen to be everywhere filled with much branched filaments which rise from the base and radiate

towards all parts of the circumference, sending forth multifid coloured branches vertically and laterally. The articulations of the filaments are once, twice or thrice as long as their diameter in different parts, contracted at the dissepiments, and filled with bright green endochrome. In a young state the apices of the ramuli are prolonged into setæ, or needleshaped, colourless acuminate cells, but these are deciduous in this and other species of the genus. *Colour*, a bright green.

Possibly this species is only a small state of *C. elegans*.

II. DRAPARNALDIA, *Bory.*

Filaments separate, gelatinous, articulated, dimorphous; the articulations of the stem and branches hyaline, transversely banded; those of the ramuli filled with green endochrome. *Zoospores* formed in the articulations. (*In fresh water.*)

Very beautiful, and extremely gelatinous, bright green, filamentous, much branched Alga, found in clear wells and gentle streams. The structure of the filaments is similar to that of the filaments of the *Chatophora*; and this genus merely differs from the preceding in its filaments being separate one from another, and not combined by means of gelatine into a compound frond. It therefore bears the same relation to *Chatophora* that *Vaucheria* does to *Codium*. The name was bestowed by Bory de S. Vincent in honour of *M. Draparnaud*, a French naturalist.

1. *DRAPARNALDIA opposita*, Ag.; frond vaguely much branched; joints of the main filament as long as broad, or shorter; pencils of ramuli mostly opposite, densely set. lanceolate-acuminate in outline, plumose, bi-tripinnate, the apices much attenuated. *Ag. Syst. p. 59. Kütz. Sp. Alg. 357. Lyngb. Hyd. Dan. tab. 65, fig. A. Batrachospermum Americanum, Schweinitz.*

HAB. In clear streams. New York, *Professor Bailey*. New Jersey, *Mr. Jackson*. (v. s.)

Frond 2-3 inches long, gelatinous, capillary, irregularly much branched; the branches patent, lateral, more or less divided, and set with lesser ramuli. Main filaments with short articulations, as long as their breadth or shorter, transversely banded. At every two or three nodes and sometimes at every node a pair of opposite penicillato-multifid ramuli are thrown off. These are bright green, ovato-lanceolate in outline, much acuminate and twice or thrice pinnate, their pinnules somewhat constricted at the nodes, and tapering at the apex into long, needle-like, hyaline points. Their cells are commonly nucleated and filled with endochrome.

Whether this be permanently distinguishable from *D. glomerata* is doubtful. It has externally the aspect of that species, but its microscopic characters are nearer those of *D. plumosa*.

2. DRAPARNALDIA *glomerata*, Ag.; frond vaguely much branched; articulations of the main stems once or twice as long as broad, swollen in the middle; pencils of ramuli alternate or scattered, often distant, ovate in outline, fasciculato-multifid. *Ag. Syst. p. 58. Kütz. Sp. Alg. p. 356. Lyngb. Hyd. Dan. t. 64. Hass. Brit. Fr. W. Alg. p. 120, tab. 13, f. 1. Conferva mutabilis, Dillw. Conf. t. 12. E. Bot. t. 1746.*

HAB. In clear streams. New York, *Professor Bailey.* Rhode Island, *Mr. Olney.* (v. v.)

Very similar to the last species, but less densely plumose, with scattered fascicles of ramuli.

3. DRAPARNALDIA *plumosa*, Ag.; frond very slender, elongate, much branched; joints of the main filaments once or twice as long as broad; pencils of ramuli opposite or whorled, plumose, much attenuated, pinnate or bi-pinnate, the apices of the pinnules acicular. *Ag. Syst. p. 58. Kütz. Sp. Alg. p. 357. Hass. Brit. Fr. W. Alg. p. 121. tab. 12, f. 1.*

HAB. In streams. West Point, *Professor Bailey.* (v. v.)

More slender than *D. glomerata*, and much more branched, forming dense, gelatinous tufts, 3-6 inches long, often much drawn out in running water. In the American specimens the articulations of the stem and branches are about twice as long as broad, slightly constricted at the nodes, and swollen in the middle. Several seriated cells of this length follow each other, and then occur two or three short, nearly globular cells consecutively, which shorter cells emit the opposite or ternary penicillate ramuli. This alternation of longer and shorter cells occurs throughout the branch, the shorter ones always producing the ramuli. The ramuli are pinnate or bi-pinnate, but much less compound than in *D. opposita* or *D. glomerata*.

The synonymy of this species is confused. The American plant differs slightly from the European specimens with which I have compared it, but I am not disposed to think it specifically different. Indeed the three forms now described as species are so similar in all essential respects, that it may well be questioned whether they should be kept separate.

III. CLADOPHORA. *Kütz.*

Filaments (not gelatinous) tufted, articulated, uniform, branched. *Articulations* filled with green, granular endochrome, which is changed at maturity into *zoospores.* (*Marine or in fresh water.*)

An immense genus, in which, for the present, are placed almost all the branching

species of a *green* colour formerly referred to the genus *Conferva*. The species are extremely difficult to define, and have been unreasonably multiplied; but are so much diversified that it is difficult to avoid giving different names to the many forms met with, if they are to be described at all. Kützting admits 210 species, and probably nearly 100 more have been described by other authors. A wholesale reduction will probably be eventually made. I have referred most of the American forms, approximately or absolutely, to European types; in some cases perhaps incorrectly. But unless better specific characters than those at present in use shall be discovered, it is almost impossible to find words to characterise, as distinct, nearly allied forms. When, therefore, I meet with an American specimen reasonably like a European, I here place them under the same head, or specific name. Several doubtful specimens I have been unable satisfactorily to identify, and hold them over for future examination, should better materials be sent to me.

Sect. 1.—*Species found in the sea.*

* CÆSPITOSÆ. Filaments short, rigid, densely interwoven into cushion-like tufts.

1. *CLADOPHORA repens*, J. Ag.; filaments short, emitting root-like processes, densely interwoven into globose or expanded mats, capillary, rather rigid, sparingly and very irregularly branched; branches erect, subsimple, filiform, naked or having a few secund ramuli; articulations cylindrical, many (10–20) times as long as their diameter. *J. Ag. Alg. Médit.* p. 13. *Harv. Phyc. Brit.* t. 236. *Kütz. Sp. Alg.* p. 416.

HAB. On rocks, &c. in the sea. Key West, *W. H. H.* (v. v.)

Tufts very dense, an inch or two in breadth and about half an inch high, cushion-like, composed of innumerable, interwoven, capillary filaments. The filaments are at first decumbent, and connected by rootlike fibres which form the substratum of the mat; the branches are erect, simple or branched, with or without secondary ramuli. The articulations vary greatly in length in specimens from different localities.

This species is a native of the Mediterranean, and also of the British Channel Islands. Except in the length of the articulations, which also vary much in the same filament, the European and American specimens nearly coincide.

2. *CLADOPHORA membranacea*, Ag.; filaments short, creeping, densely interwoven into globose or expanded mats, somewhat fastigiate, thick, almost setaceous, flaccid, membranaceous, sparingly and irregularly branched; articulations many times longer than broad. *Ag. Syst.* p. 120. *Kütz. Sp. Alg.* p. 415.

HAB. On rocks and the smaller Algæ. Key West, *W. H. H.*, *Professor Tuomey.* (v. v.)

Matted tufts an inch or more in diameter, sometimes widely spreading. *Filaments* scarcely an inch long, rising from creeping fibres, sparingly branched, flaccid, the branches very irregular, few or many, either undivided or once or twice compounded, naked, or having a few secund ramuli toward the ends. *Articulations*, especially the lower ones, very many times longer than broad, their membrane thin and membranous. *Colour* a very pale green, with watery endochrome.

This has the densely matted habit of the preceding species, but the filaments of which the mats are composed are much more robust, and less rigid, of a paler green, &c. Kützing well observes that it has the aspect of a *Valonia*.

** RUPESTRES ; rigid, dark-green, tufted ; the cell-wall thick.

3. *CLADOPHORA rupestris*, L.; filaments capillary, rigid, dark-green, straight, tufted, bushy ; branches erect, crowded, densely clothed with appressed, opposite or tufted, subulate ramuli ; articulations three or four times as long as broad. *Linn. Sp. Pl. p. 1637. Dillw. Conf. t. 23. E. Bot. t. 1699. Harv. Phyc. Brit. t. 130. Kütz. Sp. Alg. p. 396. Wyatt, Alg. Danm. No. 95.*

HAB. Rocky shores, near low water mark. Fiskernaes, near Cape Farewell, Greenland, *Dr. Sutherland*. Halifax, *W. H. H.* (v. v.)

Root a largish disc. *Filaments* densely tufted, 2-6-8 inches long (in my American specimens scarcely two inches), capillary, rigid, very dark-green, much branched ; the branches straight and very erect, repeatedly divided, the divisions either alternate or opposite. Penultimate branches often nearly naked, filiform, elongated, very erect and straight ; in luxuriant specimens set throughout with opposite or fascicled or scattered subulate ramuli, whose terminal cell is sometimes acute, sometimes obtuse. The process of cell division is well illustrated in this species, and may be observed even in dried specimens, so perfectly does the endochrome recover its form. The cells of the middle portion of the branches divide as well as those of the younger ramuli, and consequently consecutive cells are found of various lengths.

Two specimens of what I take to be a much denuded and battered state of this species were collected by Dr. Sutherland, in the Arctic expedition under Captain Inglefield, in the above mentioned locality, and have been sent to me by Professor Dickie of Belfast. They are faded to a dull green. The substance and ramification, so far as branches remain unbroken, are those of *C. rupestris* ; but in one specimen the articulations are very short, being only as long as their diameter, or scarcely longer. This peculiarity at first seems sufficiently characteristic of a distinct species, but a little further examination shows that the character is deceptive, resulting merely from the ordinary process of cell-division being in this specimen carried to an excess. On the other specimen are cells of the common length mixed with these short or halved cells ; and intermediate stages occur which quite explain the unusual character of the first specimen.

4. *CLADOPHORA cartilaginea*,* Rupt.; tufts ? filaments robust, setaceous, elongate, firm, somewhat rigid, rather sparingly branched; branches very erect, scattered, long and virgate, undivided, straight, set with a few scattered, erecto-patent, filiform branchlets, which are either naked or bear one or two minute ramuli; articulations in the older parts much shorter than their diameter; in the younger (towards the ends of the branches) as long, or twice as long as broad. *Rup. Alg. Ochotsk*, p. 211, (403.)

HAB. Unalashka, *Dr. Ruprecht*. (v. s. in Herb. T.C.D.)

My only specimen is a fragment, but it seems to belong to a well characterised species of large size. The portion before me is about four inches long, with a few lateral virgate branches, set at very acute angles, quite simple, straight and three inches long, furnished with several scattered, simple, erect ramuli, each of them from half an inch to an inch in length, obtuse, nearly as thick as the stem from which they spring. These are mostly naked, but in a few cases they bear a minute ramulus near the tip. The apices are not attenuated. The diameter of the filament is equal to that of hogs' bristle. The substance is firm and cartilaginous, and the colour a pale-green. Through the greater part of the filament the articulations are much shorter than their diameter; but towards the apices they are longer, and the few terminal joints are twice as long as broad, or more.

*** ARCTÆ. Filaments soft, forming dense, spongy, fastigate tufts of a pale, but vivid green.

5. *CLADOPHORA arcta*, Dillw.; tufts dense, more or less matted at the base, starry, fastigate, soft, brilliant and glossy green; filaments capillary, much branched; branches straight, crowded, very erect; ramuli opposite or scattered, erect or appressed; articulations in the lower part of the frond about twice as long as broad, in the upper (younger) branches many times longer than the diameter; apices obtuse. *Dillw. Conf. Supp.* p. 67, t. E. *E. Bot.* t. 2098. *Harv. Phyc. Brit.* t. 135. *C. arcta*, *vaucheriaformis*, and *centralis*, *Auct.* *C. scopæformis*, *Rup.*

HAB. Coasts, from the Arctic Regions to New York Bay, on rocks near low water mark. Whalefish Islands, Davis's Straits, *Dr. Lyall*. Prince Edward's Island, *Dr. Jeans*. Penobscot Bay, *Dr. Young*. Boston Harbour, *Mr. G. B. Emerson*. New York Bay, *Messrs. Walters, &c.*, *W. H. H.* (v. v.)

* Besides this species *Dr. Ruprecht* notices the following from Russian America:—*C. adharens*, *Rup.* from the Arctic Sea, allied to *C. arcta* (if it be different); *C. Chamissonis*, *Rup.* from Unalashka; *C. Mertensii*, *R.* from Sitcha; *C. viminea*, *Rup.* from Sitcha and Unalashka; *C. scopæformis*, and *C. coalita*, from Northern California. Of these *Dr. Ruprecht* has sent me fragments of *C. Chamissonis*, *C. viminea*, and *C. coalita*; but as he has not, that I am aware of, assigned full specific diagnoses to any of the above species, I am unwilling to describe the few that I possess, from the very imperfect materials at my command, lest I might add to the confusion already sufficiently confounded in this genus. I collect the above names from *Dr. Ruprecht's Alg. Ochotsk.*, as already quoted.

This species varies much in minor characters, but may generally be known by its lubricous substance, brilliant colour, fastigiate tufts, and straight, much branched filaments which radiate to every side from a common base, in a star-like manner. In the young plant the tufts are less dense, the filaments nearly free from each other to the very base; but as the plant advances in age, root-like processes are developed along the lower part of the filaments, while the tufts become matted together, sometimes into a compact spongy frond. In very old specimens this condensation takes place throughout the whole length of the filament, except in the very youngest ramuli. The tufts are from two to four inches in height, hemispherical, or variously divided into two or more hemispherical or flabelliform lobes, and are generally level-topped. They are composed of many parallel, much branched, capillary filaments, of nearly equal diameter from base to apex; the branches all very straight and erect, repeatedly but most irregularly divided, and set with lateral, erect, straight ramuli, which are nearly as robust as the branches from which they spring, and very obtuse. Toward the base of the filaments the articulations are once or twice as long as broad; a little farther up they are three to four times; and in the young branches and ramuli six to eight or twelve times as long as broad. In the state or variety called *C. centralis* they are uniformly short throughout except in the very young tips. The endochrome is dense and granular, and recovers its form on being moistened after having been dried. The colour in general is well preserved in drying, in which state the tufts retain much of their gloss, and closely adhere to paper.

Authors have made several species out of what we regard as simply *C. arcta* in different stages. Thus *C. vaucheriaeformis* is the young, half-developed form; *C. arcta*, Auct. the middle stage; and *C. centralis* the old plant, where the matting together of the threads has been carried to an extreme point. Other species of Kützing's section *Spongomorpha* might probably be added to these synonyms. A fragment of *C. scopiformis*, Rup. from Russian America, sent to me by Dr. Ruprecht himself seems to belong to one of the spongy forms of this species. *C. arcta* is perennial; and specimens collected in the same locality at different seasons will be found to put on, successively, all the characters attributed to the three principal forms indicated above.

6. *CLADOPHORA lanosa*, Roth.; tufts dense, globose, small, fastigiate, yellow-green; filaments slender, irregularly much branched; branches straight and virgate, erect, patent; ramuli few, scattered, erect, straight; axils acute; articulations in the lower part twice, in the upper six to eight times as long as broad. *Roth. Cust. Bot.* 3, p. 291, t. 9. *E. Bot.* t. 2099. *Lyngh. Hyd. Dan.* t. 56. *Kütz. Sp. Alg.* p. 420. *Hav. Phyc. Brit.* t. 6. *Wyatt, Alg. Danm.* 194.

HAB. On the smaller Algæ, and on *Zostera*; generally epiphytic. Boston Bay, *Mr. G. B. Emerson.* (v. v.)

Tufts rarely more than an inch in diameter, globose, dense, formed of many filaments radiating from a common base. These filaments are at first separate, but at length by means of rooting processes issuing along their sides, they become somewhat interwoven

below. They are fastigiate and very irregularly divided, but mostly straight, with erect branches and ramuli. The lower articulations are short; the upper, and especially the terminal ones, are very long. The endochrome generally recovers its form after having been dried, at least in the younger portions of the frond, if it have not been discharged, as often happens, by the rupture of the membrane, when the frond is immersed in fresh water. This plant adheres closely to paper.

A much smaller species than *C. arcta*, to which, as well as to *C. uncialis*, it is nearly allied.

7. *CLADOPHORA uncialis*, Fl. Dan.; tufts short, vivid-green, very dense, spongy, globose, simple or somewhat lobed, fastigiate, composed of numerous filaments matted together by lateral rootlets; filaments flexuous, sparingly branched, interwoven; branches and ramuli distant, patent, curved, alternate or secund; articulations of uniform length, about twice as long as broad. *Fl. Dan. t. 771, fig. 1. Lyngb. Hyd. Dan. t. 56. Ag. Syst. p. 111. Wyatt, Alg. Danm. 146. Harv. Phyc. Brit. t. 207. Kütz. Sp. Alg. p. 420.*

HAB. On rocks near low water mark. Prince Edward's Island, *Dr. Jeans*. Halifax, *W. H. H.* Nahant, *Mrs. Mudge*. (v. v.)

Tufts about an inch in height and diameter, very dense and spongy, either somewhat globose, or cleft into numerous spongy divisions, fastigiate. *Filaments* very numerous from a common base, densely matted and interwoven by root-like processes developed along the sides, flexuous, more or less compound. Branches very irregularly disposed, generally distant, secund or alternate, once or twice again divided, and having a few patent, curved, simple ramuli. *Colour*, when growing, a vivid-green; instantly discharged in fresh water, and in drying the specimen fades to a pale yellow-green, especially toward the centre of the tuft. The endochrome recovers its form and fills the cell, on moistening after having been dried. The articulations in all parts of the filaments are of nearly uniform length, twice or thrice as long as their diameter. *Substance* soft but not gelatinous.

Very nearly related to *C. lanosa*, but the place of growth is different, and the filaments are more flexuous, the branches more patent, and the rooting processes more numerous.

*** GRACILES. Filaments loosely tufted, feathery, very slender, pale or bright-green.

8. *CLADOPHORA glaucescens*, Griff.; filaments loosely tufted, pale or glaucous green, very slender, flexuous, excessively branched; branches erecto-patent, flexuous, repeatedly sub-divided, the penultimate ones pectinated with closely set, elongate, straight, slender, many celled, erect or sub-erect ramuli; axils acute; articulations constricted at the nodes, nearly uniformly thrice as long as broad, those of the main branches a little the longest. *Wyatt, Alg. Danm. No. 195. Harv. Phyc. Brit. t. 196. Kütz. Sp.*

Alg. p. 403. *Var. β. pectinella*; small, very slender, all the divisions of the ramification secund, the penultimate ramifications closely pectinated with short ramuli and recurved.

HAB. On rocks and stones, between tide marks and in rock pools. Halifax, *W. H. H. Lynn* and Nahant, *Mrs. Mudge*. Portsmouth, N. H., *Dr. Durkee*. New York Bay, *Messrs. Hooper, Calverley, Walters, and Pike*. Beesley's Point, Rhode Island, *Mr. Ashmead*. *Var. β.* Charleston, S. C., *Prof. L. Gibbes, W. H. H.* (v. v.)

Filaments very slender, 3-5 inches long, forming tufts of greater or less density, but not usually entangled or interwoven, excessively branched, the main divisions and principal branches flexuous, sometimes very much so, closely beset with lesser branches which divide either alternately or secondly, the tendency to secund ramification increasing as the frond extends. The penultimate branchlets are generally closely pectinated with secund, erect, straight, simple ramuli composed of several cells; and occasionally the ramuli are fascicled, three or four springing from the same cell. Though always very slender, the diameter varies. The articulations, on the whole, are pretty uniform; those of the ramuli are most constricted at the nodes, and also a little the shortest. In drying the endochrome is dissipated from the centre of the cell, and collapsed at the two ends, so that the filaments, in dried specimens, have a variegated appearance under a pocket lens. On remoistening, it never perfectly recovers its form.

My Halifax specimens are identical with those published by *Mrs. Wyatt*, and on which the species was originally founded. Those from other localities vary in some degree, being either coarser or more slender, and more or less branched; but on the British coasts similar varieties occur.

9. *CLADOPHORA flexuosa*, Griff.; filaments very slender, pale green, tufted, flexuous, sparingly and distantly branched; branches elongate, sub-simple, of unequal length, flexuous, sometimes nearly naked, sometimes ramuliferous; the ultimate ramuli secund or alternate, short or long, curved; articulations of the branches 3-4 times, of the ramuli twice as long as broad. *Griff. in Wyatt, Alg. Danm. No. 227. Harv. Phyc. Brit. t. 353.*

HAB. Rock pools between tide marks, &c. Hingham, Massachusetts, *Miss Brewer*. Boston, *Dr. Durkee*. Jackson Ferry and Hell Gate, New York, *Messrs. Walters and Pike*. (v. s.)

Very nearly related to *C. glaucescens*, if really specifically distinct. It is chiefly known by its less compound habit, the length and nakedness of the principal branches, and their flexuosity. The diameter of the filament is nearly as in *C. glaucescens*: the articulations are rather longer. Some of the specimens are nearly destitute of ramuli, and scarcely two of those before us agree in all respects.

10. *CLADOPHORA Morrisii*; tufts elongate, dense, somewhat interwoven, dark green;

filaments very slender, much and irregularly branched, the penultimate branches very long, filiform, flexuous, simple, set with alternate or secund, short, erecto-patent ramuli, some of which are simple and spine-like, others pectinated on their upper side; articulations filled with dense endochrome, in the branches 2-3 times, in the ramuli about twice as long as broad, cylindrical, not contracted at the nodes. (TAB. XLV. B.)

HAB. Elsinborough, Delaware, *Miss E. C. Morris*. (v. s. in Herb. T.C.D.)

Tufts dense, 6-8 inches in length. *Filaments* inextricably bundled together, very slender, much branched, the ramification of the principal divisions not determinable from dried specimens. The penultimate branches which float out from the somewhat rope-like tufts are generally simple for an inch or two in length, or the longer ones are furnished with similar simple branches; and all are beset with short, erecto-patent ramuli. Some of the ramuli are simple, of 3-4 cells; others emit similar ramuli on their upper side. The membrane of the cell-wall is very thick and tough, and the endochrome peculiarly firm, recovering its form well on being moistened after having been dried. The nodes are not contracted, and the internodes or articulations rarely exceed thrice their diameter in length, and often do not reach that dimension. The colour is a full dark-green, somewhat olivaceous when dried. Specimens adhere closely to paper.

I have as yet only received this plant from Miss Morris. It differs in several respects from any that I now remember.

PLATE XLV. B. CLADOPHORA *Morrisiæ*; *Fig. 1*, the natural size. *Fig. 3*, portion of a branch: and *Fig. 2*, a ramulus of the same; *magnified*.

1. CLADOPHORA *refracta*, Roth.; filaments very slender, rather densely tufted, bright green, membranaceous (not lubricous), excessively branched; secondary branches spreading on all sides, repeatedly divided and very patent, densely set with short, often opposite, recurved or squarrose branchlets, which are pectinate on the inner face with patent, simple or forked ramuli; articulations of the branches 2-4 times of the ramuli about twice as long as broad. *Roth. Cat.* 2, p. 193. *Alg. Syst.* p. 114. *Wyatt, Alg. Danm. No.* 228. *Harv. Phyc. Brit. t.* 24. *Kütz. Sp. Alg.* p. 398.

HAB. On rocky coasts, in tide pools, &c. Rhode Island, *Mr. Olney*, *Mr. G. Hunt*. Boston Bay, *Dr. A. Gray*. Portsmouth, N. H., *Dr. Durkee*. New York, *Messrs. Calverley, Walters, and Pike*. Newport, R. I., *Professor Bailey*. Seaconot, *Mr. Congdon*. Charleston, S. C., *Professor Gibbes*. (v. v.)

Tufts 2-3 inches long, feathery, rather diffuse, the main filaments sometimes interlaced in rope-like bundles. *Filaments* more slender than human hair, rather rigid, tough, excessively branched, all the divisions patent or divaricate. The penultimate ramuli are especially reflexed or refracted, and often opposite; their ultimate divisions are

either simple or forked. The colour is a brilliant green, but it does not well preserve in drying, in which state the specimen is without gloss and generally pale. The endochrome is generally dissipated in drying, and does not, in ordinary cases, recover its form when the frond is remoistened; sometimes, however, the endochrome remains.

A beautiful species, and tolerably easily known. The American specimens are very similar to our West of Ireland plant, but more robust than those from the South Coast of England.

12. *CLADOPHORA albida*, Huds.; filaments exceedingly slender, flaccid, but not gelatinous, pale green, forming dense, silky or somewhat spongy, soft, intricate tufts, very much branched; branches zigzag, their divisions very patent, the lesser branches very frequently opposite, and nearly horizontal; ramuli alternate, opposite or secund, patent or divaricating; articulations 3-5 times as long as broad. *Huds. Fl. Angl. p. 595. E. Bot. t. 2327. Wyatt, Alg. Danm. No. 96. Harv. Phyc. Brit. t. 275.*

HAB. On rocks and algae, between tide marks. Staten Island, *Dr. Torrey*. Beesley's Point, *Mr. Ashmead* (64, 65, 66). New York Bay, *Messrs. Calverley, Walters, &c.* (v. v.)

Tufts 6-8 inches long, very dense and soft, and somewhat intricate or woven together, occasionally feathering and opening out freely. *Filaments* excessively slender and very much branched, and so interwoven that it is impossible to trace the branching. In the American specimens the main branches are very flexuous, angularly bent from side to side, and very much divided, all the divisions squarrose or divaricating. The penultimate branches, which are nearly horizontally patent, are generally opposite, but three or more sometimes issue from the same point; the ultimate ramuli are scattered, either alternate or secund. The nodes are somewhat contracted; the cell-wall thin, and the endochrome pale and watery. When dry the whole plant frequently becomes a dull greenish white. It does not strongly adhere to paper.

13. *CLADOPHORA Rudolphiana*, Ag.; filaments very long, exceedingly slender, flexuous, sub-gelatinous, much branched, bright yellow-green, inextricable; branches di-trichotomous or irregular; ultimate ramuli pectinate, secund, very long, and much attenuated; articulations of the main branches many times longer than broad, here and there swollen, their granular endochrome somewhat spiral; those of the ramuli 6-10 times as long as broad. *Ag. Bot. Zeit. 10, p. 636. Harv. Phyc. Brit. t. 86. Kütz. Sp. Alg. p. 404.*

HAB. Jackson Ferry, N.Y., *Mr. Walters.* (v. v.)

A specimen sent by *Mr. Walters* agrees pretty well with the Irish specimens figured in *Phyc. Brit.* The filaments are 4-5 inches long, soft, and somewhat gelatinous, closely adhering to paper, intricately interbranched, very flexuous, zigzag, and much branched. The branches are patent, sometimes opposite, mostly alternate or scattered,

and repeatedly divided ; the ramuli slender, few and subdistant. The articulations of the branches are very many times longer than broad ; those of the ramuli 5-6 times their breadth. The endochrome is generally dissipated in drying. When dry the specimen retains a brilliant green and has a silky gloss.

14. *CLADOPHORA gracilis*, Griff.; filaments very long, capillary, flexuous, silky, much branched, bright yellow-green ; main branches entangled, sparingly divided, angularly bent ; ultimate ramuli pectinate, secund, much attenuated, straight, and very long ; articulations 3-5 times as long as broad. *Griff. in Wyatt, Alg. Danu. No. 97. Harv. Phyc. Brit. t. 18. Kütz. Sp. Alg. p. 403.*

HAB. Growing on *Zostera*, and the various Algæ, in the Laminarian zone. Nahant, *Mrs. Mudge*. Beesley's Point, Rhode Island, *Mr. Ashmead* (67.) Seaconot, Rhode Island, *Mr. Olney*. (v. v.)

Filaments more or less densely tufted, 4-12 inches long, (about 4 inches in the American specimens), capillary, soft and silky, much branched ; the main branches rather more robust and bent in a zigzag manner, sometimes very flexuous, and frequently more strongly coloured than the rest of the plant, set throughout with lateral, decomposed branches all whose divisions are patent ; and the ultimate branchlets pectinated with long, simple, secund ramuli. *Colour* a yellow-green. *Substance* soft and silky, but not gelatinous. *Articulations* 3-5 times as long as broad. It does not strongly adhere to paper in drying.

Mrs. Mudge's specimens are small, but in other respects very similar to English ones. Those from *Mr. Olney* and *Mr. Ashmead* are less true to the type.

15. *CLADOPHORA brachyclados*, Mont. ; filaments very slender, tufted, sparingly branched ; branches long and virgate, set with distant, alternate, erecto-patent branchlets, which are pectinated along their upper sides with very short, erect, or incurved ramuli, of 1 or 2 cells ; articulations of the branches 5-6 times as long as broad. *Mont. Cuba, p. 13, t. 4. Sylloge Pl. Crypt. p. 456. C. Montagneana, Kütz. Tab. Phyc. vol. 4, p. 9, t. 41, fig. 2.*

HAB. Mouth of Rio Bravo, on the sea-beach, *Dr. Schott*. (v. s. in Herb. T.C.D.)

The specimen received from *Dr. Schott* is a very imperfect one, but its filaments, when examined under the microscope, show so many characters in common with those of Montagne's *C. brachyclados* from Cuba, with an authentic specimen of which I have compared them, that I am unwilling to separate forms so similar. The short, mostly single-celled ramuli are characteristic.

16. *CLADOPHORA luteola*; filaments very pale yellow-green, tufted, excessively slender,

and much branched, not matted together; main and lesser branches remarkably flexuous, the angles rounded, and the filaments arcuate; branching irregular, frequently trichotomous, the lesser ramuli secund or opposite, and their ultimate divisions pectinate, somewhat corymbose and crowded toward the apices; articulations cylindrical, hyaline, 6-8 times as long as broad.

HAB. Growing on littoral corals, at Key West, *W. H. H.* (v. v.)

Filaments 2-3 inches long, rather loosely tufted, excessively slender, and soft, but not in the least gelatinous, very much branched, remarkably bent; the filaments arcuate between each ramification. The branching is irregular. In the principal and also in the lesser divisions it is frequently trichotomous, three branches springing from a node; but the branches are almost as often alternate or sub-dichotomous. In the medial portion of the frond the forkings are sub-distant; they become more frequent upwards, and the branches generally end in closely set, but scarcely fasciculate pectinated ramuli, which are either opposite, alternate, or secund. The ultimate ramuli are erect and incurved. *Articulations* seldom less than six times as long as broad, sometimes more, with a very pale, watery endochrome, which is dissipated in drying. Notwithstanding its tenuity this plant does not adhere closely to paper.

***** *LETEVIRENTES.* *Filaments* loosely tufted, robust, and somewhat firm or rigid, vivid-green.

17. *CLADOPHORA letevirens*, Dillw.; filaments much branched, bushy, forming tufts of a transparent, yellow-green colour (faded and without gloss when dry); branches erecto-patent, crowded, repeatedly divided, flexuous, the lesser divisions often opposite, ultimate ramuli secund, blunt, of few articulations; articulations of the branches six times, of the ramuli thrice as long as broad. *Dillw. Conf. t.* 48. *E. Bot. t.* 1854. *Harr. Phyc. Brit. t.* 190. *Wyatt, Alg. Dann. No.* 143. *Kütz. Sp. Alg. p.* 400. *Conf. glomerata var. marina*, *Roth. Cat. Bot.* 3, p. 237.

HAB. In rock pools between tide marks. New York Bay, *Messrs. Hooper & Walters*. Boston, *Dr. Durkee*. California, *Dr. Coulter*. (v. v.)

Tufts feathery. *Filaments* 3-6 inches long or more, capillary, much branched, main filaments flexuous or angularly bent, set with alternate or scattered, occasionally opposite, repeatedly decompound patent branches, which are densely set with lesser branches and ramuli, all of which are patent and often recurved. Lesser and penultimate branches mostly secund, sometimes opposite or fasciculate, their ultimate divisions pectinated with short closely set ramuli on the upper side. Articulations of the main branches 4-6 or 8 times, of the ramuli 3-4 times as long as broad. *Colour*, a full grass green. *Substance*, not very soft. It adheres, but not strongly, to paper in drying.

18. *CLADOPHORA diffusa* (?); filaments capillary, elongate, loosely tufted, somewhat rigid, full green, flexuous, much branched; branches distant, irregularly subdivided, nearly naked, or furnished toward the ends with a few short secund ramuli; articulations 3-4 times as long as broad. *Harv. Phyc. Brit. t. 130* (?) &c.

HAB. New York Sound, *Messrs. Walters, Pike, &c.* California, *Mr. A. D. Frye.* (v. s.)

Tufts loose. *Filaments* 6-12 inches long or more, generally so rigid as not to collapse when removed from the water, capillary or somewhat more robust, much and irregularly branched. Branches distant, often an inch or more apart, erecto-patent, naked in the lower portion or very sparingly ramulose, and sometimes naked throughout and little subdivided. Generally, however, the upper divisions are more repeatedly and more closely branched, and their branches furnished with a few short, secund, pectinate ramuli. On some specimens these are very few and confined to the apices; on others they are more abundant.

Recognised chiefly by its naked and distant branches, nearly destitute of ramuli. The more ramulose specimens seem gradually to glide off into *C. latevirens*. I quote the figure in *Phyc. Brit.* with a mark of doubt, and refrain from quoting other authorities, because I am not quite sure of the specific identity of the American and European specimens.

SECT. 2. Species found in brackish water, or in fresh-water ponds and streams.

19. *CLADOPHORA fracta*, Fl. Dan.; tufts irregular, entangled, often detached and then forming floating strata, dull green; filaments rather rigid, distantly branched, the lesser branches somewhat dichotomous, spreading, with very wide axils; the ramuli few, alternate or secund; articulations 3-6 times as long as broad, at first cylindrical, then elliptical, with contracted nodes. *Fl. Dan. t. 946.* *Dillw. Conf. t. 14.* *E. Bot. t. 2338.* *Lyngh. Hyd. Dan. t. 52.* *Harv. Phyc. Brit. t. 294.* *Kütz. Sp. Alg. p. 410.*

HAB. In salt water ditches and ponds, also in brackish or fresh water. Rhode Island, and in the Hudson, at West Point, *Prof. Bailey.* Beesley's Point, *Mr. Ashmead.* Near New York, *Mr. Walters.* (v. v.)

This is at first tufted and attached to sticks or stones, but afterwards occurs floating, and then forms strata of considerable extent. *Filaments* capillary, several inches long, loosely tufted or bundled together, much but distantly branched, the branches widely spreading at very obtuse angles, and again and again dividing, all the minor divisions being equally patent, and the angles equally wide. The lesser branches sometimes bear a few secund ramuli, and are sometimes quite naked. *Colour*, at first a grass green, but gradually becoming darker. *Substance*, membranaceous and rather rigid, seldom quite adhering to paper in drying, and readily detached.

To this species I am disposed to refer a specimen which was provisionally named *C. prasina*, formerly received from Professor Bailey, who found it abundantly in the Hudson at West Point, where it is thrown ashore after storms. I have also received a fresh-water specimen collected by Dr. Bigelow when engaged on Lieutenant Whipple's expedition to the Pacific.

20. *CLADOPHORA glomerata*, Linn. ; filaments tufted, bushy, somewhat rigid, much branched, bright grass-green ; branches crowded, irregular, erecto-patent, repeatedly divided ; ultimate ramuli secund, subfasciculate ; articulations 4-8 times as long as broad. *Dillw. Conf. t. 13. E. Bot. t. 2192. Harv. Man. Ed. 1, p. 134.*

HAB. In streams, lakes, and rivers. Probably common.

I have received North American specimens from Milton, Saratoga County, N.Y., and from Lake Erie ; also from the Mexican Boundary Surveying Expedition.

IV. CHÆTOMORPHIA, Kütz. (May, 1845.)

Filaments (not gelatinous), membranaceous or cartilaginous, unbranched, attached, or floating, articulated ; formed of a string of oblong cells, the basal cell longer than the rest. *Articulations* filled with granular endochrome. (*Marine.*)

The genus, as here adopted from Kützing, is intended to include most of the marine species of the older *Conferva*, which have unbranched filaments and articulations usually longer than their diameter. It differs from *Cladophora* solely in being branchless. From *Hormotrichum* it is less easy to point out a clear distinctive character, unless we seek it in the substance of the cell-coats, and in the shortness of the cells usual in that genus. The name *Aplonema* was proposed for this group by Mr. Hassall (*Brit. Fr. W. Conf. p. 213.*) only two months subsequently to the publication of Kützing's genus, which thus establishes its priority on very narrow evidence. It forms a part of the Agardhian *Lychete*, published in 1846 ; a group that includes both simple and branched species, and which is thus characterised by its author :—

LYCHÆTE, J. Ag. ; "fronde sub-heterogenea, articulo infimo (in simplicibus), aut infimis ramorum (in ramosis) dissimilibus et non mutandis, superioribus omnibus continua subdivisione iterum iterumque divisis atque coniocystis externis distinguendum." *Alg. Ined. Ed. 2, No. 9. (Lychete mirabilis).*

I prefer, with Kützing, to keep the branching and unbranched species in separate genera, as being a more obvious, if not more natural arrangement. However, the whole subject of the natural arrangement of these obscure plants is open to future discussion. The present is but a temporary settlement of the question.

1. *CLETOMORPHA Piquotiana*, Mont. ; filaments loosely bundled together in strata, very long, ultra-setaceous, grass-green, rigid, glossy and variegated when dry, variously twisted ; articulations 3-5 times as long as broad, contracted at the nodes. *Mont. An. Sc. Nat. 3d Ser. vol. 11, p. 66.* *Mont. Syll. p. 459.* *Kütz. Sp. Alg. p. 379. Tab. Phyc. vol. 3, p. 19, t. 58, f. 2.* (TAB. XLVI. C.)

HAB. In deep water ; from 5 to 6 fathoms. Coast of Labrador, *M. Lamare-Piquot!* Burnt Coat Island, Maine, *Dr. A. Young.* Halifax, *W. H. H.* Boston Bay, *Mrs. A. Gray.* Staten Island, N.Y., *Dr. Torrey.* (v. v.)

This occurs in large bundled strata, the filaments lying loosely together, but probably they are attached at an early age. *Filaments* 12-14 inches long or more, twice as thick as hog's bristle, crisp and rigid, variously curved and twisted, of a full grass-green colour, fading in drying, but retaining a glossy surface. The *endochrome*, in drying, is usually dispersed toward the ends of the cell, which gives the filament a variegated look, with alternate pale and dark bands. The cell membrane is thick and tough. The articulations are variable in length, but always much longer in proportion than those of *C. melagonium*. They are commonly four times as long as broad ; occasionally only thrice their breadth, and sometimes 5-6 times as long. The dissepiments or nodes are always much constricted and very narrow. The endochrome recovers its form when remoistened. It does not adhere to paper.

I have compared my specimens with an original one communicated by Dr. Montagne. The species is nearly related to *C. melagonium*, but of larger dimensions and with much longer articulations.

PLATE XLVI. *Fig. 1.* *CLETOMORPHA Piquotiana*, the natural size. *Fig. 2.* a magnified portion.

2. *CLETOMORPHA melagonium*, Web. and Mohr. ; root scutate ; filaments erect, straight, elongate, very robust, ultra-setaceous, stiff and wiry, dark-green, tapering to the base, obtuse ; articulations 2-3 times as long as broad. *Ag. Syst. p. 99.* *Lyngh. Hyd. Dan. t. 51.* *Harv. Phyc. Brit. t. 99. A.* *Wyatt, Alg. Danm. No. 221.* *Kütz. Sp. Alg. p. 379.*

HAB. In rock pools near low water mark, and at a greater depth. Greenland, *Worms-kjold.* Halifax, *W. H. H.* Boston Bay, *Mrs. Asa Gray.* Newbury Port, *Mr. Hooper.* Unalashka, *Wosnessensky.* (v. v.)

Root an expanded disc. *Filaments* either scattered, or somewhat tufted, 5-12 inches long, twice as thick as hog's bristle, erect and stiff, peculiarly wiry to the feel when growing, straight or slightly curved, very blunt at the apex, and tapering to the base. *Articulations* rather longer in the American than in European specimens, but variable even in the same tuft ; once and a-half, twice, or thrice as long as broad, filled with dark-green endochrome and contracted at the dissepiments.

3 *CHLETOMORPHA arca*, Dillw. ; root scutate ; filaments setaceous, tufted, straight, (sometimes twisted in age) harsh and brittle, yellow-green ; articulations about as long as broad. *Dillw. Conf. t.* 80. *E. Bot. t.* 1929. *Lynb. Hyd. Dan. t.* 51. *Alg. Syst. p.* 100. *Wyatt, Alg. Danm. No.* 191. *Harv. Phyc. Brit. t.* 99. *B. Kütz. Sp. Alg. p.* 379.

HAB. In rock pools, between tide marks, &c. Newport, *Professor Bailey*. New York Bay, *Messrs. Hooper, Walters, &c.* (v. v.)

Filaments generally in dense tufts, 3-12 inches in length, and as thick as hog's bristle, rather harsh to the touch when fresh, but much less rigid than *C. melagonium*, and collapsing on being removed from the water, usually straight, but old specimens are sometimes crisped and contorted. The colour when growing is a beautiful yellowish green, but dried specimens are usually much faded, and dull-greenish white after long keeping in the Herbarium. The endochrome fills the cell and is of a watery consistence, and dispersed in drying. The articulations are pretty uniformly as long as broad, with contracted dissepiments.

4. *CHLETOMORPHA Olneyi*, Harv. ; filaments tufted, setaceous, straight or curved, soft, pale-green ; articulations once and half as long as broad. (TAB. XLVI. D.)

HAB. Rhode Island, *Mr. Olney*. (v. s. in Herb. T.C.D.)

This has the habit of *C. arca*, but is of a soft and flaccid substance, adhering closely to paper in drying. When dry it is very pale, greenish white, and without gloss. The filaments are about the same diameter as those of *C. arca* ; the articulations are longer, and the cell-wall thicker.

PLATE XLVI. D. Fig. 1. *CHLETOMORPHA Olneyi*, the *natural* size. Fig. 2. a portion *magnified*.

5. *CHLETOMORPHA longiarticulata*, Harv. ; filaments capillary, curved, loosely bundled together, flaccid, soft, pale green ; articulations 4-6 times as long as broad, swollen at the nodes. (Tab. XLVI. E.) Var. β . *crassior* ; filaments more robust.

HAB. In rock pools, between tide marks. Ship Anne Point, *Mr. Hooper*. Boston Bay, *Mrs. Asa Gray*. Little Compton, *Mr. Olney*. Var. β , in brackish ditches at Little Compton, *Mr. Olney*.

Filaments rather more slender than human hair, 3-4 inches long, loosely bundled together, and somewhat stratified. *Articulations* filled with very pale endochrome, almost hyaline when dry, several times longer than their diameter, nodoso-incrassate at one or both ends, with contracted dissepiments. The cell-wall is very thin and membranous.

I do not know any species to which this is nearly related. It is much more robust than *C. arenosa*. The length of the joints and the swelling of the nodes distinguish it from *C. litorea*.

PLATE XLVI. E. *Fig. 1.* *CHÆTOMORPHA longiarticulata*; the natural size. *Fig. 2,* a portion magnified.

6. *CHÆTOMORPHA sutoria*, Berk. ; filaments setaceous, elongate, flexuous, equal, pale or dark green ; articulations once and half as long as broad ; interstices pellucid. *Berk. Gl. Alg. t. 14, f. 3. Harv. Phyc. Brit. t. 150. B. Ch. rigida, Kütz. Sp. Alg. p. 377.*

HAB. Floating in large masses at Stonington, Con., *Prof. Bailey.* (v. s.)

This occurs, loosely bundled together in extensive floating masses or strata. *Filaments* as thick as hog's bristle, several inches long, rigid and variously curved and twisted, pale-green, cylindrical. *Articulations* once and half as long as broad, at length bisected. *Substance* rigid. It scarcely adheres to paper in drying.

Professor Bailey's specimens chiefly differ from the British plant with which I have associated them in being of a paler colour, with less dense endochrome, and of rather softer substance.

7. *CHÆTOMORPHA litorea*, Harv. ; filaments capillary, rigid, crisp, forming loose, extensive, dull-green bundles ; articulations once and half as long as broad, here and there swollen in pairs and discoloured. *Harv. Phyc. Brit. t. 333. C. linum, Alg. Danm. No. 220 (Excl. Syn.) C. tortuosa, var. crassior, Rup. Alg. Och.*

HAB. Sea-shores. Sitcha, Russian America, *Wosnessensky.* (v. s.)

Filaments forming loosely interwoven, extensive, floating strata, or entangled among the branches of other Algæ, capillary, several inches in length, and of a dull green colour. The articulations are once and a-half to twice as long as broad, cylindrical, not contracted at the nodes, and mostly uniform in the same filament ; but here and there a pair of longer cells occur, which are swollen towards their commissure, where the endochrome collects in a dark mass. In drying the endochrome is usually dispersed, and never recovers its form on being moistened.

This has been sent to me by Dr. Ruprecht from Sitcha, under the name *C. tortuosa, var. crassior*. The filaments, however, are fully twice as robust as in *C. tortuosa* ; they are more rigid, and adhere less strongly to paper, and their endochrome is dissipated in drying. They agree pretty well with the *C. litorea* of British collections.

8. *CHÆTOMORPHA brachygona*, Harv. ; filaments capillary, interwoven in strata, curved and twisted, rigid ; articulations either as long as, or much shorter than their

diameter, with occasionally a pair of swollen longer cells among the short ones. (TAB. XLVI. A.)

HAB. Key West, *W. H. H., Mr. Binney.* Boca di Rio Bravo, *Dr. Schott.* (v. v.)

Forming decumbent strata, covering rocks, or entangled with other Algæ. *Filaments* slender, variously curved and twisted, of a membranaceous, rather rigid substance, destitute of gloss, and not adhering to paper when drying, cylindrical. The articulations appear to be normally about as long as broad, but as they divide in the middle by transverse cell division, they are frequently found less than half their proper length. Here and there, throughout the filament, a pair of cells occur longer than the rest, and swollen, with the endochrome of each cell collected at the dissepiment: these may be connected with reproduction. The endochrome is dispersed in drying, and does not well recover its form on being moistened.

A much more robust and rigid plant than *C. tortuosa*.

PLATE XLVI. A. *Fig. 1.* CILETOMORPHIA *brachygona*, the natural size. *Fig. 2.* Portion of a filament, *magnified.*

9. CILETOMORPHIA *tortuosa*, Dillw. ; filaments very slender, somewhat rigid, densely interwoven into dark green, crisped, fleecy strata ; articulations twice or thrice as long as broad, filled with endochrome. *Dillw. Conf. t. 46.* *E. Bot. t. 2220.* *Hurv. Phyc. Brit. t. 54, A. Ag. Syst. p. 98.* *Kütz. Sp. Alg. p. 376.* (TAB. XLVI. B.)

HAB. On rocks, &c. about half tide level. Halifax, *W. H. H.* Coast of Maine, *Dr. A. Young.* Massachusetts' Bay, *Mr. Pike, W. H. H., &c.* Newbury Port, *Mr. Hooper.* Unalashka, *Wosnessensky.* (v. v.)

Strata spreading widely over the surface of rocks, &c. like a coating of dark green wool. The filaments are very slender, about half the diameter of human hair, but they are when recent crisp and rigid, and do not collapse when removed from the water. They are densely interwoven, of a dark green colour, and not without gloss. The articulations vary in length in different specimens, but are usually twice as long as broad, sometimes more, sometimes less ; and the endochrome generally recovers its form on being remoistened after drying.

I have received from Dr. Ruprecht, under the name *C. confervicola*, a specimen from Unalashka that I cannot distinguish, under the microscope, from the ordinary *C. tortuosa* of the East coast. It grows attached to *C. melagonium*, in which it is peculiar. The "*C. tortuosa crassior*" of Dr. Ruprecht I have already alluded to under *C. litorea*.

PLATE XLVI. B. *Fig. 1,* CILETOMORPHIA *tortuosa*, the natural size. *Fig. 2,* portion of two filaments, *magnified.*

V. HORMOTRICHUM, Kütz.

Filaments gelatino-membranaceous, unbranched (or with a few rootlike branches), basifixed, articulated; formed of a string of very short cells. *Cell-wall* very thick and soft. *Nodes* constricted. *Articulations* often tumid, filled with dense, green, granular endochrome, which is finally converted into darker-coloured compact sporidia. (*Marine.*)

The plants comprised under this genus have hitherto been placed either in *Conferva* or in *Lyngbya*. They all have a peculiar habit, by which they are more readily known than by any definite character at present established. The changes that take place in the endochrome will probably afford better characters when they have been carefully ascertained and compared with what occur in *Chatomorpha*. At present we are contented to refer to this place all the soft, sub-gelatinous, marine Confervæ, which are basifixed, and have short joints—the type of these being *C. Youngana*, Dillw.; and such *Lyngbya*-like Algæ as *Lyngb. Carnichaelii* and its allies, whose truly articulated tube distinguishes them from proper *Lyngbya*. The whole assemblage of species which are thus brought together are remarkable for the brilliant green of their endochrome, which at first fills the cells, and is afterwards contracted and condensed, and for the breadth of the soft, sub-gelatinous, glassy cell-wall. At maturity the wall of the cell opens, and the compact *sporidium* escapes. All the species are natives of littoral rocks and objects growing within tide marks. Three of the following are European.

1. HORMOTRICHUM *Younganum*, Dillw.; filaments short or elongated, tufted, capillary, rather firm, grass-green, not remarkably gelatinous, nor glossy when dry; articulations as long, or once and half as long as broad, or shorter than their breadth, tumid, constricted at the nodes. *Dillw. Conf. t. 102. Harv. Phyc. Brit. t. 328. Kütz. Sp. Alg. p. 382.*

HAB. On stones and wood-work, between tide marks. New York Bay, *Mr. Congdon*. Common at Fort Hamilton in spring. *W. H. H. (v. v.)*

Filaments densely tufted, 1–3 inches long, as thick as human hair, erect, straight or curved, spreading over the surface of rocks and wood-work in grass-green fleecy tufts, not lubricous or gelatinous (as compared with others of the genus), soft, but rather firm. The filaments when young are cylindrical, but soon become constricted at the dissepiments or nodes. The cells vary much in length, even in the same filament. The common length is once and half as long as broad, but they are sometimes twice as long, sometimes only as long as their diameter, and sometimes only half as long. At first they are quite filled with the granular deep-green endochrome, which, while the filament is elongating, divides in the centre, forming two new cells from each old one; but in the mature plant it gradually condenses, and retreats toward the centre of the cell, where it forms a compact, globose or oval sporidium. In drying the filaments adhere, but not strongly, to paper.

2. *HORMOTRICHUM boreale*, Harv. ; filaments slender, forming decumbent strata of a pale yellowish-green, flaccid, slightly interwoven ; articulations as long as broad or somewhat longer, at length constricted at the nodes.

HAB. On rocks near high-water mark. Whalefish Islands, Davis's Straits, *Dr. Lyall*. (v. s. in Herb. T.C.D.)

This forms a thin, yellow-green, decumbent fleece, lying on the surface of the rock, and extending indefinitely. *Filaments* flaccid, glossy when dry, variously interwoven, about half the diameter of those of *H. Younganum*, but in other respects very similar, except that the cells are commonly shorter. *Articulations* usually quadrate ; in age contracted at the nodes.

A much more slender plant than *H. Younganum*, softer, more glossy, and spreading in patches, not tufted.

3. *HORMOTRICHUM speciosum*, Carm. ; filaments long, thick, flaccid, straight, at length curled, the margin slightly crenate, forming bright yellow-green strata, glossy when dry ; articulations half as long as their breadth, the cell-wall very thick. *Harv. Phyc. Brit. t. 186, B. Wyatt, Alg. Danm. No. 196. (Lyngbya.)*

HAB. Mixed with the foregoing species, at Whale-fish Islands, *Dr. Lyall*.

Much more robust than the following species, to which it is allied.

4. *HORMOTRICHUM Carmichaelii*, Harv. ; filaments scarcely capillary, closely interwoven into decumbent, crisped, full-grass-green strata, variously twisted ; articulations half as long as their diameter ; the cell-wall thick. *Harv. Phyc. Brit. t. 186. A. Wyatt, Alg. Danm. No. 230. Kütz. Sp. Alg. p. 382.*

HAB. On rocks and fuci, between tide marks. Near Boston, *Mr. Calverley*. In a "running stream" (quere, of salt, or fresh water?) on stones, in Wellington Channel, Arctic Regions, *Dr. Lyall*. (v. v.)

Strata extensive, densely interwoven, full green, or somewhat yellowish, soft, but not gelatinous, and not glossy when dry. *Filaments* very long, thinner than human hair, variously curved and twisted. *Articulations* shorter than their diameter, generally less than half as long as their breadth ; the cell-wall thick, and the endochrome at length contracting into a lenticular sporidium.

This plant is common on the British Coasts, where it occurs between tide marks. The specimen received from Mr. Calverley is said to come "from fresh water near Boston ;" but I suspect some mistake. Whether that from the Arctic Regions be from brackish or fresh water I cannot tell ; but under the microscope there is no character

by which I can distinguish its threads from British specimens of *C. Carmichaelii*. It is very luxuriant, of a bright green colour, and quite resembles the ordinary marine form. Quere, are two species confounded? Or is there an error in the habitat? Or does this plant inhabit both salt and fresh water, as *Bangia fuscopurpurea* is well known to do?

5. HORMOTRICHUM? *Wormskioldii*, Fl. Dan.; filaments "branched at the base" (Lyngb.); thence simple, erect, straight, ultra-setaceous, flaccid, bright yellow-green, moniliform; articulations at first nearly cylindrical and rather longer than broad, then globular, and very much contracted at the nodes. *Conferva Wormskioldii*, Fl. Dan. t. 1547. *Lyngb. Hyd. Dan.* p. 158. t. 55. A. *Ag. Syst.* p. 121. *Hormotrichum Wormskioldii*, Kütz. *Sp. Alg.* p. 383. *Chaetomorpha monilis*, Harv. in *Herb. (olim.)*

HAB. Coast of Greenland, common, *Wormskiold*. Fragments dredged in Queen's Channel, lat. 76° 29', long. 96° 13' W. *Dr. Lyall.* (v. s.)

Dr. Lyall's specimens, which alone I have seen, consist of a few single threads (broken branches?) 6-8 inches long, as thick as hog's bristle or a little thicker, moniliform, with very turgid globular articulations and strongly contracted dissepiments. These fragments so strongly resemble the figure given by Lyngbye, (t. 55. A. 5.) that I cannot doubt the above reference; but I do question the propriety of arranging this species under the present genus. I follow Kützing, however, who had probably seen more perfect specimens than I possess. Judging from the fragments collected by Dr. Lyall, I formerly placed it in *Chaetomorpha*, near *C. melagonium*, believing that it was an undescribed species.

Lyngbye's description may be thus rendered: "Filaments densely tufted, parallelly floating, an ell or more in length, branched at the base, slender, as thick as human hair (below?), then increasing to the thickness of hog's bristle, or sparrow's quill, simple, attenuated toward the apex. *Articulations* as long as broad, in the thicker filaments remarkably moniliform, ellipsoidal or globose, turgid; in the more slender filaments often twice as long as broad. *Dissepiments* contracted, mostly pellucid. *Colour* green. Substance membranaceous, tender, lubricous, soft. It adheres to paper."

VI. RHIZOCLONIUM, Kütz.

Filaments (not gelatinous) membranaceous, uniform in diameter throughout, decumbent, simple or spuriously branched; branches short and rootlike; formed of a string of oblong cells. *Cell-wall* thin. *Articulations* filled with granular endochrome. (*Marine, or in fresh water, or on damp ground.*)

Confervoid Algæ, forming decumbent strata ; the filaments lying heaped together, and emitting at irregular distances rootlike branches. Kützing enumerates 28 species, among which are several which we refer to *Chatomorpha*.

1. *RHIZOCLONIUM riparium*, Roth. ; filaments long, slender, decumbent, pale-green, forming wide strata, flaccid, entangled, angularly bent, furnished at the angles with short, rootlike processes (which sometimes, but rarely, lengthen into very patent branches, and often attach themselves to neighbouring filaments). *Conf. riparia*, Roth. *Cat. Bot.* 3. p. 216. *E. Bot.* t. 2100. *Dillw. Conf.* p. 111. *Sup. t. E. Ag. Syst.* p. 106. *Harv. Phyc. Brit.* t. 238. *Conf. obtusangula*, Lyngb. *Hyd. Dan.* t. 55. *B. Rhizoclonium obtusangulum*, Kütz. *Sp. Alg.* p. 261.

HAB. On sand covered rocks near high water mark. Greenland, *Wormskjold*, fide *Lyngbye*. (v. s.)

I have not seen American specimens of this plant.

ORDER VII. ZYGNEMACEÆ.

Zygnemaceæ, Kütz. *Phyc. Gen.* p. 274. *Sp. Alg.* p. 433. *Zygnemææ*, Endl. 3d *Suppl.* p. 14. *Algæ Synsporeæ*, Dne. *Class.* p. 32. *Conjugatæ*, Berk. *Crypt. Bot.* p. 150. *Conjugatæ*, Hass. *Br. Fr. W. Alg.*, p. 129.

DIAGNOSIS. Green (freshwater) Algæ, consisting of simple, articulated, floating threads, composed of cylindrical, seriated cells. *Endochrome* usually definitely figured. *Spores* of large size, and mostly solitary, formed by the union of two endochromes or by the division of a single endochrome.

NATURAL CHARACTER. Freshwater, floating, *confervoid* Algæ, at first consisting of unbranched threads, formed of a number of cylindrical cells placed end to end ; afterwards often linked together in pairs by connecting processes. The endochrome in different genera puts on a variety of forms. It is rarely diffused equally through the cell as in ordinary Confervæ, but is either arranged in spiral bands, attached to the cell-walls, or divided into two star-like masses ; or it consists of larger and smaller grains subsymmetrically arranged. The cell-wall varies also much in character ; in some it is membranous, in others gelatinous, and occasionally very thick. The *fructification* consists of large and mostly solitary *spores* formed usually from the union and condensation of the contents of two cells, either consecutive cells of the same fila-

ment, or cells of different filaments. The latter mode of forming a spore is the most usual, whence we have the origin of the names "*Conjugatæ*" and "*Zygnemeæ*" applied to these Algæ, and alluding to their "yoked" character. When two filaments are about to conjugate, they float near one another, lying parallel, or nearly so in the stratum. Then, from the proximate sides of each cell of both filaments there issue short tubes, which mutually unite; the cell-wall at the point of union disappears, and the contents of both cells are mixed together. Sometimes the whole contents of one cell is discharged into the other, and the spore formed in that cell; sometimes, and equally commonly, the spore is formed in the connecting tubes. These tubes are sometimes long and barlike; and the pairs of conjugated threads resemble little ladders. Sometimes they are very short, and the filaments are angularly bent at the point of union. In most cases the spore forms a single spheroidal or angular mass; but in *Thwaitesia* it is divided into four sporules, exactly like the tetraspore of one of the *Rhodospiræ*. In the genus *Edogonium*, which Mr. Berkeley refers to this Family, the filaments do not conjugate, but the spores are formed by a division of the endochrome of a fertile cell. The cell separates into two half-cells by a transverse partition, as in ordinary cell division; the spore is then formed in one half; the other half lengthens to the size proper to the genus and again divides, forming a second spore in one of its halves; and so it may divide repeatedly until a string of six or eight consecutive spores is formed, in the centre or at the end of the thread, as in *E. monile*, a beautiful species from Tasmania. The spores are not always green; but (especially in *Edogonium*) are often brilliantly coloured, orange or vermilion.

Several genera, containing a large number of species, are described, chiefly from the stagnant or nearly still waters of the Northern Hemisphere. But they are probably dispersed over the globe, though few have yet been brought from the tropics. Unfortunately they do not recover their characters sufficiently, after having been dried, to admit of being accurately verified from dried specimens: and consequently I am forced to omit specific descriptions of those that I have received from North America. No doubt many of the species of the genera MOUGEOTIA; ZYGNEMA (*Spirogyra*); TYNDARIDEA; STAUROCARPUS; and EDOGONIUM (*Vesiculifera*) exist in American waters; but they must be examined on the spot. Mr. Ravenel has kindly sent me a few specimens of *Staurocarpus* and *Zygnema*, but I have not been able to recognize the species satisfactorily. Authors who have written on the subject appear to me to have needlessly multiplied the European species, of which Kützing enumerates 200, including 58 *Zygnemata* and as many *Edogonia*.

ORDER VIII.—HYDRODICTYÆÆ.

HYDRODICTYÆÆ, *Kütz. Phyc. Gen. p. 281. Sp. Alg. p. 448. Berk. Crypt. Bot. p. 138. Dne. Class. p. 31. (in part only.)*

DIAGNOSIS. Green (fresh-water) Algæ, composed of cylindrical cells, united by their ends into a saccate net-work, with polygonal meshes ; each side of the mesh formed of a single cell. *Endochrome* of each cell resolved at maturity into indefinitely numerous, minute *zoospores*, which arrange themselves, end to end, into a new net-work, whilst still contained within the parent cell. *Nets* viviparous.

NATURAL CHARACTER. The genus *Hydrodictyon* differs so remarkably in the mode of evolution of its frond from that of any other confervoid Alga that it has been found necessary to constitute it the type of a distinct family. Its essentially distinctive characters are thus well given by Messrs. Derbes and Soliere in their able memoir : "Each *zoospore* of this plant gives birth to one cell only, whose further development will consist merely in an increase of dimensions, without undergoing any multiplication. Here then, without doubt, is the most distinctive character of the genus ; for in the *Confervæ*, with which it has the greatest affinity, one *zoospore* gives birth to an individual, which increases in dimensions by the multiplication of its cells ; here, on the contrary, a great number of *zoospores* unite together to form an individual, which is composed of a limited number of cells, which number remains the same during the whole duration of the plant ; that is to say, until each of these cellules, in its turn, gives birth to a young *Hydrodictyon* complete. In other terms, a *Hydrodictyon* is an assemblage of little plants reduced to a single cell, formed by the development of a *zoospore*." If we trace the development, it will be obvious that this is a true explanation of the viviparous net-work.

At all stages of its growth, then, the structure of the *Hydrodictyon* is the same. Young specimens differ from old ones merely in the size of the cells of which the net is composed ; the number of the cells, their form, and that of the net are the same in young as in old nets. In all stages the *Hydrodictyon* is a bag-like or purse-shaped net, with polygonal, generally five-sided meshes, each mesh consisting of a single articulation or cylindrical cell, united by its ends to the neighbouring cells, just as the cells of a *Conferva* are united, but having no passage from cell to cell, and each cell, from first to last, carrying on an independent existence. When first emitted from the

parent, the young *Hydrodictyon* is of microscopic size. It grows rapidly until each articulation becomes from a quarter to half an inch in length, and half a line in diameter. Up to this period the cells are filled with a green semi-fluid endochrome, in which grains of different sizes are formed. Gradually this green matter is resolved into an infinite number of minute zoospores, which are at first spherical, afterwards ovate, pointed at one end; and which, while contained within the cell wall, exhibit lively movements. At length these movements gradually subside, and the zoospores arrange themselves, end to end, into polygonal, commonly pentagonal, areolæ; and when all the zoospores contained within a single articulation have so arranged themselves, the little net is completed before its emission or birth. When all is thus ready, the parent net falls to pieces, each articulation floating separately; and shortly afterwards, on the bursting or deliquescence of the wall of the mother cell, the little network floats independently, and commences its career of growth and development. This curious plant early attracted the notice of botanists, and has deservedly engaged the attention of physiologists. The fullest of the earlier histories is to be found in Vaucher's work on Fresh Water Confervæ; and recent accounts are given by Areschoug in the 16th vol. of "Linnæa;" and by Derbes and Soliere in their memoir presented to the French Academy in 1848. I have never had the opportunity of examining living specimens, though abundantly supplied with dried ones from many distant parts of the world. The only species known inhabits ponds in Europe and in America, both North and South. It is rare in England, and has not yet been found in Ireland.

HYDRODICTYON, *Roth.*

(Character the same as that of the Order.)

1. *HYDRODICTYON utriculatum*, *Roth. Fl. Germ.* 3. part 1, p. 531. *Fl. Dan. t.* 1597. *Ag. Syst.* p. 84. *Lyngh. Hyd. Dan.* p. 169. t. 58. *Harv. Man. Ed.* 1. p. 140. *Kütz. Phyc. Gen.* p. 281. *Syst. Alg.* p. 448. *Conferva reticulata*, *Linn. Dillw. Conf. t.* 97. *E. Bot. t.* 1687.

HAB. In ponds of fresh water. West Point, *Professor Bailey.* Weehawken, *Mr. Walters.* Waterholes between Van Horn's Wells and Muerte on the Mexican boundary, *Dr. Bigelow.* (v. s. in *Herb. T.C.D.*)

This has been sufficiently described in the remarks under the Order. The full sized nets are 6-8 or 12 inches long, and 3-4 in diameter; their meshes from half an inch to three quarters of an inch across. In different localities and climates the size varies. No difference is appreciable between American and European specimens.

ORDER IX.—OSCILLATORIAEÆ.

Harv. Man. Ed. 1. p. 219. Oscillatoriae, Harv. in Mack. Fl. Hib. part 3, p. 164. Endl. 3d. Suppl. p. 12. Oscillatoriae and Rivulariae, Harv. Br. Fl. J. Ag. Alg. Medit. p. 8, 10. Oscillatores, Lindl. Veg. Kingd. p. 18. Oscillaricae, Leptotrichiceae, Lyngbyae, Scytonemeae, Mastichotricheae, Rivulariceae, Kütz. Sp. Alg. pp. 235-344.

DIAGNOSIS. Green, (rarely olive-brown, blue, or purple) marine or fresh water Algæ, composed of simple or slightly branched filaments ; each filament having a membranous unicellular sheath, enclosing an annulated medullary chord of very short cells.

NATURAL CHARACTER. *Root* either a simple point of attachment, or, in most cases, not obvious. *Filaments* of small size, and often very minute, rarely solitary, variously aggregated together. In some microscopic forms, as in *Trichodesmium*, a number of minute filaments lie close together, cohering by their edges and parallel to each other, forming little bundles, resembling *faggots* in miniature ; and these float freely in the water, through which they move by a slow, proper motion, rising to the surface or sinking, according to the season. In others, as in *Oscillatoria*, an indefinite number of similar filaments lie loosely in a gelatinous matrix, within which they are developed, and from the edges of which they radiate ; but they have no definite or determinate arrangement in the mass. Again, in *Calothrix*, the filaments are fixed at the base, and stand erect in minute tufts, or spread in a velvety pile over the surface of various objects. In *Lyngbya* the arrangement of the threads is similar, but they are of much greater length, more curved and flexible, resembling tufts of hair or silky wool. Lastly, in *Rivularia*, there is a compact gelatinous frond of sub-definite form, constructed of a multitude of symmetrically arranged filaments ; each one springing from a minute, spherical, bulb-like cell, by which it is attached to the neighbouring filament. These basal cells have been called "connecting cells," and also "*heterocysts*." Their peculiar function has not been clearly ascertained. Through all the genera of the Order considerable uniformity prevails in the structure of the filaments. The external coating or peripheric portion, called the *sheath*, is a tubular membrane, destitute of markings, hyaline, and apparently formed by the lengthening of a single generating cell. In many cases it is delicately membranous and thin ; in others it is thickened ; and in some (as in *Petalonemum*), the sheath consists of many foliations, one inside the other. In several of the *Rivulariceae* also, the sheath is similarly compound, and frequently plumoso multifid at the extremity. Within the sheath is the medullary column, or endochromatic part of the filament. This always consists of a series of short, lenticular, densely coloured cells, which in the full grown

filament may be readily separated. They have been described as *sporidia*; but observations on their germination are wanting. Minute *zoospores* have been observed in some. Besides the ordinary sheath which encloses each medullary column, a supplementary sheath is found in some genera, as in *Microcoleus*, enclosing a considerable number of separately sheathed filaments. The origin of this general sheath has not been observed. It probably originates as a simple filament, whose endochrome divides and subdivides longitudinally, thus forming a number of filaments within the body of the older one, whose walls continue to enlarge, being fed by the matter of the contained filaments. This appears, at least sometimes, to be the case: in other cases probably the investing sheath is formed of exuvie and dead filaments.

Many plants of this Order are celebrated for exhibiting peculiar movements resembling those of animals. Some have a rapid progressive and regressive movement, by which they can change their place, rising or falling in the water; others, while remaining nearly in one place, move from side to side, describing an arc. The genus *Oscillatoria* is so named from the pendulum-like movements of its filaments. Species of this genus are to be found in most pools of stagnant water, and their peculiar movements may be easily observed. These plants occur, when fully developed, in floating, skin-like, slimy pellicles, of a deep green or blackish or blueish colour and gelatinous substance. If a small portion of the floating scum be placed in a cup of water, and allowed to remain for some hours at rest, its edges will become finely fringed with delicate, radiating threads, which extend further and further, from hour to hour; and if the experiment be continued for a day or two, in warm weather, the whole surface of the water will be coated with a thin layer of filaments, which will spread till stopped by the dry edges of the cup. These filaments were at first contained within the gelatinous matrix, and have merely *spread* out, not *grown*, from it, by means of their peculiar movements. These movements are of three kinds:—first, there is the oscillating movement; one end of the thread remaining nearly at rest, while the other sways from side to side, sometimes describing nearly a quarter of a circle in a single *swing*. Secondly, the tip of the filament has a minute movement, bending from side to side, like the head of a worm: and thirdly, there is an onward movement, probably the result of the two former. It is this latter which causes the filaments to radiate and spread out from the edges of the stratum. If a minute portion of a living *Oscillatoria* be placed in water, under a moderately high magnifying power, all these movements can be seen without trouble. They vary in vividness, however, in different species, some being active, and some sluggish; and also according to the state of the weather, being most rapid in warm weather. Some of the species are furnished with minute cilia at the extremities, but these do not seem to take part in the motion.

Oscillatoriaceæ are found in all parts of the world, and under a great variety of circumstances. Not very many, with the exception of the *Lynghyæ* and *Calothrices*, are marine; the great proportion are found in fresh water. Several occur in hot-springs, even in the Geysers of Iceland; and others inhabit water highly charged with mineral salts or gases. Some are found on damp soil; others under the spray of cascades, and on the gates of canal-locks and about mill-dams. Few pieces of stagnant fresh water are free from them; but rivers and streams are equally furnished, and broad lakes are

sometimes coloured, throughout their whole extent, with minute, perhaps microscopic, species of this Order. The ocean itself, often for many hundreds of square miles, has been found discoloured by microscopic Algæ of this group, belonging to the genus *Trichodesmium*; one of which, of a red colour, is found at seasons abundantly in the Red Sea, and is supposed to have caused that name to be given to the Arabian Gulf. Others are found in the Indian Ocean, one of which is of a bright yellow-green, and sometimes deeply tinges the upper strata of the sea off the coasts of Malacca. Others have been noticed in equal abundance, but less strongly coloured, in various parts of the Pacific, and on the coasts of Australia.

The species are very difficult to determine, and have been too much multiplied by authors: little therefore can usefully be said respecting their geographic distribution. Probably, if they are ever carefully investigated, the same kinds will to a large extent be found in the most distant localities. This at least seems to be the case with some, as *Petalonema alatum*, *Lyngbya majuscula*, *L. ferruginea*, *Calothrix scopulorum*, and many others.

TABLE OF THE NORTH AMERICAN GENERA.

* *Fronde filamentous, branched, olive-brown, in fresh water.*

I. PETALONEMA. *Filaments with a flattened, longitudinally and transversely striate sheath, much broader than the endochrome.*

II. SCYTONEMA. *Filaments with a cylindrical, hyaline sheath, narrower than the endochrome.*

** *Fronde filamentous. Filaments separate, free, green or purple.*

III. LYNGBYA. *Filaments very long, flexible, threadlike, bundled together.*

IV. CALOTHRIX. *Filaments short, tufted, erect.*

V. OSCILLATORIA. *Filaments rigid, needle-shaped, lying loosely in a mucous matrix, usually floating.*

*** *Fronde formed of numerous parallel filaments contained within a simple or branching membranous common-sheath.*

VI. MICROCOLEUS.

**** *Fronde formed of numerous radiating filaments invested with firm gelatine; each filament springing from a spherical root-cell.*

VII. RIVULARIA.

I. PETALONEMA, *Berk.*

Filaments stratified, decumbent, free, simple or branched. *Tube* or sheath very wide, flattened, longitudinally and transversely striate, and crenulate at the edge; endochrome olivaceous, annulated, here and there interrupted by a *heterocyst*. *Branches* issuing in pairs, formed by the division and protrusion of the endochrome of the original filament.

A very distinct and easily recognized genus established by Mr. Berkeley in 1833, under the name here adopted; a name changed by Professor Kützing in 1845 to *Arthrosiphon*, for what reason I am not aware. The Alga on which it is founded was discovered many years previously, in the West of Scotland, by the late Captain Carmichael, and was first figured and described by Dr. Greville as an *Oscillatoria*. It has more recently been found in several parts of Europe, and we have now to record its occurrence in the New Continent. There are few more beautiful objects among the fresh water Algae, and unlike many of its kindred the fronds perfectly recover their form when moistened after having been dried. When placed under the microscope the filaments present the appearance of a cylindrical central column, containing annulated, olive-coloured endochrome, and a wide winglike border at each side of the column. This border or *sheath* is obliquely striate, the striæ running in an arch from the margin toward the centre, where they become parallel, and are then continued longitudinally downwards along the medullary column, till lost in the density. The margin of the wing is closely crenulate, and in age transversely striate at the crenatures as if jointed. Such is the *apparent* structure: the *real* structure seems to be, that an annulated central filament is enclosed within a number of compressed, trumpet-mouthed gelatinomembranaceous tubular sheaths, one arising within the other, and successively developed as the growth proceeds. These sheaths, thus concentrically arranged, are indicated by the longitudinal arching striæ; and the mouths of the younger sheaths, projecting slightly beyond those of the older, form the crenatures of the margin.

PETALONEMA *alutum*, Berk. *Gl. Br. Alg.* p. 23, t. 7, fig. 2. *Harv. Man. Ed. 1*, p. 168. *Hass. Fr. Wat. Alg.* p. 237, t. 68, f. 6. *Arthrosiphon Grevillii*, Kütz. *Phyc. Germ.* p. 177. *Sp. Alg.* p. 311. *Oscillatoria alata*, *Carm. Grev. Sc. Crypt. Fl. t. 222*. *Harv. in Hook. Br. Fl. 2.* p. 378. (TAB. XLVIII. A.)

HAB. On dripping rocks, under Biddle Stairs, Niagara Falls, abundantly, *W. H. II.* (1849). (v. v.)

This forms strata of a dark chestnut-brown colour, and of indefinite extent, on the surface of rocks or soil in places exposed to the constant drip of water. The *filaments* are decumbent, lying without order in the gelatinous matrix in which they are developed, and which forms the groundwork of the stratum. They appear to be unattached to the soil, and each filament may be about half an inch in length; but they are commonly found broken off at the inferior end, or the lower portion decays while the upper continues to grow. They are slightly curved, in serpentlike fashion, never quite

straight ; at first they are simple, but now and then they emit lateral branches, which issue at considerable angles, and generally in pairs. When a filament is about to branch, a rupture takes place in the side of the sheath, and the endochrome issues in two portions, one connected with the upper, the other with the lower half of the filament ; these form the nuclei or medullary portion of two new branches, and become duly invested with a membranous sheath, and gradually put on the aspect of the adult filament. The *endochrome* is granular, dark-brown, and annulated at short intervals, the transverse rings being placed very close together in the youngest portions, and less closely in the older, where they are distant from each other about twice the diameter of the column. This annulated endochrome is interrupted at certain fixed places, where an ellipsoidal cell is formed, separating the endochrome of the lower from that of the upper portions. These cells may be compared to nodes, and indicate, if I mistake not, the points where the twin branches issue. I have not, however, noticed their development into branches.

PLATE XLVIII. A. *Fig* 1. Portion of the stratum formed by *PETALONEMA alatum* ; and *fig*. 2. Fronds removed from the same ; the *natural* size. *Fig*. 3. Portion of two filaments *magnified*. *Fig*. 4. Apex of a filament, more highly *magnified*.

II. SCYTONEMA, Ag.

Filaments tufted, mostly basifixed, erect or decumbent, free, flexible, branched. *Tube* or sheath cylindrical, continuous, membranaceous, tough ; endochrome olive-brown, annulated. *Branches* lateral, issuing in pairs, formed by the division and protrusion of the endochrome of the original filament.

When at Niagara Falls in the autumn of 1849, I collected on the rocks under Biddle Stairs specimens of a large decumbent *Scytonema*, which may possibly be referable to one or other of the 50 species named and described by Kützing, but whose characters appear to me to be founded, often, on insufficient data. I am unwilling to add to the synonyms by giving a new name to the American species, and I have not at hand the means of comparing it with more than a few of the recorded species. It is of large size, its filaments being nearly twice the diameter of those of the British *S. myochrous*, which it resembles in its branching. The endochrome is narrower in proportion to the sheath and distinctly annulate ; the annuli rather distant. The sheath is of a deep chestnut brown colour.

Probably several other *forms*, if not species, occur in North America.

III. LYNGBYA, *Ag.*

Filaments destitute of mucous layer, free, flexible, unbranched, elongated, not oscillating. *Tube* continuous, cylindrical, membranaceous; endochrome green or purple, densely annulated, at length separating into lenticular sporidia. (*Marine or in fresh water.*)

A genus consisting of many species, most of which are found in the sea; several occur in estuaries of rivers and in brackish ditches, and a few are found in fresh water or in thermal springs. From *Oscillatoria* they are known by the absence of a gelatinous matrix and of oscillating movements, and by the greater flexibility of the filaments. From *Calothrix*, to which they are more nearly related, they differ chiefly in habit; especially in the great length of the filaments, and in being rarely fasciculate. The generic name is given in honour of H. C. Lyngbye, a Danish Algologist, and author of an excellent work on the Algæ of Denmark.

1. LYNGBYA *majuscula*, Harv.; filaments thick, very long and tenacious, twisted, issuing in long, crisped bundles from a blackish green stratum. *Harv. Phyc. Brit. t. 62. Kütz. Sp. Alg. p. 283. Lyngbya crispa, Ag. Syst. p. 74 (in part.). Conf. majuscula, Dilw.! Supp. t. A. L. maxima, Mont. L. pacifica, Kütz. Sp. Alg. p. 284. (TAB. XLVII. A.)*

HAB. Long Island Sound, *Professor Bailey*. Peconic Bay, *Mr. Hooper*. Key West, *W. H. H. and Mr. Ashmead*. (v. v.)

Tufts often several inches in diameter, the central portion densely interwoven or stratified, the margins throwing off long bundles or fascicles of free, crisped, or variously twisted filaments, one to two inches in length, and floating freely in the water. The strata at first are attached to the bottom, but with age float to the surface and are cast ashore in large masses. The diameter of the filament is greater than in any other species, being commonly rather more than .05 of an inch. The Key West specimens are rather less broad than usual. The sheath or tube of the filament is thick, and forms a wide, hyaline margin to the dark-coloured, closely but not strongly annulated endochrome.

The *L. maxima*, Mont. (*L. pacifica*, Kütz.) which I have gathered in great abundance on the shores of the Friendly Islands, appears to me to be merely a luxuriant state of this common species. Except in the greater diameter of the filaments, and this varies in different specimens, I see no character by which it may be distinguished. The species (as understood in England) has a peculiar external habit, and its microscopic characters—however difficult to describe—are easily remembered after having once been seen. It was first found at Bantry, South of Ireland, by the late Miss Hutchins.

PLATE XLVII. A. *Fig. 1.* A tuft of *Lyngbya majuscula*, the natural size. *Fig. 2.* Portion of a filament, magnified.

2. *LYNGBYA ferruginea*, Ag. ; filaments slender, flaccid, curved, forming a thin stratum of a verdigris green colour, which gradually changes to a pale chestnut (but resumes the green in drying). *Ag. Syst. p. 73. Harv. Phyc. Brit. tab. 311. L. æruginosa, Kütz. Sp. Alg. p. 282. (TAB. XLVII. B.)*

HAB. On muddy shores, in tide pools and floating in ditches of salt or brackish water near the sea. Haarlem River, N.Y. close to the High Bridge, *W. H. H.* Salt ditches at Hoboken and near Green Port, *Professor Bailey. (v. v.)*

Stratum thin, expanded, covering the mud to an indefinite extent, or floating on the surface of stagnant salt water, generally of an intense verdigris or bluish green colour, now and then foxy or rust colour, scarcely at all gelatinous. *Filaments* about .001 of an inch in diameter, flaccid, slightly flexuous, rather tough, with very thin, membranous cell-walls, filled with dense closely and strongly annulated, bluish-green endochrome, occasionally with empty spaces. The striae are very evident. In the dry state the blue-green colour is mostly preserved ; and the surface is not glossy.

PLATE XLVII. B. *Fig. 1.* Portion of the stratum of *LYNGBYA ferruginea. Fig. 2.* Portion of a filament, *magnified. Fig. 3.* Section of the same, more highly *magnified.*

3. *LYNGBYA fulva*, Harv. ; filaments slender, elongate, flexuous, fulvous, issuing in erect, crisped, plumose fascicles from a dark coloured stratum ; cell-wall thick, forming a broad limbus to the endochrome. (TAB. XLVII. F.)

HAB. On the granite masses composing the breakwater at Stonington, Conn. *Professor Bailey. (v. s. in Herb. T.C.D.)*

Stratum attached to the rock, dull olivaceous, throwing up long fascicles of filaments, an inch or more in length, and standing upright in the water. *Filaments* about the size of those of *L. ferruginea*, but with very thick walls, which form a glassy sheath to the enclosed fulvous or ochre coloured endochrome ; the hyaline border being nearly half as wide as the coloured portion. The annuli are strongly marked and very closely set.

This somewhat resembles *L. luteo-fusca*, Ag., but the walls of the tube are much thicker, as thick in proportion to the enclosed matter as are those of *L. majuscula* to the matter in its tube.

PLATE XLVII. F. *Fig. 1.* *LYNGBYA fulva*, the natural size. *Fig. 3.* Portion of a filament, *magnified. Fig. 2.* Section of a filament, more highly *magnified.*

4. *LYNGBYA nigrescens*, Harv. ; filaments very slender, flaccid, densely interwoven into a fleecy, blackish-green stratum. (TAB. XLVII. D.)

HAB. Sea shores or mud, &c. Canarsie Bay, Long Island, *Mr. Hooper.* Peconic Bay. *W. H. H.* Also on leaves of *Zostera*, Peconic Bay, *Mr. Hooper.*

Strata varying in extent, lying on the surface of mud, or floating, or entangled with other Algæ and attached to them, of a very dull, blackish, or somewhat violet colour, with shades of æruginous green. *Filaments* scarcely more than half the diameter of those of *L. ferruginea*; with thin, membranous cell-walls, and densely annulated, dark or dull coloured endochrome. When dry the stratum becomes brittle, and frequently breaks off from the paper in flakes.

PLATE XLVII. D. *Fig. 1.* *LYNGBYA nigrescens*, the natural size. *Fig. 2.* Portion of a filament, magnified. *Fig. 3.* Section of the same, more highly magnified.

5. *LYNGBYA confervoides*, Ag.; filaments very slender, flaccid, elongate, forming long, comose fasciuli, floating freely from a blackish green basal stratum; annuli not very strongly marked. *Ag. Syst. p. 73. Kütz. Sp. Alg. p. 285. (TAB. XLVII. C.)*

HAB. Sea-shores, Charleston, S. Carolina, *Professor Lewis R. Gibbes. (v. s.)*

Stratum dark, olivaceous, or blackish green, emitting long bundles of slender filaments. 1-2 inches long, which float freely in the water. Filaments lying parallel in the bundles, flexuous, but scarcely interwoven and often separate; with very thin, narrow, membranous tubes, and a dense, dull-green endochrome, which is much less distinctly annulated than in *L. ferruginea*. The diameter of the filament is also much less than in that species.

I have compared the above quoted species with an authentic one from Professor J. Agardh, and find little difference between them.

PLATE XLVII. C. *Fig. 1.* *LYNGBYA confervoides*, the natural size. *Fig. 2.* Portion of two filaments, magnified. *Fig. 3.* Section, more highly magnified.

6. *LYNGBYA pusilla*, Harv.; stratum minute, blackish-green; filaments very slender, short, crisped, spreading in small bundles; endochrome pale, dull-green, annulate, cell-wall very thin. (TAB. XLVII. E.)

HAB. Parasitic on small Algæ, at Sullivan's Island, S.C., *W. H. H. (v. v.)*

This spreads over small Algæ in thin strata, composed of densely matted filaments, and emitting to all sides free, fasciated filaments. These latter are about quarter of an inch long, and half the diameter of those of *L. ferruginea*, with a pale endochrome. The cell-wall is extremely thin; the endochrome quite fills the tube, leaving a scarcely perceptible margin. The annuli are tolerably definite.

Possibly this may be an *Oscillatoria*.

PLATE XLVII. E. *Fig. 1.* *LYNGBYA pusilla*, the natural size. *Fig. 2.* Portions of three filaments, magnified. *Fig. 3.* Section of a filament, highly magnified.

7. *LYNGBYA hyalina*, Harv. ; filaments basifixed, erect, straight, very slender, arachnoid, gelatinoso-membranaceous, flaccid, very pale yellowish green or nearly hyaline ; endochrome filling the tube, at first granular, then annulated. (TAB. XLVII. G.)

HAB. On lime encrusted rocks at Key West, *W. H. H.* (v. v.)

Forming indefinite, very soft and sub-gelatinous continuous tufts or pilose strata. *Filaments* fixed by their base to the rock, and floating freely, exceedingly slender and cobwebby, straight, glossy, cylindrical, from half an inch to an inch long, very pale æruginous or yellowish-green, often nearly colourless. The cell-wall is thin and delicate, and the endochrome quite fills the tube, leaving no perceptible margin.

I do not know any species similar to this. It is exceedingly slender and delicate.

PLATE XLVII. G. *Fig. 1.* *LYNGBYA hyalina*, the natural size. *Fig. 2.* Portions of three filaments, magnified. *Fig. 3.* Section of a filament, highly magnified.

8. *LYNGBYA muralis*, Ag. filaments somewhat rigid, thickish, tortuous, very long, interwoven in a bright, grass-green stratum ; annuli strongly defined. *Ag. Syst. p. 74. Harv. Man. Ed. 1, p. 160. Conf. muralis, Dillw. tab. 7, E. Bot. t. 1554. β. aquatica.*

HAB. var. *β*, in pools of fresh water, Whalefish Islands, Davis Straits, *Dr. Lyall.* (v. s.)

The specimens are mixed with turfy soil. Except in the submerged habitat, this agrees with the ordinary form. Intermixed with threads of the usual size and structure are others cohering in pairs, as in *L. copulata*, Hass., which is obviously only a state of this widely dispersed species. I have not received specimens of the ordinary *L. muralis* from America ; but no doubt it is common on damp walls, &c., as in Europe generally.

IV. CALOTHRIX, Ag.

Filaments destitute of a mucous layer, erect, tufted, or aggregated, fixed at the base, somewhat rigid, not oscillating. *Tube* continuous ; endochrome green, densely annulated, at length separating into lenticular sporidia. (*Marine or in fresh water.*)

I retain the genus *Calothrix*, as established by Agardh, in preference to dividing it, with Kützing and others, into the groups *Leibinia*, *Tolyptothrix*, &c. which appear to me to be separated on very uncertain and variable characters. The whole group requires a careful study and complete remodelling ; but I have neither time nor sufficiently copious materials to attempt such a work. I can hardly suppose that the multitude of species and genera of these obscure plants described by Kützing are all

distinct. To judge by the characters assigned by him, many appear very closely allied to each other.

1. *CALOTHRIX confervicola*, Ag. ; filaments short, glaucous, opaque, filiform, blunt, rigid, straight or slightly curved, minutely tufted. *Ag. Syst. p. 70. Harv. Phyc. Brit. t. 254. Wyatt, Alg. Danm. No. 229. Leibleinia confervicola, Endl. 3d. Supp. p. 221. Leibleinia chalybea, Kütz. Sp. Alg. p. 277.* (and probably other species of *Leibleinia* of the same author). *Conferva confervicola, Dillw. Conf. t. 8. E. Bot. t. 2576.*

HAB. On the filiform marine Algæ. Rhode Island shores, *Professor Bailey, Mr. Obney, Mr. Hunt.* (v. v.)

Filaments about the tenth of an inch long, either forming little starry tufts along the branches of the Alga it infects, or, by the confluence of several such tufts, covering the branch with a continuous pile of dark æruginous-green threads. When seen under the microscope the filaments are simple, curved, filiform, but little attenuated upwards, and either separate from each other or variously combined by lateral cohesion into fascicles. Their cell-wall is rather thick, and the endochrome within is of a dull bluish-green, here and there interrupted and broken into separate masses, and sometimes nodoso-incrassate at short intervals. The transverse striæ are more or less distinctly seen according to the age of the specimen examined. The colour varies in different specimens, from dull to bright green ; and is sometimes olivaceous, and even yellowish or pale.

This species is a common parasite on the filiform Algæ, and found in many distant seas.

2. *CALOTHRIX scopulorum*, Ag. ; spreading in velvety dull-green strata of indefinite extent ; filaments flexuous, subulate, subattenuate, simple. *Ag. Sp. Alg. p. 70. Harv. Phyc. Brit. t. 58, B. Schizosiphon scopulorum, Kütz. Sp. Alg. p. 329 (and probably others.) Conferva scopulorum, Dillw. Conf. p. 39, Sup. t. A. E. Bot. t. 2171.*

HAB. Rocks near high water mark. Shores of Rhode Island, *Professor Bailey and Mr. Obney.* (v. v.)

This occurs in slimy and somewhat velvety patches of indefinite extent, covering the surface of marine rocks. The filaments rise from a slimy debris or matrix, which is gradually accumulated. They are erect, flexuous, often very much bent, attenuated to the apices, and sometimes, but not invariably, acuminate ; and they stand in the stratum parallel to each other, crowded together, but not cohering in laminae. The endochrome is commonly of a dark, olivaceous green, and the cell-wall thin and membranous. *Striæ* evident.

Generally dispersed throughout the temperate zones, both north and south. Its slimy patches are very treacherous to the feet of unwary trespassers who may happen to tread on them.

3. *CALOTHRIX vivipara*, Harv. ; spreading in continuous, velvety strata ; filaments thick-walled, fasciculate at base, straight or somewhat curved, viviparous above, and pseudo-branched ; endochrome strongly annulated.

HAB. Seaconnot Point, *Professor Bailey* (v. s. in Herb. T.C.D.)

This appears to form a continuous stratum on rocks, like that of *C. scopulorum*, but the filaments of which it is composed are longer, 2-3 tenths of an inch long and straighter ; more united at the base into fascicles, and furnished above with appositional branches which evidently rise from viviparous separations from the endochrome. Sometimes the endochrome seems to split or divide longitudinally ; at other times it separates transversely, the portions growing at each end and cohering laterally. The cell-wall is wider than in *C. scopulorum*.

Certainly closely allied to *C. scopulorum* and also to *C. hypnoides*, and perhaps intermediate between them, connecting the extreme forms of each. It was sent to me by Professor Bailey as probably *C. fasciculata*, but it does not agree with the British plant so called ; and not knowing what else to do with it, being unwilling to pass it by altogether, I have given it a provisional *locus* in the genus, assigning to it the trivial name *vivipara*. It may possibly be merely a viviparous state of *C. scopulorum*.

4. *CALOTHRIX pilosa*, Harv. ; strata of indefinite extent, blackish or dark brown, pilose ; filaments densely interwoven at the base, then free, elongate, rigid, cylindrical, very obtuse, very flexuous, simple or slightly pseudo-branched ; cell-wall very thick, fulvous or subopaque ; endochrome narrow, dark green. (Tab. XLVIII. C.)

HAB. On rocks between tide marks, Key West, *W.H.H.* (v. v.)

This forms strata of indefinite extent, covering rocks in patches of a very dark blackish or brown colour, not in the least lubricous, and more pilose than velvety. The stratum is about quarter of an inch thick ; its matrix composed of the densely interwoven decumbent bases of the filaments which constitute it. These are afterwards erect, unconnected together, standing separately like the hairs on a fleece, very much curved or twisted, nearly half an inch long, rigid and not at all slimy. They are about the same diameter as *Lyngbya majuscula* ; and are scarcely attenuated at the blunt apex. The cell-wall or tube is remarkably thick and opaque, evidently formed of successive deposits, indicated by faint longitudinal striae ; and is fulvous or ochraceous in colour. The endochrome seldom constitutes more than a third of the diameter of the filaments, and is of a dull dark-green, more or less annulated. When dry the whole plant is rigid and harsh, and does not adhere to paper.

This seems to be a well characterised species, different at least from any with which I am acquainted, and to be recognised by its shaggy, rigid pile of hair-like filaments, and their dark colour. Its microscopic characters are quite different from those of *C. scopulorum*. It abounds at Key West on littoral rocks.

Plate XLVIII. C. *Fig. 1.* Stratified tufts of *CALOTHRIX pilosa*, the natural size. *Fig. 2.* Portion of the filaments *magnified*. *Fig. 3.* A more highly *magnified* portion.

5. *CALOTHRIX dura*, Harv.; strata indefinite, dull brown; filaments at first decumbent and matted together, then erect, cohering laterally in tooth-like bundles; each filament angularly bent below, at first simple, then cleft longitudinally and afterwards once or twice forked; endochrome very narrow, annulate; the cell-wall thick, lamellated and subopaque; apices acuminate. (TAB. XLVIII. D.)

HAB. On mudflats, near highwater mark. Key West, *W. H. H.* (v. v.)

Possibly this may be only a state of the preceding species, to which, at least, it is nearly allied, although it offers characters which would cause it to be referred to another genus of Kützing. The filaments are matted together at base; the mat being composed of prostrate portions of each thread, intricately interwoven. The threads, after proceeding for a time horizontally, suddenly become erect, bending nearly at right angles, and then they cohere together into stiff, tooth-like fascicles, in which they stand parallel, and are straight or but slightly curved. When a single filament is removed from the fascicle, it is seen to be simple and filiform below, but gradually increasing in diameter upwards to a certain stage, at which the endochrome separates into two columns, which are at first parallel with each other and contained in the same sheath; but they soon separate, and then each becomes invested by a separate sheath. In this way two branches are formed, which may either remain simple or may again divide once or twice in a similar manner. The cell-wall is much wider than the endochrome. The substance is rigid and tough: and the colour dull brown or fulvous.

PLATE XLVIII. D. *Fig. 1.* Stratified tufts of *CALOTHRIX dura*, the natural size. *Fig. 2.* Portions of the filaments *magnified*. *Fig. 3.* Apex of a filament, more highly *magnified*.

V. OSCILLATORIA. *Vauch.*

Filaments lying in a gelatinous matrix, rigid, simple, acicular, vividly oscillating. *Tube* continuous; endochrome green, densely annulated with close, parallel, transverse striæ. (*Mostly in fresh water—some marine.*)

The *Oscillatoria* occur in gelatinous strata or pellicles, which at first are formed at the bottom of stagnant or running water, and afterwards rise to the surface. The green scum frequently seen on the surface of putrid ditches is generally formed by one or

more species of this genus. Others occur in lakes, and sometimes in such abundance as to impart a blue-green tint to the water, over very wide areas. Others, again, inhabit mineral springs and thermal waters ; and some are found on the damp surface of the soil, especially in the autumnal months. Varied as are the habitats, the general characters of the species are very uniform: and all are remarkable for an oscillating movement of the filaments, from side to side, like the motion of a pendulum. This continues with greater or less vividness, while the plant lives: but some species exhibit much more lively movements than others, and all appear to be more active in warm than in cold weather.

A considerable number of species have been described by authors, but they require to be studied in a living state, or at least with very perfect materials and an ample suite of well preserved specimens. I cannot undertake to name specifically the few scraps of American *Oscillatorie* which have been sent to me by various correspondents. Probably most of the European species will be met with in America ; and no doubt some others peculiar to the New Continent. It would be interesting to know whether any species be found in the Mammoth Cave of Kentucky, or in other anomalous localities.

VI. MICROCOLEUS, *Desmaz.*

(*Chthonoblastus*, Kütz.)

Filaments minute, rigid, straight, annulated, bundled, and enclosed within membranaceous simple or branching sheaths, which are either open or closed at the upper extremities.

The filaments in this genus have the structure of those of *Oscillatoria* or *Calothrix*, but are developed within membranous common sheaths, which are either simple or branched, and either lie prostrate in indefinite strata, like those of an *Oscillatoria* ; or stand erect, in toothlike tufts, like those of many *Calothrices*. In all cases the sheath is much attenuated at the base, gradually widening upwards, and terminating either in an open, trumpet-shaped upper extremity, or in a closed club-shaped one. In the lowest part of the sheath there is but a single longitudinal filament ; a little way up, two or three parallel filaments are found ; and the filaments gradually increase in number in the upper and wider portions of the common sheath. Hence it may probably be inferred that the mode of growth of the frond is by the continual longitudinal division of the filaments ; the older ones, having once split, remaining unchanged at base ; while their apices by another splitting give birth to other filaments, which multiply in the same manner. Such a mode of growth would account for the form

which the full grown frond assumes. The species are found either in the sea or in fresh or brackish water, and even on damp soil. A terrestrial species is common in Europe by the borders of clayey highways and paths, and may also be found in America.

1. *MICROCOLEUS corymbosus*, Harv.; fronds erect, rigid, tufted, multifid, the branches erect, level-topped, linear-clavate, closed at the extremity; filaments densely packed, not oscillating. (TAB. XLVIII. B.)

HAB. On mud-flats, near high-water mark, at Key West, mixed with *Calothrix dura*. W.H.H. (v. v.)

Fronds half sunk in the mud, erect, tufted, from an eighth to a quarter of an inch in length, flexuous, tapering much to the base, gradually increasing in diameter upwards and dividing above into three or four or more erect branches, the lowest of which are longest, the upper gradually shorter, so that the apices of all are nearly on a level. These apices are obtuse, and closed. The investing sheath is tough and firmly membranous, and the enclosed filaments strongly cohere together, and are with difficulty separated. The colour of the sheath is ochraceous yellow, and of the endochrome dull green. The substance is very firm and rigid, and in drying the plant does not adhere to paper.

PLATE XLVIII. B. *Fig. 1.* Tufts of *MICROCOLEUS corymbosus*, the natural size. *Fig. 2.* Magnified view of two fronds. *Fig. 3.* Portions of the enclosed filaments, more highly magnified.

VII. RIVULARIA, Roth.

Frond globose or lobed, fleshy, firm, composed of continuous radiating filaments, annulated within; each springing from a spherical globule. (*In the sea or in fresh water.*)

A fresh water species resembling the British *R. pisum* has been sent to me by Mr. Ravenel from the Santee Canal, where it grows on submerged leaves and stems of plants. It is hemispherical, very convex, dark blackish-green and soft, and consists of densely set, spuriously branching, slender filaments. The specimens are not in a very perfect state, and I cannot say to which, if any, of the modern species they would belong. In old times they would pass for *R. pisum*, but it is nearly impossible at present to say exactly what that species is.

ORDER X.—NOSTOCHINEÆ.

Nostochineæ, Endl. 3rd Suppl. p. 12. Berk. Crypt. Bot. p. 139. *Nostocææ*, Lindl. Veg. Kingd. p. 18. Kütz. Phyc. Gen. p. 30. *Nostochaceæ*, Harv. Man. Ed. 2, p. 230.

DIAGNOSIS. Green, fresh water, or rarely marine Algæ, composed of moniliform filaments, lying in a gelatinous matrix. *Filaments* formed of globose cells, here and there interrupted by a single cell (*heterocyst*) of a different character. Propagation by *zoospores*.

NATURAL CHARACTER.—The least organized plants of this Order consist of isolated, moniliform threads, invested with a gelatinous coat, and either lying on the soil, without a root attachment, or floating freely in water. Others a little more compound are made up of numerous similar threads aggregated in bundles, and imbedded in a gelatine common to the colony: while even the most complex, as in the genus *Nostoc*, present but little further in advance, except that the gelatine in which the threads are developed is of a firm consistence, when dry becoming quasi-membranous, and assumes the character of a frond, with definite outline, but generally polymorphous shape. The filaments are almost always simple, consisting of strings of cells, and are curved or twisted, or often spiral; in one case (*Monormia*) the filaments branch. The *cells* are spherical or oval, never truly cylindrical with flat ends, as in the *Confervaceæ*, and are filled with a dense, bright-green endochrome. In some few cases, as in *Spermosira*, the moniliform thread is enclosed within a tubular, membranous sheath, as in *Oscillatoria*, and there is little to distinguish such plants from individuals of that Order, except the occurrence of the cells called "*heterocysts*." These latter cells are destitute of endochrome, but often clothed with cilia, and are of a different size and shape from the neighbouring cells. They are always solitary, and occur at intervals in the filaments, but vary in position in the different species. Their use has not been ascertained, but they have been supposed to be connected with the male system of these plants. They never change character, like the ordinary cells, and are always found occupying a definite position in the filament, indicating that they perform some important function, whatever it may be.

Though the process of fertilization has not yet been observed, there can be little doubt but that a true fructification is formed in the ordinary cells, which at first are filled with pale-green matter, and afterwards increase in size, alter their form, and acquire a much denser and more darkly coloured, often deep brown, endochrome. All the cells of the filaments do not exhibit these changes, but only one or more, generally

those in the neighbourhood of the heterocyst. Finally, at maturity, the threads break up, and the enlarged brown cells are found to contain *spores* which germinate and continue the species. They have been stated to change into zoospores, but this requires confirmation. *M. Thuret*, in a communication recently made to the Natural History Society of Cherbourg (*Aug. 1857, vol. 5*) has described and figured the germination of the spores of *Anabaina licheniformis*, and *A. major*. In these species the sporangium is oblong, and contains at maturity a deep brown solitary spore. *M. Thuret* having obtained some specimens with ripe fruit, set them aside in a convenient glass vessel, and observed them from day to day. The filaments soon broke up, the heterocysts and sporangia floating apart in the water. Many of the latter perished, melting away, and disappearing altogether. Some remained sound, and these were carefully supplied with water, until germination commenced. The spore, in germinating, at first lengthens, pushing against one end of the sporangium, which it finally pierces lifting off the tip of the periderm like a lid, and thus its extremity issues, as the radicle from an monocotyledonous seed, capped with the lid of the sporangium. At this period new cells begin to be formed, by the repeated sub-division of the spore, which continues to lengthen till it is transformed into a moniliform filament or string of cells, like that from which it was derived. At first the divisions between the cells are but little distinct, but they become more and more strongly defined as growth proceeds. The filament lengthens at both extremities, but more rapidly at that which projects into the water; the young articulations are of smaller size than the rest, and thus the filament tapers towards each end. But this character gradually disappears, and the cells acquire a uniform dimension, proper to the species. *M. Thuret's* first experiments were made with freshly gathered sporangia: but he afterwards succeeded in causing to germinate specimens which had been dried and preserved for several months in the herbarium. They began to germinate in about a fortnight. Others (of *Anabaina licheniformis*) which had been kept for nine years in a dried state, germinated in an equal space of time, and the experiment was repeated several times with like success. Several other fresh-water Algae have been observed to possess the same property of revivification, and it seems a necessary endowment to enable them to continue the existence of their species through the alternate drying and moistening to which they are subjected in nature.

To *M. Thuret* we are also indebted for observations on the ordinary propagation by gemmation of the *Nostocs*, and for an account of the way in which the compound frond is developed. In the autumnal months, when this process goes forward, the old *Nostoc* may be said to diliquesce, the gelatine becoming loose and exuding, and the filaments contained in it breaking up into small fragments. If these be collected and placed in a glass of water, they may be observed to have a slow, progressive movement, like that of the *Oscillatorie*, which enables them to change their place; and at length they generally fix themselves on that side of the glass next the light. By continuing the observations for some days, the broken threads are seen to become immoveable, and then to be invested with a transparent pellicle. At the same time the green cells increase in size, expanding laterally, till the thread attains nearly twice its ordinary diameter. A cell division, in vertical order, then takes place throughout its component cells, and thus the filament splits into two parallel filaments, which are then contained

within a common pellicle. The same process continues ; these split into other threads, and thus, by gradual bisection of the first formed threads, the frond grows until it become of the form and size proper to its kind. As it grows the filaments twist and curl, and lose their parallelism. All these changes have been figured by M. Thuret with the accuracy and delicacy of execution characteristic of that accomplished naturalist.

The Nostochineæ are very rarely marine, and are chiefly found in fresh water streams or ponds and lakes, or in damp places. *Nostoc commune* is dispersed over most countries of the globe, being found lying on the bare soil after rains, or in very damp weather. It may be observed often on garden walks in the autumn and winter months, and is found throughout both temperate zones, extending almost to the tropics. A similar species has been seen in Australia, after a shower of rain, to cover what had seemed previously to be a bare hill side, with such a thick coating of jelly as to render it impossible to walk over it without sliding. Such terrestrial species have, in England, the popular name of "fallen stars"; their sudden appearance and disappearance being accounted for by the supposition that they had fallen from the air. In Dr. Sutherland's account of his Arctic voyage a species bearing a close external resemblance to *N. commune* was observed in profusion, occurring on the shores of the Arctic Ocean, but in windy weather frequently blown over the ice, and drifted out to sea. This will be found described below as *N. arcticum*. Dr. Sutherland mentions that he had eaten handfulls of it on several occasions, without any inconvenience ; and although it was generally infested with swarms of the larvæ of flies and gnats, he considered it much more nutritious than "tripe de roche," and perhaps not inferior to Iceland moss. A very similar plant was noticed by Dr. Thomson as occurring in Thibet, up to the height of 17,000 feet, floating on the surface of pools and lakes, in soils impregnated with carbonate of soda, and drifted in heaps by the winds along their banks. Mr. Berkeley, who examined the specimens of both plants chemically, "thinks we may safely assume the jelly of the Nostoc to be a state of bassorin, passing into cellulose or dextrine." Another species of this genus (*Nostoc edule*, Mont. and Berk.) is found abundantly in streams in Tartary, whence it is exported to China, where it is sold in the markets as an article of food, and highly esteemed as an ingredient in soups. It is prepared for sale in boxes, one of which is in the Museum of the Linnæan Society. These particulars are drawn from the abstract of a paper read by Dr. Hooker before the Linnæan Society of London, January 20, 1852. (See *Taylor's An. Nat. Hist. 2nd. Ser. Vol. 10, p. 301-303.*) As the edible Nostocs closely resemble *N. commune* in substance, it may be worth enquiry whether the latter may not also be used as food. Possibly a new source of luxury may lie hid under this humble exterior. Or it may perhaps be a nourishing and delicate food for weak digestions. The dyspeptic had better seek for it betimes.

NOSTOC. *Vauch.*

Fronde gelatinous or coriaceous, globose or lobed, filled with curled, beaded, simple filaments, formed of spherical or ellipsoidal coloured cells, interrupted here and there by a colourless cell of larger size. *Spores* formed from the ordinary cells. (*On damp ground or in fresh water.*)

1. *NOSTOC commune*, Vauch. ; terrestrial ; frond expanded, membranaceous, plaited and waved or curled, olive-green, polymorphous. *Vauch. Tab. 16. Fig. 1, Ag. Syst. p. 18. Harv. Man. Ed. 1, p. 183. Hass. Br. Fr. W. Alg. p. 288 t. 74, f. 2. Kütz. Sp. Alg. p. 298.*

HAB. On damp soil, in autumn. Common after rain on dry flats, Rio Bravo, *Dr. Schott.* (v. v.)

In dry weather the frond curls up and contracts, looking like a piece of shrivelled skin, and in that state may be blown about without injury. When moistened it expands, and then forms a semi-transparent, semi-gelatinous, elastic membrane, of a dull bottle-green colour. Under the microscope it appears like a transparent jelly traversed in every part with curled strings of beadlike, green cells.

2. *NOSTOC (HORMOSIPHON) arcticum*, Berk. ; fronds foliaceous, variously plaited, green or brownish ; filaments at length (their gelatinous envelope being dissolved) free. *Berk. in Proc. Lin. Soc. Jide An. Nat. Hist. 2d Ser. vol. 10, p. 302.*

HAB. On the naked soil, in boggy ground. Assistance Bay, lat. 75° 40' N. *Dr. Sutherland.* (v. s.)

“*Fronde* foliaceous, variously plicate, sometimes contracted into a little ball. Gelatinous envelope at length effused ; connecting cells at first solitary, then three together ; threads, which are nearly twice as thick as in *N. commune*, breaking up at the connecting cells, so as to form new threads, each terminated with a single large cell, the central cell becoming free.” *Berk. l. c.*

“It grows,” says Dr. Sutherland, “upon the soft and almost boggy slopes around Assistance Bay ; and when these slopes become frozen at the close of the season, the plant lying upon the surface in irregularly plicated masses becomes loosened, and if it is not at once covered with snow, which is not always the case, the wind carries it about in all directions. Sometimes it is blown out to sea, where one can pick it up on the surface of the ice, over a depth of probably one hundred fathoms. It has been found at a distance of two miles from the land, where the wind had carried it. At this distance from the land it was infested with *Poduræ*, and I accounted for this fact by presuming that the insects of the previous year had deposited their ova in the plant upon the land, where also the same species could be seen in myriads upon the little purling rivulets, at the side of which the Nostoc was very abundant.” At p. 205 of his Journal, Dr.

Sutherland further mentions having tried it as an article of food, and found it preferable to the Tripe de Roche of the arctic hunters. Its nutritive qualities are probably equal to those of the jelly derived from other Alga.

3. *NOSTOC verrucosum*, Vauch. ; aquatic ; fronds large, gregarious, confluent, sub-globose, plaited, at length hollow, blackish-green. *Vauch. t. 16, fig. 3. Ag. Syst. p. 21. Harv. Man. Ed. 1, p. 185. Hass. Brit. Fr. Wat. Alg. p. 291, tab. 75, fig. 1. Kütz. Sp. Alg. p. 300.*

HAB. On stones in fresh water streams. Pools of fresh water, Isle of Disko, and at Beechey Island, Arctic Regions, *Dr. Lyall.* Santa Fe, New Mexico, *Fendler.*

Fronds gregarious, at length confluent, adhering firmly to the rock on which they grow, becoming hollow and torn in age, and finally floating to the surface. *Colour* a bottle-green. Glossy when dry.

4. *NOSTOC cristatum*, Bailey ; aquatic, fronds orbicular, plano-compressed, firm, smooth or tuberculated, attached by a point of the circumference, erect. *N. nummulare*, *Harv. MS. in Herb.*

HAB. In rivulets, attached to stones under water. Near West Point, *Professor Bailey.* Crumelbow Creek, Hyde Park, N.Y., *W.H.H. (v. v.)*

This pretty little species grows on stones in running water and may possibly be of common occurrence. The fronds are circular, about half an inch in diameter, or rather more, the tenth of an inch in thickness, plano-compressed and solid ; but perhaps in age they would become hollow, and then would probably be spherical. Such inflated fronds, however, have not yet been seen. They are fixed to the stones on which they grow by a single point of the circumference, and stand erect, like miniature cock's-combs, whence the specific name *cristatum* bestowed by *Professor Bailey.* The substance is very firm and cartilaginous. The filaments are much curled and very densely packed together, moniliform, and of a dark bluish-green under the microscope. The colour of the frond to the naked eye is a dark olive-green, blackish rather than bluish.

5. *NOSTOC Sutherlandi*, Dickie ; "discoid, coriaceous ; filaments crowded ; cells mostly spherical." *Dickie in App. Suth. Voy. 1, p. 193.*

HAB. South side of harbour, in winter quarters, Baffin's Bay, July, 1851. *Dr. Sutherland.*

"The plant is one to two inches in diameter, attached by one point of the margin. Plicato-venose beneath, the plicæ radiating chiefly from the point of attachment ; faintly venose above, especially near the point of adhesion ; toward the margin reticulately venose." *Dickie, l. c.*

This is unknown to me. It seems to be closely allied to the preceding species, if it be distinct. The plicæ and reticulations observed do not appear to be characters of much value for the discrimination of species among these gelatinous plants.

6. *NOSTOC microscopicum*, Carm. ; fronds densely aggregated, very minute, globose or oblong, immersed in a blackish crust ; filaments few. *Carm. in Hook. Brit. Fl.* 2, p. 399. *Harv. Man. Ed.* 1, p. 184. *N. muscorum*, *Hass. Br. Fr. Wat. Alg.* p. 292, t. 74, fig. 4.

HAB. "Stones in a small stream, Baffin's Bay, *Dr. Sutherland*, fide *Prof. Dickie*.

I have not seen American specimens. In Britain this species grows among mosses on exposed calcareous rocks, but not in water. The above specific character is taken from the British plant. The fronds are rarely more than the tenth of an inch in diameter, and contain two or three beaded filaments lying in a copious transparent jelly.

7. *NOSTOC flagelliforme*, Berk. and Curt. ; terrestrial ; frond cartilaginous, linear, very narrow, compressed and often channelled, much branched, irregularly dichotomous ; branches solid, densely filled with moniliform curved threads. *Berk. and Curt.* No. 3809.

HAB. On naked aluminous soil, at San Pedro, Texas, *Mr. Charles Wright* (v. s.)

Fronds several inches in length, half a line in diameter, lying prostrate on the surface of the soil, much branched in an irregularly dichotomous manner : branches exactly linear, compressed, often channelled on one or both sides, thinned in the middle and incrassated to the edge. *Substance* firm and elastic, cartilaginous, solid, densely filled with moniliform, curved or curled, interlaced threads, which are set longitudinally in the frond, and lie nearly parallel to each other. *Colour* dark olive.

A very curious and most distinctly marked species, differing from others of this genus, much in the same manner that *Chatophora endiviaefolia* does from the ordinary globose forms of *Chatophora*.

ORDER XIII.*—PALMELLACEÆ.

Palmellaceæ, Harv. *Man. Ed. 2*, p. 234. *Palmelleæ*, Dne. *Class*, p. 31. *Endl. 3rd. Supp.* p. 10. *Kütz. Phyc. Gen.* p. 166. *Hass. Brit. Fr. Wat. Alg.* p. 306. *Lindl. Veg. King.* p. 18. *Kütz. Sp. Alg.* p. 196. *Berk. Crypt. Bot.* p. 114. *Thwaites, in An. Nat. Hist. 2nd Ser. vol. 2*, p. 312, and *vol. 3*, p. 243. *Part of Ulvaceæ*, Harv. *Man. Ed. 1*, p. 169. *Part of Nostochinææ*, *Ag. Syst.* p. 13. *Harv. in Hook. Br. fl. 2*, p. 394.

DIAGNOSIS. Green or red, orange or yellowish, fresh-water Algæ, composed of separate or aggregated (but not united) globose or ellipsoidal cells, free, or lying in a gelatinous matrix; sometimes stipitate. *Propagation* by division of the endochrome.

NATURAL CHARACTER. The plants of this family are the simplest in organization of any of the great class of the Algæ, and therefore fall to the lowest point of the scale in the arrangement we have adopted. In them we no longer find any distinction of root from frond; most of them are amorphous masses of gelatinous substance, and only in a few, as in *Hydrurus*, does the gelatine assume a tolerably definite form, and display itself as a branching frond. The simplest of the group (*Protococcus*) consists of single, isolated cells, strewn on the surface of the soil or of whatever object to which they happen to attach themselves. These cells are globose or egg-shaped, have a hyaline, often gelatinous coat, and contain a utricle filled with dense endochrome of various colours; sometimes green, but often red or orange. Of this character is the Red Snow plant (*Protococcus nivalis*) which has attracted so much notice, from the accounts of arctic travellers, and which may often be seen tinging the snows of Mount Blanc and other snowy Alps with a pale roseate hue. The mode of propagation of this primordial plant is as simple as its structure. The matter in the cell becomes condensed at maturity, and then subdivides into 4, 8, 16, or more parts, on a quaternary scale of increase; each frustule acquires a new cell-coat while yet within the parent cell, and when the process is completed, and all the endochrome of the mother cell has thus been used up in providing for the progeny, the cell-coat bursts and a multitude of minute cell-plants, similar in all respects to the parent except in size, are launched into the world. These grow till they attain the dimensions of the parent, when a similar cell division takes place; and thus in a very few generations millions of new plants may be produced from a few or even from a solitary original. As the process of growth and

* Orders XI. *Desmidiaceæ*, and XII. *Diatomaceæ* are omitted in this work; the American species having been already partially described and published by Professor Bailey, and the author not being supplied with any new materials for publication.

development is very rapid, we may easily account for the rapidity with which the *Protococcus nivalis* has been seen to extend, and also for the vast surface covered by so minute an organism. Each individual is not more than $\frac{1}{1000}$ of an inch in diameter, yet the surface of snow visibly reddened by the congregated masses often covers hundreds of square miles. A species very similar, if really different, called *P. pluvialis*, is found in shallow pools of rain water, on the surface of rocks, in gutters of houses, &c.; and has been noticed in very distant parts of the globe under various climatical conditions; and of this species a most elaborate monograph,* illustrated by figures, has been given by De Flotow, in the *Nov. Act. Leop. Carol. Nat. Cur. vol. 20*, where no less than twenty-two distinct and many more subdistinct varieties, or rather states, are enumerated, described, and measured to fourteen places of decimals (!) and figured. Several of these forms are endowed with movements resembling those of the infusorial animalcules, and have been described as animalcules by Shuttleworth in his account of the Red Snow (*Bib. Univ. Geneva, Feb. 1840.*)

A little higher in organisation than *Protococcus* is the genus *Gloeocapsa* (*Hæmatococcus*) in which what is only a passing phase of the *Protococcus* becomes a permanent character. In this we have several cells (of the structure of *Protococcus*) enclosed within a common, primary cell, which is persistent, or at least partially so. In some species (as in *G. Hookeri*) the primary cell-coat exfoliates repeatedly, the old coats remaining permanently attached on one side to each other, and to the cell, which perpetually bursts through them; and thus a sort of spurious frond, simple or branching, is formed, consisting of exuviae, each branch being tipped with the living cell, which shines like a gem at its summit. These plants occur generally in damp situations, on rocks and among mosses, about the spray of cascades, &c., and Kützing has described and figured upwards of fifty.

Next come the *Palmelle* proper, where a large number of protococcoid cells are enclosed within a common gelatine, in which they sometimes appear to be distributed without order; and sometimes arranged in a subquaternary manner. In this latter case the structure approaches very closely to that of *Tetraspora*, a genus we have already referred to the *Ulvaceæ*; but which is placed by many authors next to *Palmella*. Possibly among these obscure plants forms are associated in one genus which will be separated when their development is better understood. Among some of the *Palmelle* Broome and Thwaites have described and figured a more definite organization than was previously known; namely, that the apparently scattered cells of the mass are connected in an early stage of growth, by means of slender gelatinous threads, with a central cell

* This extraordinary essay is well worth looking at—(I will not say carefully perusing)—as one of the most remarkable commentaries on the text, “how great a flame a little fire kindleth.” The object to be examined is a microscopic Alga of the simplest possible structure, being in fact merely an isolated living cell. All that need to be said of its history might, one would suppose, easily have been written in a page or two. But the learned and most laborious author has occupied nearly two hundred large quarto pages on this theme; and not content therewith, has appended long tables of decimal measurements of microscopic areas and volumes, whose only reference to his subject appears to be that they enable him to arrive at such important calculations and useful results as describing the mean differences of the shorter and longer diameters of different individuals of his *Protococcus*, and their mean comparative bulk and spherical aberration. In computing these tables, the decimals have been carried sometimes to fourteen places, and in most cases at least to six.

of large size, from which they radiate. Afterwards they become detached, and then each is seen at the end of a mucous prolongation similar in appearance to that already noticed as occurring in *Gloecocapsa*. Mr. Thwaites compares these threads to the mycelium of a fungus, but regards the increase of cells by cell-division as properly an act of gemmation and not of true reproduction. The reproductive process in these plants is by conjugation of two cells, which takes place in a manner similar to that already noticed as occurring in *Zygnemaceæ*. A narrow connecting tube, soon enlarging to the breadth of each cell, is formed between two contiguous cells, through which the contents of both cells are mixed together; and thus a *sporangium* filled with a denser and more distinctly granular endochrome is formed, the membranes of the original cells being absorbed in the process. Probably at a future stage the contents of this sporangium are resolved into zoospores. (See *Thw. An. Nat. His. ser. 2, vols. 2 and 3.*)

Higher in structure than *Palmella*, and showing some approaches to the *Nostochineæ*, or even to the gelatinous CONFERVACEÆ (*Chatophora*) is *Hydrurus*, the only genus which we shall further describe.

I. HYDRURUS, Ag.

Fronde fixed at base, cylindrical or compressed, elongated, branched, gelatinous. *Structure*: seriated, but separate, cellules, filled with bright-green endochrome, enclosed in gelatinous parallel tubes, ranged longitudinally in the frond, and surrounded by a common gelatinous envelope.

Of this genus several species have been described by authors, all having a close resemblance to each other, and all very variable in ramification. Indeed it is almost impossible to fix characters by which they can be permanently kept apart; and instead of adding another specific name to the already too numerous list, I prefer to consider the American specimens received as constituting a luxuriant variety of the best known of the established species. All previously recorded species or varieties of these plants are natives of rapid rivers and streams in various parts of Europe.

1. *HYDRURUS penicillatus*, var. *occidentalis*, Harv.; frond very long (1-2 feet or more) much branched; branches very irregular, scattered or crowded, wormlike, tapering to a fine point, naked or clothed with feathery villous ramuli; cells ellipsoidal or pearshaped, twice as long as their diameter.

HAB. On the rocky bottom of rivers and streams, in a strong current. Santa Fe, New Mexico, *Mr. Fendler*, February to April, 1847. (v. s. in Herb. T.C.D.)

*Fronde*s attached at base, one or two feet long, from one to four lines in diameter, very much and irregularly branched; branches scattered or crowded, simple or divided, a foot or more in length, attenuated to a fine point, sometimes smooth and naked, but generally densely clothed with slender, villousramenta, spreading to all sides. The gelatinous tubes or sheaths in which the cells are seriated are very obvious, and lie close together in longitudinal, parallel strata. The cells are of large size, bright-green colour, and variable shape; some are twice as long as others.

This I had at first supposed to be a new species, but now regard it as a very gigantic state of *H. penicillatus*, Ag. which under various forms and of various sizes is common in alpine streams in Europe. I fear characters derived from the shape and size of the cellules are not more to be depended upon than are those taken from the ramification.

SUPPLEMENT.

No. 1. Additional Species discovered since the publication of the First and Second Parts.

PART I.—MELANOSPERMEÆ.

Part 1, p. 61, add,

I.* TURBINARIA. *Lamour.*

Root branching. *Frond* alternately decomposed, having a distinct stem, branches, vesicated leaves and receptacles. *Branches* filiform, simple or pinnate. *Leaves* spirally inserted, on long petioles, peltate, becoming inflated and changed into peltate air-vessels with leafy dentate margins. *Receptacles* cylindrical, verrucose, much branched, rising from the petiole of the leaf, near its base, on the upper side; of similar structure to those of *Sargassum*.

A genus consisting of two or three tropical or subtropical Algae, distinguished from *Sargassum* by its peltate leaves, which are at first thin and flat, but afterwards become hollow and are changed into flat-topped, margined air vessels.

1. *TURBINARIA vulgaris*, Ag.; frond membranaceo-coriaceous; leaves on an inflated petiole obconic or top-shaped, the margin entire or toothed, the disc naked. *J. Ag. Sp. Alg.* 1, p. 267. *Turbinaria denudata* and *T. decurrens*, Bory. *Fucus turbinatus*, Turn. *Hist. t.* 24, fig. a. and b.

HAB. At Key West, *Mr. Ashmead.* (v. v.)

Root a mass of branching fibres, as thick as sparrow's quills, loosely entangled together. *Fronde* several from the same mat of roots, either quite simple, or dividing near the base into three or four principal branches; or pinnately compound by the evolution of lateral branches, erect and rigid, 6–10 inches high, cylindrical and smooth. *Leaves* spirally inserted, spreading to all sides, patent, rigid; petioles at first cylindrical,

then becoming clubshaped and somewhat inflated, from half an inch to an inch long, crowned with a peltate horizontal lamina, which is either subentire or sharply dentate at the margin. In young specimens or on young branches the peltate leaves are found flat and thin, their upper and lower surfaces forming one substance; but more commonly the centre of the leaf becomes inflated or vesicated, and then is formed a compound top-shaped flat-topped body, half vesicle, half leaf, which is characteristic of the genus. *Receptacles* dichotomous, much branched, shrubby, their branches verrucose. *Colour*, when growing a pale olive, but in the herbarium changing to a dark brown or black. *Substance*, when dry very hard and rigid.

A common plant in tropical seas, both in the eastern and western hemispheres. Mr. Ashmead obtained fine specimens at Key West, but it appears to be of rare occurrence.

Part 1, page 64, add,

III.* CYSTOPHYLLUM.

(Generic character the same as that of *Cystoscira*, except that the *air-vessels* are confined to the ultimate ramuli, which are simple and filiform.)

1. *CYSTOPHYLLUM geminatum*, Ag. ; stem ; fronds elongate, filiform, unarmed, decomposed-pinnate; branches issuing from all sides, geminate; vesicles solitary in the ramuli near the summit, oval, tipped with an excurrent point; receptacles paniculate, warty, attenuate, often tipped with a vesicle. *J. Ag. Sp. Alg.* 1, p. 232. *Cystoscira thyrsgera*, Post. and Rupr. *Ill. Alg.* 13, t. 38, f. 4.

HAB. Banks' Island, North Western America, *Mr. Menzies*, 1787. (v. s.)

In Mr. Menzies' Herbarium, now preserved at the Botanic Garden, Edinburgh, is a specimen of this plant, marked *C. trinodis* in Mr. Menzies' handwriting. Two branches are laid on one piece of paper. The largest is about 10 inches long, as thick as sparrow's quill, smooth, decomposed, pinnate and ovato-lanceolate in circumscription. The branchlets are mostly geminate, filiform, alternately decomposed; their lesser divisions also subgeminat. *Vesicles* oval, $1\frac{1}{2}$ lines long, scarcely a line wide, either solitary in the filiform ramuli, about the middle or a little beyond it, or two in the ramulus, the second one terminal, apiculate, and removed by a rather long pedicel from the first. *Receptacles* lanceolate, 2-3 lines long, verrucose, apiculate, often with a slender beak nearly as long as the receptacle, and sometimes two receptacles occur on the same ramulus. The upper branches are very dense.

Page 71, add,

8. *FUCUS serratus*, Linn. ; frond flat, dichotomous, midribbed, serrated, without air-vessels; receptacles flat, terminating the branches, serrated. *J. Ag. Sp. Alg.* 1, p. 211. *Kütz. Sp. Alg.* p. 590. *Turn. Hist.* t. 90. *E. Bot.* t. 1221. *Harv. Phyc. Brit.* t. 47, §c.

HAB. On rocky sea-shores. Newbury port, Mass. *Captain Pike*, 1852. (v. v.)

Fronds, two feet long or more, from one half-inch to one or two inches in width, dichotomous, with a thick midrib, bordered by a sharply serrated lamina. *Air-vessels* none. *Receptacles* flat, formed in the acuminate extremities of the branches, sharply serrate like the other parts of the frond.

I have received a small fragment of this common European plant, stated to have been found in the above locality on the American coast. It is hardly probable that it is either confined to one locality, or even rare, wherever it occurs; yet none of my other American correspondents have sent it; nor do I know the circumstances under which Captain Pike obtained it. I hope this notice may lead some one on the coast to investigate the subject; for European botanists are yet uncertain whether *F. serratus* be really a bona fide native of the American coast, or merely a stray waif, accidentally cast ashore.

Page 106, add,

2. *ZONARIA flava*, Ag.; frond erect, with an elongated, branched, woolly stipes, the branches expanding into cuneate, flabelliform, vertically cleft and laterally lacinated, naked laminae; segments wedge-shaped, with radiating, longitudinal striae; sori roundish, scattered. *J. Ag. Sp. Alg.* 1, p. 110. *Stypopodium flavum*, Kütz. *Sp. Alg.* p. 563.

HAB. Pacific Coast, *Dr. Schott*. (v. s.)

A small specimen, apparently referable to this species, was collected by Dr. Schott on the Pacific coast, but the locality is not stated. It is about two inches high, much narrower and more branched than *Z. lobata*, with stupose, linear, riblike patches extending up the principal lobes. Perhaps, therefore, it is rather referable to *Z. stuposa*, J. Ag., if that be a distinct species from *Z. flava*.

Page 113, add,

VI.* STRIARIA, *Grev.*

Root a small, naked disc. *Frond* tubular, membranaceous, continuous, branched. *Fructification*, groups of naked, roundish spores, disposed in transverse lines.

1. *STRIARIA attenuata*, Grev.; branches and ramuli mostly opposite, tapering to each extremity. *Grev. Crypt. Fl. Syn.* p. 44. tab. 288. *Alg. Brit.* p. 55. t. 9. *Wyatt, Alg. Danm.* No. 160. *J. Ag. Sp. Alg.* 1. p. 80. *Harv. Phyc. Brit.* t. 25. Kütz. *Sp. Alg.* p. 553. *Phyc. Gen.* t. 21. f. 11.

HAB. Flushing, New York Bay, *Professor Bailey*.

The only American specimen I have yet seen is small and very slender, about two and a half inches long, and not thicker than hog's bristle. It is abundantly in fruit; otherwise it could hardly be recognised. The branches are few, opposite or alternate, some of the larger ones bearing a few ramuli, and all tapering to a very fine point.

On the British coast this species varies greatly in size. Sometimes it is nearly as small and slender as that just noticed. Other specimens, like that figured in Phyc. Brit. are 8-12 inches long, and from one to two lines in diameter. The branching is irregular and sometimes whorled.

Page 137, add,

3. *SPHACELARIA arctica*; filaments naked at the base, erect, elongate, slender, irregularly branched, scarcely pinnate; ramuli filiform, naked, erect.

HAB. In tide pools, Isle of Disko, Greenland, *Dr. Lyall.* (v. s. in Herb. T.C.D.)

Filaments 1-2 inches high, irregularly once or twice compounded, the main branches few, the secondary numerous, densely set and very erect, lateral, either naked or bearing few or many, long, filiform, erect, naked, slender ramuli, from half an inch to an inch in length. *Articulations* short in the stem and branches; once and a half as long as broad in the ramuli. *Colour* a dull olive. *Fruit* unknown.

Page 138, add,

III.* MYRIOTRICHIA, *Harv.*

Frond capillary, flaccid, jointed, (simple), beset with quadrifarious, simple, spinelike ramuli, clothed with byssoid fibres. *Fructification*, elliptical spores, containing dark-coloured endochrome.

1. *MYRIOTRICHIA filiformis*, Griff.; stem filiform, slender, often flexuous or curled, beset at irregular intervals with oblong clusters of short, papilliform ramuli. *Harv. Phyc. Brit. t. 156.* *Wyatt, Alg. Dawn. No. 213.* *J. Ag. Sp. Alg. 1. p. 14.* *Kütz. Sp. Alg. p. 470.*

HAB. Parasitic on *Dictyosiphon faniculaceus* at Penobscot Bay, *Mr. Hooper.* (v. v.)

Fronds an inch or more in length, very slender, filiform, but thickened at intervals, as if nodose; the thickening caused by the dense aggregation of short ramuli of two or three cells each. These ramuli emit byssoid fibres. *Spores* roundish, scattered. *Substance* soft. It adheres closely to paper.

On the British Coast this parasite commonly infests *Chorda Lomentaria*.

Page 139, add,

2* *ECTOCARPUS longifructus*, Harv.; tufts large, branching, the divisions feathery; filaments robust, excessively branched, branches mostly opposite, the lesser ones set

with short, spine-like, opposite, or rarely alternate ramuli; articulations as long as broad; silicules very long, linear-lanceolate, attenuate, densely striate transversely, terminating the principal branches and ramuli. *Harv. Phyc. Brit. t. 258.*

HAB. Penobscot Bay, *Mr. Hooper.* (v. s.)

I have seen an American specimen collected by Mr. Hooper, which I venture to associate with the Orkney plant to which the above character is given in *Phyc. Brit.* Perhaps it is a mere form of *E. littoralis*; though a remarkable one.

Page 140, add,

3* *ECTOCARPUS amphibius*, Harv.; tufts short, loose, soft, pale olive; filaments very slender, sub-dichotomous; ultimate branches alternate, spreading; articulations two or three times longer than broad; silicules linear-attenuate, spine-like, mostly sessile, scattered. *Harv. Phyc. Brit. t. 183.*

HAB. In fresh (probably brackish?) water, near New York, *Mr. Hooper.* (v. s.)

Tufts 2-3 inches long, very flaccid and slender; pale brown when fresh, fading to a dull greenish-olive in drying. This is nearly related to *E. siliculosus*, and may perhaps be regarded as a depauperated variety of that common species, altered by having grown in a less saline medium than usual. In England it occurs in brackish ditches near the coast. The American locality is not particularly specified.

PART II.—RHODOSPERMEÆ.

Page 23, add,

7. *CHONDRIA nidifica*; frond ultrasetaceous, filiform, sparingly and distantly branched; branches alternate or secund, quite simple or forked, long, cordlike, naked, or emitting at intervals fascicles of forked or multifid fructiferous ramuli; tetraspores several, near the tips of the ramuli. (TAB. L. B.)

HAB. Pacific Coast, *Dr. Schott.* (v. s. in Herb. T. C. D.)

Fronds 6-8 inches long, as thick as sparrow's quills, cylindrical, inarticulate, sparingly branched in a manner between alternate and dichotomous; the branches, by frequent non-development of one of the arms of the fork, appearing unilateral. *Branches* several inches long, quite simple, or once or twice forked; or bearing a few secondary branches one or more inches long, either quite naked or furnished at intervals of about an inch with tufts of short, fructiferous ramuli. These latter are about quarter-inch long, as thick as hog's bristle, densely tufted, and simple or sub-divided. In the specimen examined some of them bear tetraspores. A transverse slice of the inarticulate frond

shows a central axial-cell surrounded by several primary radiating cells, and many external rows of secondary cells which become smaller towards the circumference. *Colour* a dull brownish red. *Substance* cartilaginous, not adhering to paper.

I have seen but a single specimen of this seemingly very distinct plant, which has more the habit of *Clampia lumbricalis* than of one of the present genus. It was picked up, it is presumed on the Western coast, by Dr. Schott, during the Mexican Boundary Survey, but no note regarding its exact habitat accompanied the specimen. I am indebted to my friend Professor Torrey for specimens of this and other Algæ collected by the officers attached to the Mexican Boundary Survey.

PLATE L. B.—*Fig. 1.* CHONDRIA *nidijica*; the natural size. *Fig. 2.* Portion of a branch, with a tuft of ramuli. *Fig. 3,* a ramulus, containing tetraspores. *Fig. 4,* a tetraspore. *Fig. 5,* transverse section of a branch; the latter figures more or less *magnified.*

Page 26, add,

4.* RHODOMELA *lycopodioides*, Ag.; frond divided near the base into several long, simple branches, which are densely beset with slender, finely divided branchlets, mixed with the short, rigid, bristlelike remains of a former series. *Ag. Sp. Alg. 1. p. 377. Harv. Phyc. Brit. t. 50. Lophura lycopodioides, Kütz. Sp. Alg. p. 850. Fucus lycopodioides, Linn. Turn. Hist. t. 12. E. Bot. t. 1163.*

HAB. Whalefish Islands, Davis Straits, *Dr. Lyall. (v. s.)*

Fronde 1–2 feet long, half a line in diameter at base, attenuated upwards, filiform, either quite simple or divided a short way above the root into several long simple branches. In its winter state the virgate branches are closely set with short, rigid, simple or slight divided ramuli, from half an inch to one inch in length. In summer, long, capillary, multifid ramuli from one to two inches in length are thrown out both from the remains of the winter ramuli and from the main branches, and the frond thus acquires a plumose aspect very different from its winter state. *Conceptacles* are abundantly borne on the summer ramuli; and *tetraspores*, lodged in clustered, podlike branchlets or stichidia, are found on the winter ramuli. *Substance* cartilaginous. *Colour* a purplish brown, becoming very dark in drying.

This interesting addition to the American Nereis occurs abundantly in various places on the shores of Northern Europe. In the British Isles it is almost confined to the coasts of Scotland and of the North of Ireland; but has occasionally been met with on the East coast of England.

Page 59,

1. DASYA GIBBESII, HARV.

Add to the description: *Conceptacles* of large size ($\frac{2}{5}$ inch in diameter), borne on the penultimate ramuli, at first globose, afterwards broadly ovate, inflated, with thin, highly cellular walls and a berry-like nucleus of much branched filaments, bearing many

small, pyriform spores. Specimens in fruit communicated by *Mr. S. Ashmead* from Key West. (v. s.)

Page 61,

3. *DASYA ramosissima*, Harv.

Add to description : *Conceptacles* sessile on the lesser branches, ovato-globose, thin walled, inflated, without prominent orifice, containing a large nucleus. *Stichidia* on the ramelli, either fusiform or ovato-acuminate, always tapering to a slender point ; tetraspores in a single or double row. Specimens in both kinds of fruit communicated by *Mr. S. Ashmead* from Key West. (v. s.)

Page 62, add,

3.* *DASYA Harveyi*, Ashmead ; rose red ; stem cartilagineo-membranaceous, longitudinally striate, glabrous, inarticulate, robust, attenuated upwards, much branched ; branches alternate or secund, once or twice decompound, their ultimate divisions being pinnated with capillary, closely set, articulated (polysiphonous) ramuli, which are densely clothed with byssoid, dichotomous ramelli ; cells of the epidermis of the branches very narrow, parallel ; articulations of the ramelli many times longer than broad, conceptacles sessile near the tips of the lesser ramuli, urecolate, with a prominent orifice ; stichidia on the ramelli, tapering to each end. (TAB. L. A.)

HAB. Key West, *Mr. Ashmead*. (v. s. in Herb. T.C.D.)

Fronde 8—10 inches long, as thick as crow-quill in the main divisions ; very much branched, the successive divisions being more and more slender, till the ultimate ones have become finer than human hair. The branching is irregular, the larger divisions frequently secund, several lateral branches directed successively first to one side and then to the opposite one of the main branch. All the main *branches* and their lesser divisions down to the last are inarticulate, being coated with very slender, coloured, longitudinal, parallel, seriated cells, which give the branches a striated appearance under the microscope ; they are also glabrous, or bare of ramelli. The *ultimate* branchlets, which are half an inch to an inch long, are plumose, very flaccid and soft, and closely set with lateral, but not strictly distichous pinnules, which are clothed with excessively slender, cobweb-like, flaccid ramelli. These latter are many times dichotomous and taper to the points ; their articulations are many times longer than broad. The *conceptacles* are nearly of the form of those of *Polysiphonia ureolata*, and are sessile at or near the ends of the pinnules of the plumose branchlets. The *stichidia* spring from the lower forkings of the byssoid ramelli, and are much attenuated, tapering at each end, and containing a double row of tetraspores. The whole plant is of a beautiful, clear, rose-red colour. Its substance is very soft and flaccid, and in drying it adheres very strongly to paper.

For fine specimens of this distinct and beautiful species I am indebted to its discoverer Mr. Ashmead of Philadelphia, who sent them to me marked with the specific name here adopted.

PLATE L. A. *Fig. 1.* *DASYA Harveyi*, the natural size. *Fig. 2.* A ramulus bearing a *conceptacle* near its summit. *Fig. 3.* Portions of different ramelli bearing *stichidia*. *Fig. 4.* A portion of a branch, showing the linear striaform surface-cells: the latter figures *magnified*.

Page 64,

7. *DASYA Tumanoviczi*, Gatty. add to the description: *Conceptacles* on very short peduncles, borne by the lesser branches, ovate or sub-urceolate, thin walled, without prominent orifice, with a large nucleus. Specimens from *Dr. Blodgett* and *Mr. Ashmead*.

Page 105, add,

3. *NITOPHYLLUM Fryeanum*; frond sessile, full-red, nerveless, thickish, deeply divided into many cuneate lobes, which are again vertically cleft, the segments rounded, frequently crisped at the margin, specially towards the base, the sinuses narrow; fruit.....?

HAB. Golden-gate, California, *Mr. A. D. Frye*. (v. s. in Herb. T.C.D.)

I propose this species with much hesitation, having as yet seen only very imperfect specimens, which I know not how to dispose of but by giving them a local habitation and name. Two specimens are before me; one faded, the other in a better state of preservation, but neither in fruit. The frond is about 3 inches long, and 4 in lateral expansion, and is deeply divided into 4 or 5 principal segments which are broadly cuneate, and each again partially cloven into 4 or 5 lesser, vertical segments. The margin towards the base of the lobes is crisped or undulate; in other parts it is plane. The lesser lobes are somewhat erenate or sub-lobulate, and all the tips are rounded, and the axils or sinuses very narrow. The substance of the membrane is thickish; the surface-cells large and tessellated; the cells of the interior appear also to be of large size, and quadrate, but the specimens examined have been too much squeezed in the process of drying, and their cells are consequently broken and difficult to examine. No traces of veins in the specimens seen. More perfect specimens must be had before this species can be considered as other than provisional.

Fragments of one or two other *Nitophylla* have reached me from the Pacific Coast, but not sufficiently perfect to warrant me in naming them.

Page 150, add,

5. *RHODYMENIA corallina*, Grev. (?); stipes cylindrical, sub-simple, expanding into a fan-shaped, many times dichotomous, rose-red frond; laciniae linear, with rounded

interstices and a flat, entire margin; apices rounded; conceptacles clustered near the ends of the lacinia, on the surface of the lamina; tetraspores forming deep-red sori in the dilated apices. *J. Ag. Sp. Alg.* 2, p. 379. *Sphaerococcus corallinus*, *Bory, Coq.* p. 175, t. 16. *Kütz. Sp. Alg.* p. 780.

HAB. San Diego, California, *Mr. A. D. Frye.* (v. s. in Herb. T.C.D.)

A single Californian specimen only has yet been seen, and I doubtfully refer it to *R. corallina*, in preference to founding a new species on such imperfect data. The frond is stipitate; the stipes filiform, 2-3 inches long, then widening and passing into the cuneate base of a flabelliform, dichotomously parted lamina, with broadly linear or somewhat cuneate segments. The lower part of the stipes throws out 2 or 3 proliferous frondlets, and similar ones spring from the margin of the lacinia. The *conceptacles* are immersed in the ultimate segments of the lacinia, which then are truncated and foliferous. The colour is a deep-red, and the substance rigid and membranaceous. Such is the Californian specimen, and it tolerably agrees with the Chilian species, whose character is given in the above diagnosis.

Page 175, add,

2* *GIGARTINA Chamissoi*, (?) *Mont.*; *J. Ag. Sp. Alg.* 2, p. 267. *Sphaerococcus Chamissoi*, *Ag. Ic. Med.* t. 6. *Mart. Ic. Sel. Bras.* t. 3, fig. 1.

HAB. West Coast, *Dr. Schott.*

A fragment of a *Gigartina*, closely allied to *G. Chamissoi*, if not a mere form of it, occurs in *Dr. Schott's* new Mexican collection. It is too imperfect for description. *G. Chamissoi* is a common species on the coast of Peru, and may very probably extend to the north of the Equator.

Page 180, add,

6. *IRIDÆA dichotoma*, *Harv.*; stipes linear, compressed, simple or branched, passing into the cuneate base of the broadly cuneiform or obovate, repeatedly forked lamina; lacinia shallow and rounded, divaricating, their margin entire or denticulate; surface smooth and glossy. *I. micans*, var. *dichotoma*. *Hook. f. and Harv. Fl. Ant.* 2, p. 487. *I. dichotoma*, *Harv. in Hook. Journ.* 1845, p. 262.

HAB. California, *Mr. A. D. Frye.* (v. s.)

Stipes 1-2 inches long, about a line wide, throwing out 2-4 minutely stipitate fronds, which are 4-6 inches long, and 3-4 wide, at their greatest width. The base of the frond is cuneate, and the lobes into which it divides are also broadly cuneiform. They divaricate from each other, leaving very wide sinuses between. The frond is thus sometimes thrice forked, the last furcation being minute, and frequently a mere indentation. The substance is rather thin and membranous. The surface is smooth and glossy, and the colour a fine purple-red.

Whether a distinct species or a mere variety of *I. micans* remains to be shewn, when some competent observer on the Pacific Coast shall have properly examined the several reputed species of this most troublesome genus. If we admit more than *one* species it is difficult to refuse admission to many, the forms are so varied. The present is, at least, a well-marked *variety*.

Page 195, add,

4. HALOSACCION *dumontioides*; stem short, filiform, emitting many crowded, tubular, membranaceous, long branches, which are quite simple, destitute of ramenta, and taper much to the base and apex.

HAB. Northumberland Sound, Queen's Channel, lat. 76° N., *Dr. Lyall*. (v. s. in Herb. T.C.D.)

Stem 1-3 inches long, simple or forked, filiform, about twice as thick as hog's bristle, emitting throughout its length, and directed towards all sides, numerous crowded, perfectly simple branches. *Branches* two feet long, more than quarter inch wide in the middle, cylindrical for their greater extent, but attenuated and fusiform to the base, and tapering at the extremity to an acute point, hollow, destitute of ramenta, smooth and glossy, formed of a very thin membrane. *Colour* a brownish pinky-red, partly discharged in fresh water. *Cellular* structure very dense.

I have some hesitation in proposing this as a species distinct from *H. ramentaceum*; but if not a good species, it is at least a strongly marked variety, and has so much the external aspect of *Dumontia filiformis*, that until I had submitted a section to the microscope, I supposed I had before me a very luxuriant specimen of that plant. The microscopic structure of the membrane is that proper to *Halosaccion* (section *Halocolia*), but is not easy to see, as the collapsed cells do not readily expand on reimmersion of the dried frond. The substance is much softer and more membranous than in *H. ramentaceum*, and in drying the branches adhere much more strongly to paper. Dr. Lyall brought home several fine specimens.

Page 242, add,

16.* CALLITHAMNION *tenue*; filaments tufted, ultra-capillary, irregularly much branched, diffuse, flexuous, the branches and their divisions very generally secund, springing from the middle of the internodes; ramuli few and distant, patent, filiform, beset toward the attenuated apices with whorls of minute, byssoid fibres; articulations cylindrical, those of the branches 4-6 times, those of the ramuli 3-4 times as long as broad, and gradually shorter towards the extremities. (*Griffithsia tenuis*, *Ag. Sp. Alg.* p. 13. *J. Alg. Sp. Alg.* 2, p. 84. *Kütz. Sp. Alg.* p. 661.

HAB. Beesley's Point, New Jersey, *Mr. Samuel Ashmead*. (v. s. in Herb. T.C.D.)

Filaments 3-4 inches long, somewhat thicker than human hair, loosely tufted, flexuous, very irregularly branched, the ramification on a lateral, not a dichotomous

type. *Branches* usually secund, in some cases opposite or alternate, springing from the middle of the articulation (or internode), or from near its base (not from the shoulder), long and filiform, flexuous, furnished with several distant, secund, filiform, patent, secondary branches, which are either simple, or furnished with a few similar, secund ramuli. All the branches and ramuli of every grade spring from the middle of the internodes of the branches of the preceding grade. The ramuli taper to their summit; the last six or eight internodes are very short, or rather are gradually developed whilst the ramulus lengthens, and their nodes are beset, especially those of the younger ones, with whorls of minute and very delicate byssoid ramelli, which seem to be connected with the growing process; but perhaps may also accompany fructification, as they do in the nearly allied *C. thyrsoides*. The articulations are cylindrical, 4-5 times as long as broad, with a wide, hyaline margin and dissepiment, and are filled with rosy endochrome. *Substance* membranaceous and delicate. The frond closely adheres to paper in drying.

I have compared Mr. Ashmead's specimens with an authentic one of Agardh's *Griffithsia tenuis* from the Mediterranean, and find them to agree in every essential character; the only difference that I can perceive being, that the American specimens are larger and more luxuriant than the European. The fructification has not been observed either in America or Europe, and I may therefore be accused of indiscretion in removing this species from *Griffithsia* to the present genus. I do so because its affinity with *C. thyrsoides* of Ceylon and Australia is so great that they cannot be placed in separate genera; and the fruit of the latter is known. I only question whether I ought not to go a step further, and unite *C. thyrsoides* to *C. tenuis* as a mere variety. Both are remarkable for the manner in which the branches and ramuli are inserted; and may be known by this character alone from all allied species. But there is no American species to which the present is nearly allied.

Page 247, under *Pikea californica*, add to the specific diagnosis,

(TAB. XLIX. B.)

And insert the following reference to the figure,

PLATE XLIX. B. *Fig. 1.* *PIKEA californica*, a robust specimen; and *fig. 2*, a more slender and smaller individual; both of the *natural size*. *Fig. 3.* Longitudinal section of the frond, showing the central, articulated axial filament, and the two strata of cells. *Fig. 4*, a transverse section of the frond; these two figures equally *magnified*.

No. 2. List of Arctic Algae, chiefly compiled from collections brought home by Officers of the recent Searching Expeditions.

1. *FUCUS vesiculosus*, Linn. *Ner. Bor. Amer. part 1, p. 71.*
 HAB. Common along the Arctic Seas, and continuing through Behring's Straits along the North-west Coast. Whalefish Islands, and north end of Disco, *Dr. Lyall.*
2. *FUCUS nodosus*, Linn. *Ner. Bor. Amer. part 1, p. 68.*
 HAB. North end of Isle of Disco, *Dr. Lyall.*
3. *AGARUM Turneri*, Post. & Rup. *Ner. Bor. Amer. part 1, p. 95.*
 HAB. Navy-board Inlet and Whalefish Islands, *Dr. Lyall.*
4. *LAMINARIA saccharina*, Lamour. *Ner. Bor. Amer. part 1, p. 92.*
 HAB. Floating off the West Coast of Greenland, five miles from shore, in lat. 63, *Dr. Lyall.*
5. *ALARIA Pyluii*, Grev. *Ner. Bor. Amer. part 1, p. 89.*
 HAB. Northumberland Sound, Queen's Channel, Lat. 76°. 52', *Dr. Lyall.*
6. *DESMARESTIA aculeata*, Lamour. *Ner. Bor. Amer. part 1, p. 78.*
 HAB. Dredged in 6 fathoms, in Queen's Channel, lat. 76° 29', long 96° 13' W., *Dr. Lyall.*
7. *DICTYOSIPHON feniculaceus*, Grev. *Ner. Bor. Amer. part 1, p. 114.*
 HAB. Whalefish Islands, *Dr. Lyall.*
8. *CHORDARIA flagelliformis*, Ag. *Ner. Bor. Amer. part 1, p. 123.*
 HAB. Whalefish Islands, *Dr. Lyall.*
9. *CILETOPTERIS plumosa*, Kütz. *Ner. Bor. Amer. part 1, p. 136.*
 HAB. Arctic Coast, *Dr. Seeman.* Roots of large Algae, floating near Whalefish Islands, *Dr. Lyall.*
10. *SPHACELARIA arctica*, Harv. *Ner. Bor. Amer. part 3, suppl. p. 124.*
 HAB. Isle of Disco, *Dr. Lyall.*
11. *ECTOCARPUS fasciculatus*, Harv. *Ner. Bor. Amer. part 1, p. 141.*
 HAB. Whalefish Islands, *Dr. Lyall.*
12. *ECTOCARPUS littoralis*, Lyngb. *Ner. Bor. Amer. part 1, p. 139.*
 HAB. Whalefish Islands, *Dr. Lyall.*

13. RHODOMELA *lycopodioides*, Ag. *Ner. Bor. Amer. part 3, suppl. p. 126.*
 HAB. Cast ashore on Disco and Whalefish Islands, *Dr. Lyall.*
14. RHODOMELA *gracilis*, Kütz. *Ner. Bor. Amer. part 2, p. 26.*
 HAB. In rock-pools. Disco and Whalefish Islands, *Dr. Lyall.*
15. POLYSIPHONIA *urcolata*, Grev. *Ner. Bor. Amer. part 2, p. 31.*
 HAB. Dredged in 10 fathoms, off Cape Cockburn, 75° N. 100° W., *Capt. McClintock.*
16. CORALLINA *officinalis*, L. *Ner. Bor. Amer. part 2, p. 83.*
 HAB. Lively Harbour, Isle of Disco, *Dr. Lyall.*
17. DELESSERIA *sinuosa*, Ag. *Ner. Bor. Amer. part 2, p. 93.*
 HAB. Off the Greenland Coast, *Dr. Lyall.* North Shore of Prince of Wales' Strait,
Sir R. McClure. Cape Cockburn 75°, and Lowther Island 74°, *Capt. McClintock.*
18. EUTHORA *cristata*, J. Ag. *Ner. Bor. Amer. part 2, p. 150.*
 HAB. Disco Island, *Dr. Lyall.*
19. RHODYMENIA *interrupta*, Grev. *Ner. Bor. Amer. part 2, p. 149.*
 HAB. Arctic Sea, *Lieut. W. H. Griffiths, R.N.*
20. RHODYMENIA *palmata*, Grev. *Ner. Bor. Amer. part 2, p. 148.*
 HAB. Queen's Channel, Northumberland Sound, 76° 52' N., *Dr. Lyall.*
21. HALOSACCION *ramentaceum*, J. Ag. *Ner. Bor. Amer. part 2, p. 194.*
 HAB. Whalefish and Disco Islands, and in Queen's Channel, *Dr. Lyall.*
22. HALOSACCION *dumontioides*, Harv. *Ner. Bor. Amer. part 2, suppl. p. 130.*
 HAB. Northumberland Sound, Lat. 76° N., *Dr. Lyall.*
23. KALLYMENIA *Pennyi*, Dickie. *Ner. Bor. Amer. 2, p. 172.*
 HAB. Dredged in 15–20 fathoms in Assistance Bay, *Dr. Sutherland.* Dredged in
 6 fathoms, Queen's Channel, Lat. 76° 29' N., Long. 96° 13', *Dr. Lyall.*
24. Ptilota *serrata*, Kütz. *Ner. Bor. Amer. 2, p. 222.*
 HAB. Arctic Coast, *Sir J. Richardson.* Whalefish Islands and West Coast of Green-
 land, *Dr. Lyall.*
25. Ptilota *plumosa*, Ag. *Ner. Bor. Amer. 2, p. 224.*
 HAB. Arctic Sea Coast, *Sir J. Richardson.*
26. CLADOPHORA *arcta*, Kütz. *Ner. Bor. Amer. 3, p. 75.*
 HAB. Whalefish Island, Davis's Straits, *Dr. Lyall.*
27. CLADOPHORA *rupestris*, Kütz. *Ner. Bor. Amer. 3, p. 74.*
 HAB. Whalefish Islands, Davis's Straits, *Dr. Lyall.* Fiskernaes, near Cape Farewell,
Dr. Sutherland.

28. CHLETOMORPHA *Melagonium*, Kütz. *Ner. Bor. Amer.* 3, p. 85.
HAB. Roots of large Algæ, Whalefish Islands, *Dr. Lyall*.
29. CHLETOMORPHA *Piquotiana*, Mont. *Ner. Bor. Amer.* 3, p. 85.
HAB. Floating in the sea, near Whalefish Islands, Davis's Straits, *Dr. Lyall*. (A single filament only!)
30. HORMOTRICHUM *Carmichaelii*, Harv. *Ner. Bor. Amer.* 3, p. 90.
HAB. Wellington Channell, *Dr. Lyall*.
31. HORMOTRICHUM *boreale*, Harv. *Ner. Bor. Amer.* 3, p. 90.
HAB. Whalefish Islands, *Dr. Lyall*.
32. HORMOTRICHUM *Wormskioldii*, Kütz. *Ner. Bor. Amer.* 3, p. 91.
HAB. Dredged in 6 fathoms, in Queen's Channel, 76° 29' N., 96° 13' W., *Dr. Lyall*.
Coast of Greenland, *Lynghye*.
33. MOUGEOTIA (*species inominata*.)
HAB. In fresh water. Isle of Disco, *Dr. Lyall*.
34. LYNGBYA *muralis*, var. *aquatica*. *Ner. Bor. Amer.* 3, p. 104.
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35. ULVA *latissima*, L. *Ner. Bor. Amer.* 3, p. 59.
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36. ULVA *bullosa*, L. *Ner. Bor. Amer.* 3, p. 60.
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37. ENTEROMORPHA *intestinalis*, Link. *Ner. Bor. Amer.* 3 p. 57.
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38. OSCILLATORIA *corium*, Ag. *Harv. Man. Ed.* 1 p. 166.
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39. NOSTOC *arcticum*, Berk. *Ner. Bor. Amer.* 3, p. 113.
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40. NOSTOC *verrucosum*, Vauch. *Ner. Bor. Amer.* 3, p. 114.
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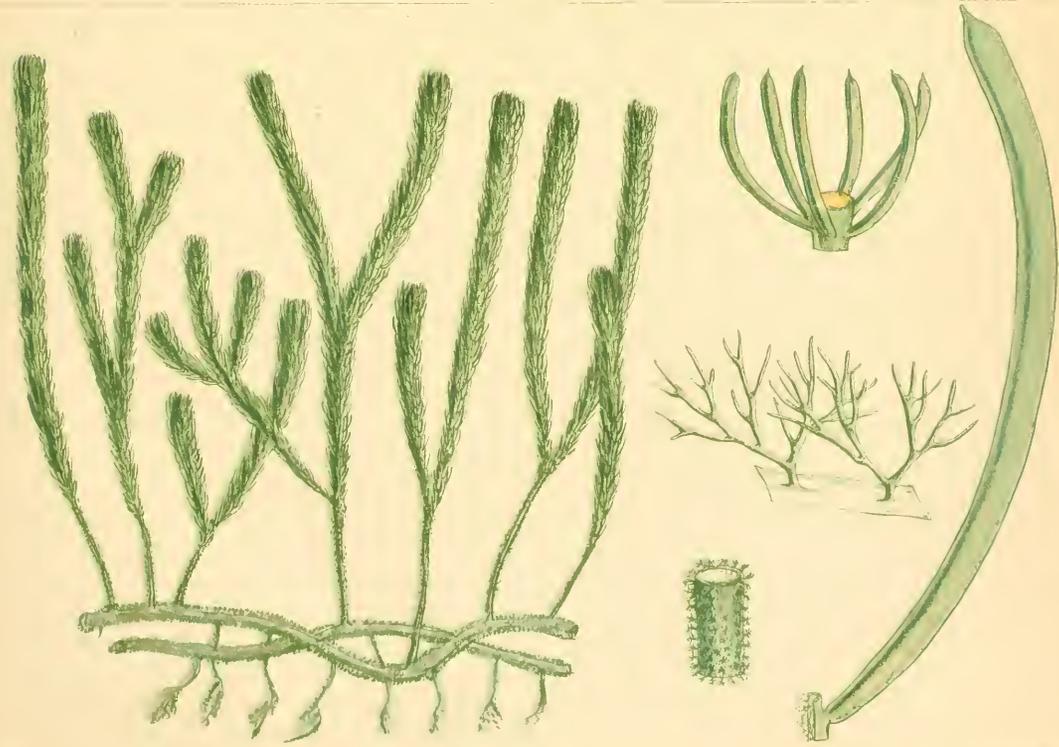
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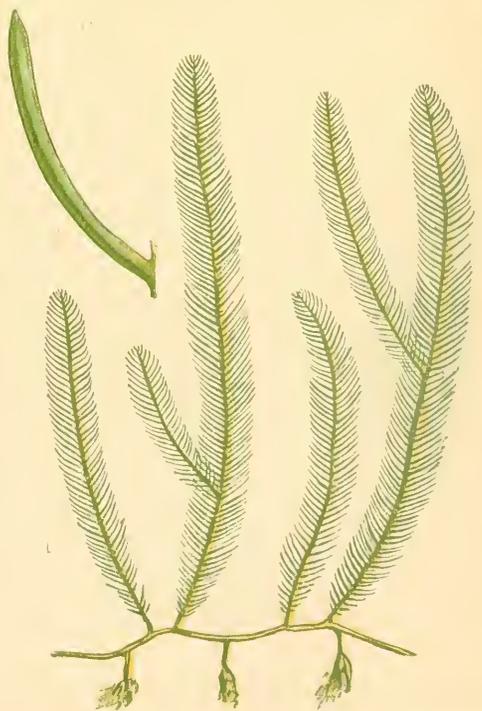
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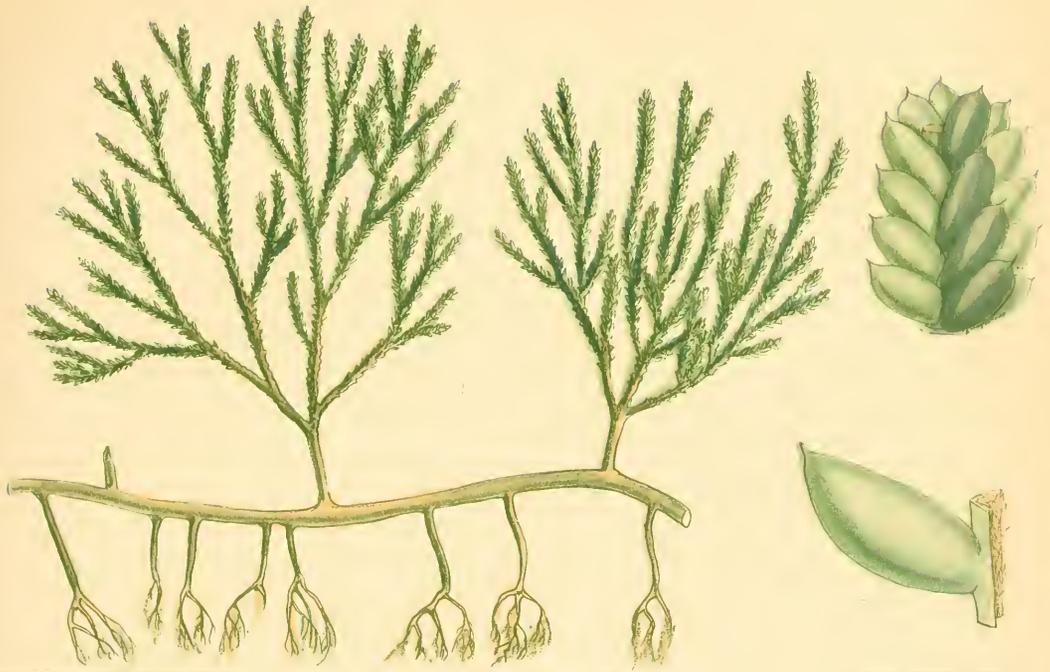
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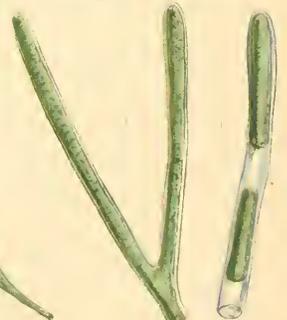
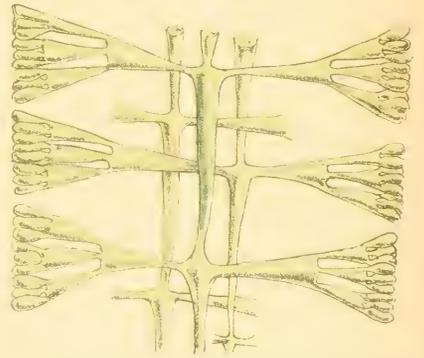




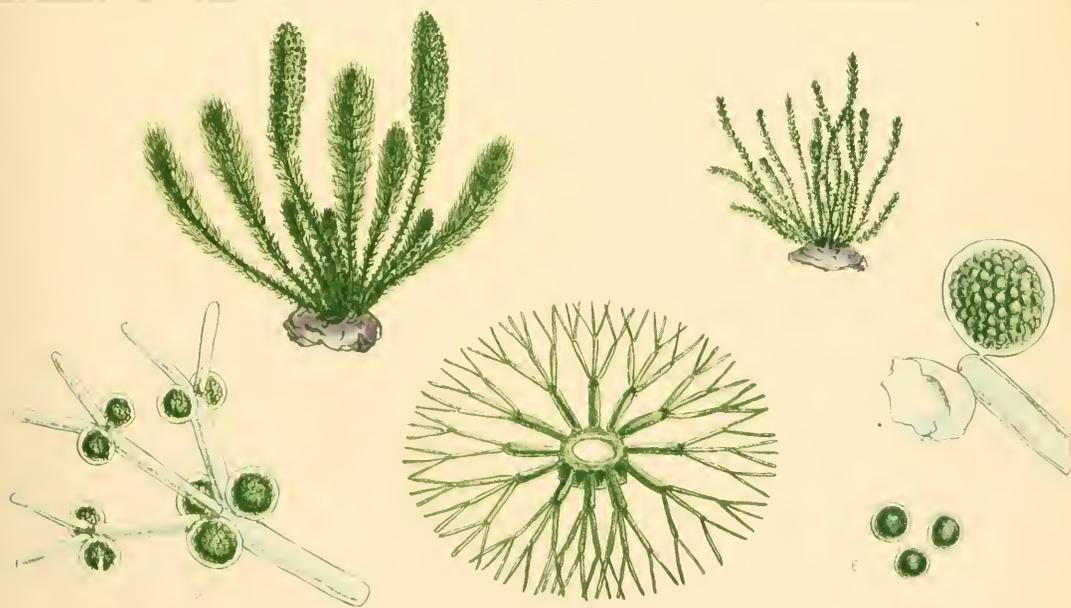
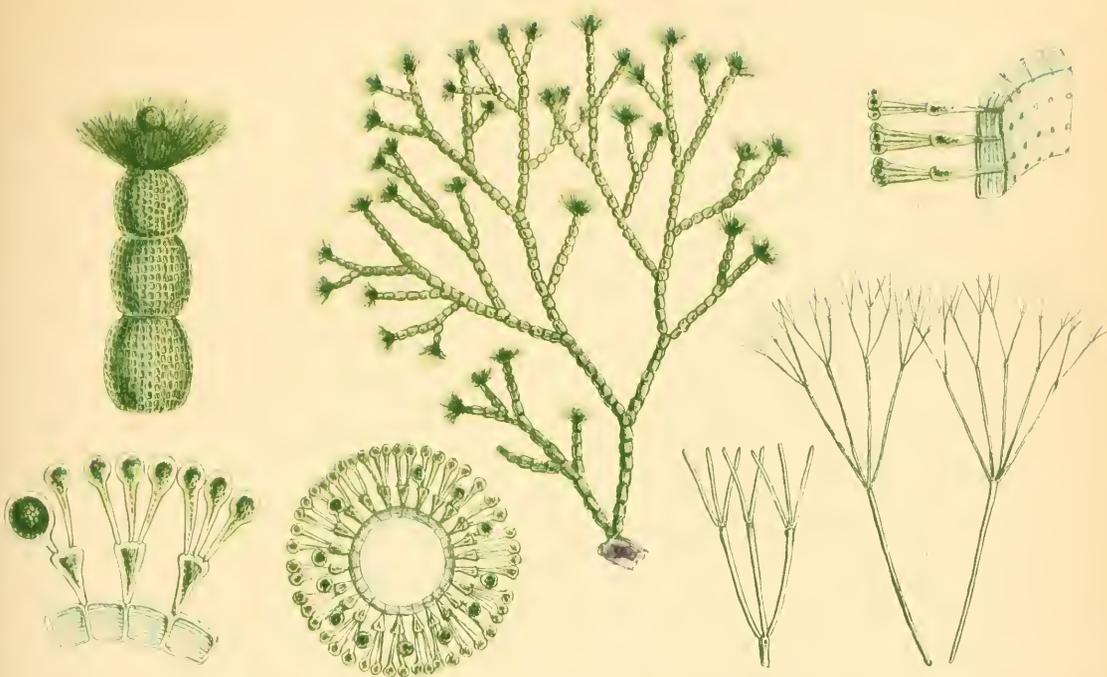




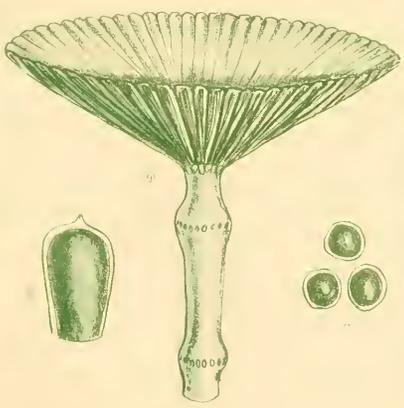
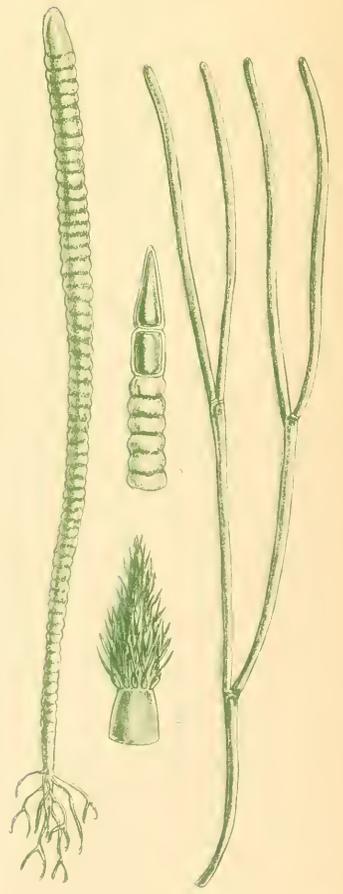
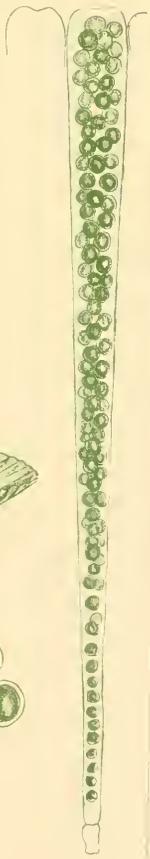
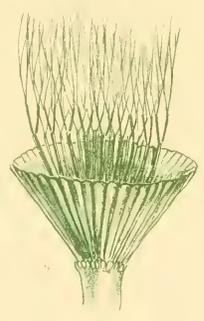
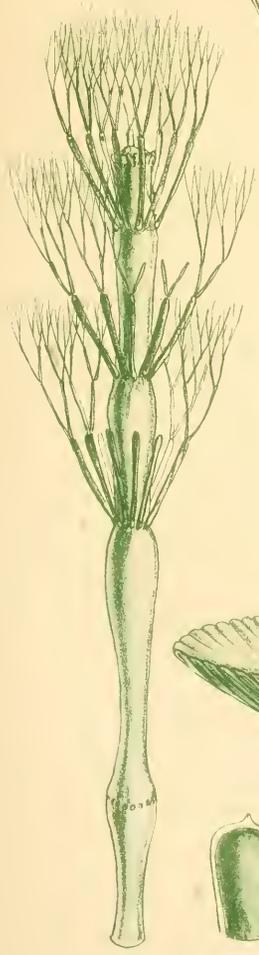
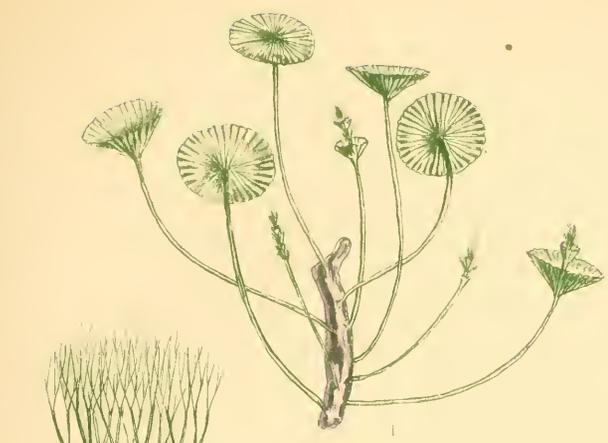








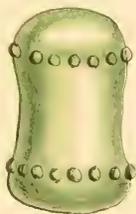
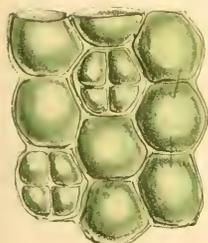
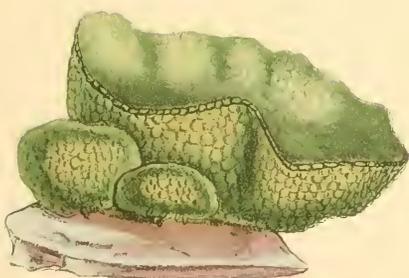




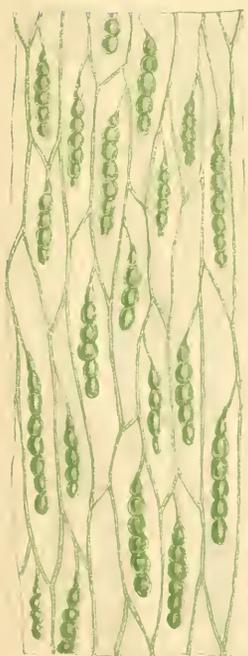
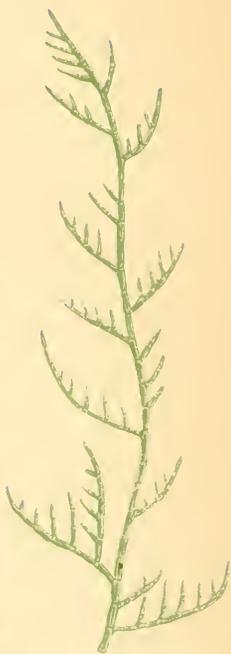






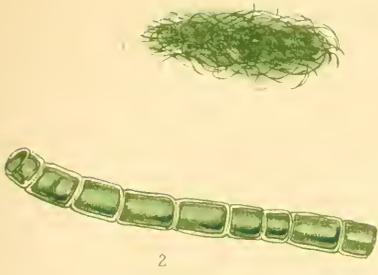




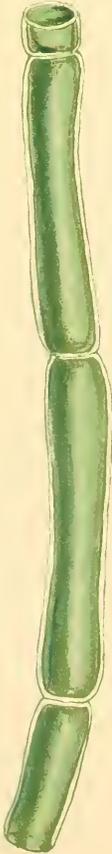
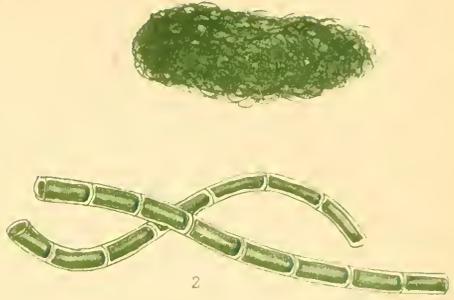




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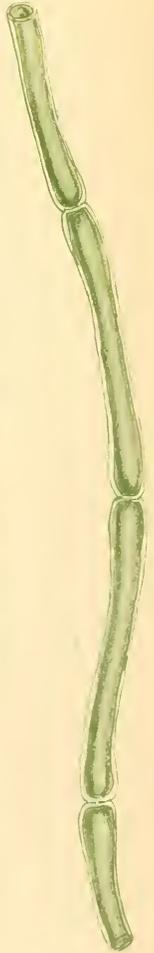
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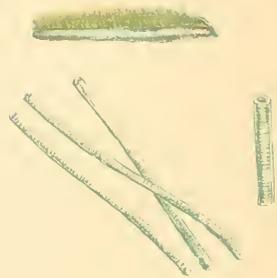
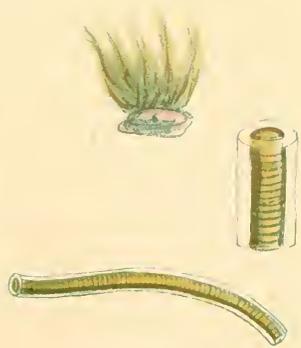
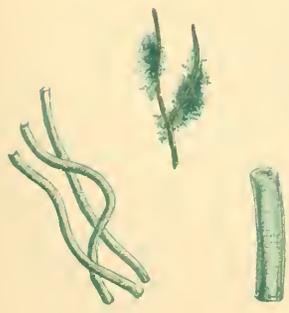
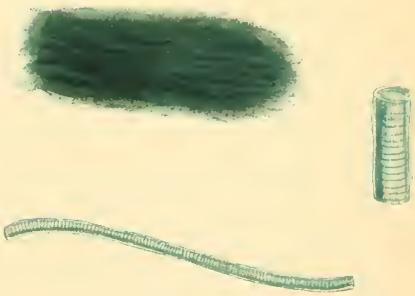
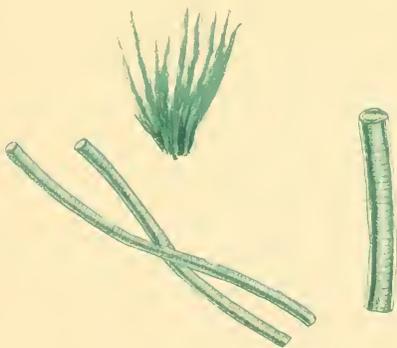
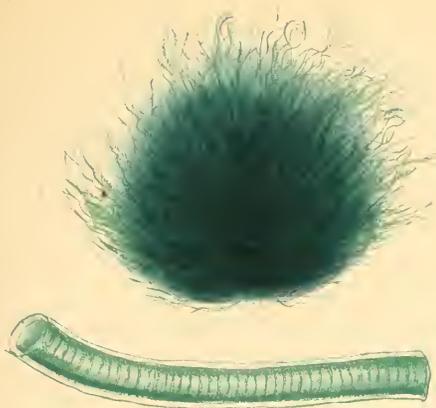
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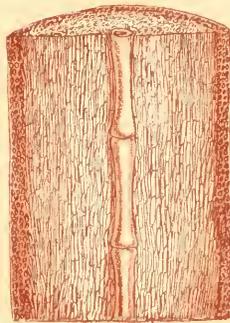
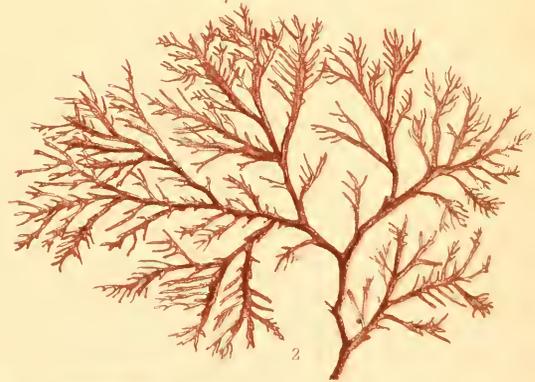
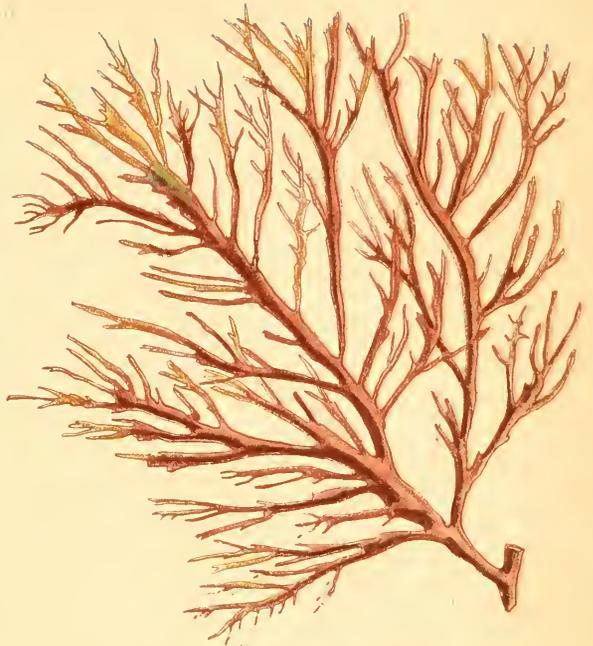
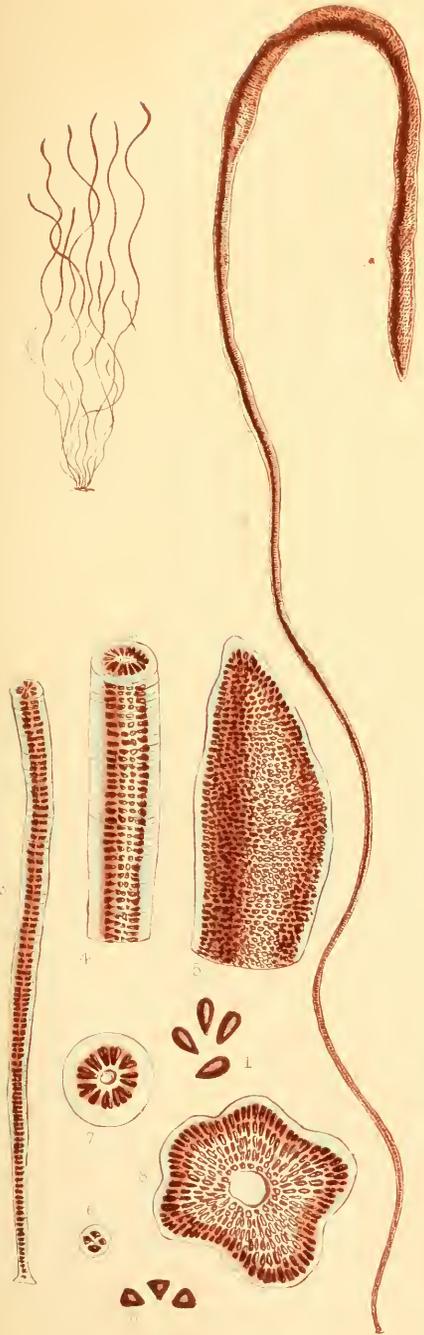




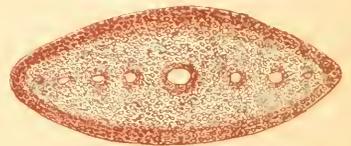




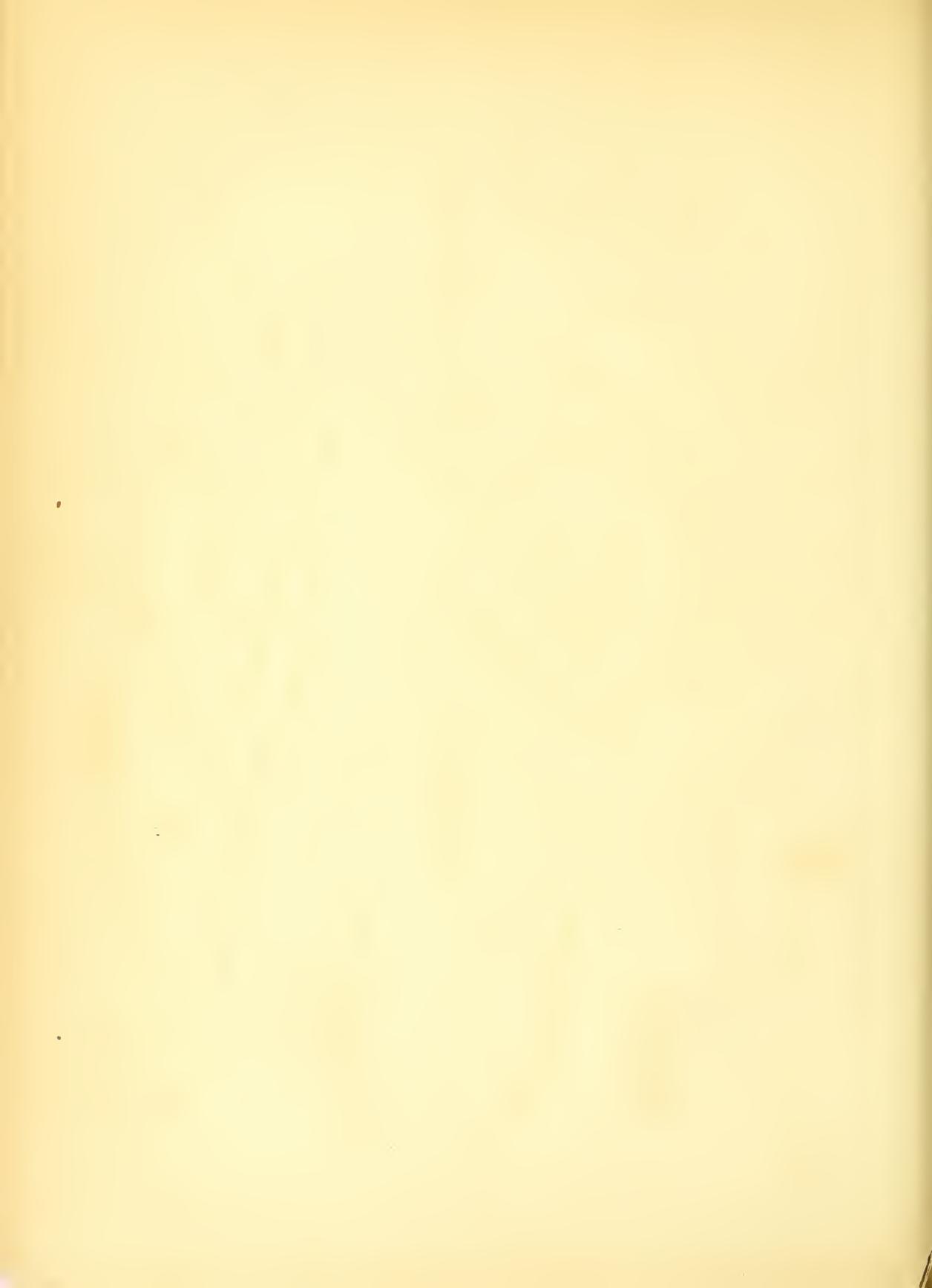


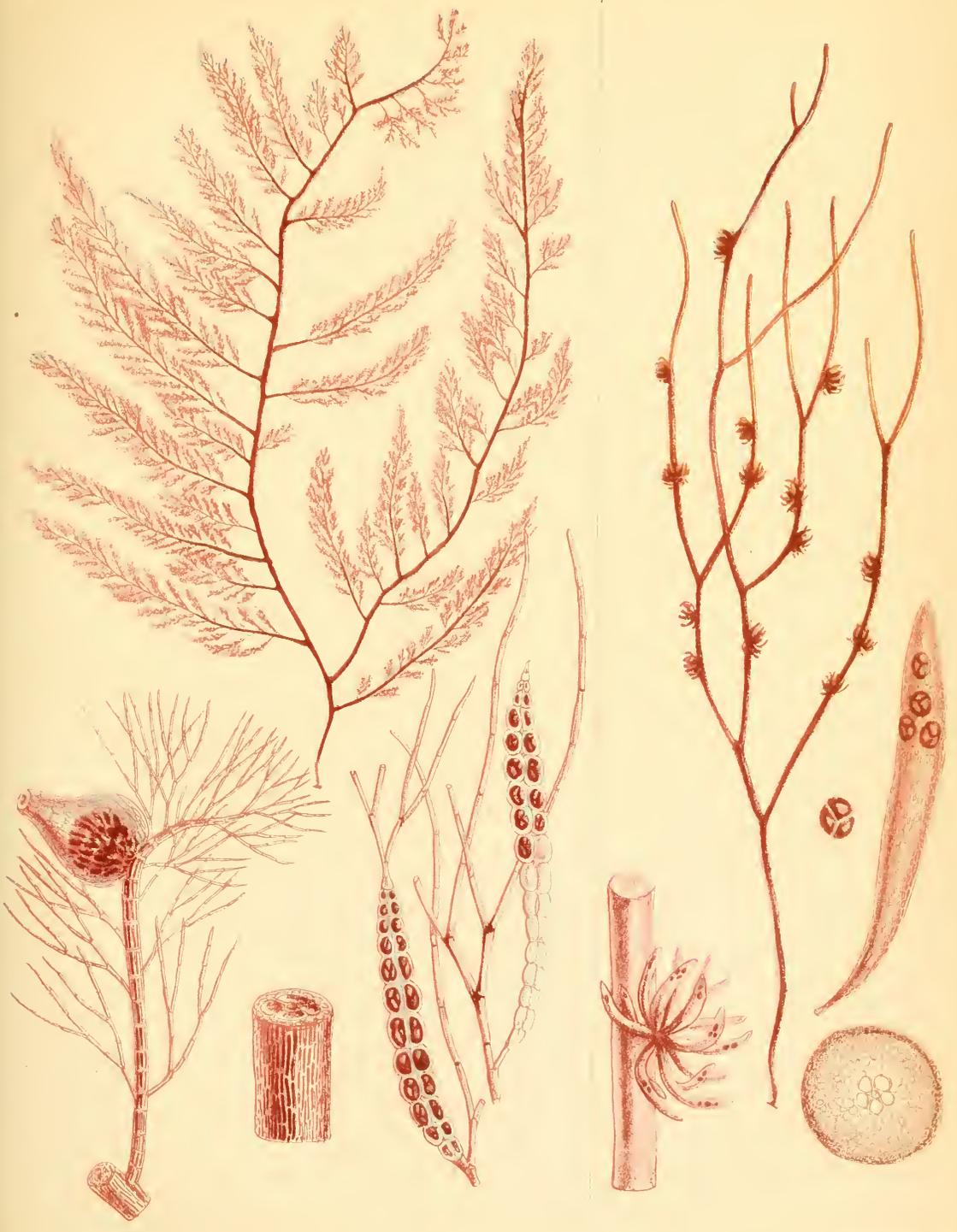


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SMITHSONIAN CONTRIBUTIONS TO KNOWLEDGE.

MAGNETICAL OBSERVATIONS

IN THE

A R C T I C S E A S .

BY

ELISHA KENT KANE, M. D., U. S. N.

MADE DURING THE SECOND GRINNELL EXPEDITION IN SEARCH OF SIR JOHN FRANKLIN,
IN 1853, 1854, AND 1855, AT VAN RENSSELAER HARBOR, AND OTHER
POINTS ON THE WEST COAST OF GREENLAND.

REDUCED AND DISCUSSED,

BY

CHARLES A. SCHOTT,
ASSISTANT U. S. COAST SURVEY.

[ACCEPTED FOR PUBLICATION, MAY, 1858.]

COLLINS, PRINTER.
PHILADELPHIA:

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INTRODUCTORY LETTER.

WASHINGTON, *May* 17, 1858.

PROFESSOR JOSEPH HENRY, LL.D.,

Secretary of the Smithsonian Institution:

DEAR SIR: The records of the magnetic observations made under the direction of Dr. Kane, in the second expedition to the Arctic regions, were placed in my hands by his late lamented father, Judge Kane, in December last.

Dr. Kane had selected Assistant Charles A. Schott, of the Coast Survey, for the reduction of a considerable portion of the observations made in that expedition; and I, therefore, placed these in Mr. Schott's possession for reduction and discussion. The work has been faithfully performed, and I recommend it for publication in the "Smithsonian Contributions to Knowledge." It is proper to state that the instruments were furnished by the Coast Survey and the Smithsonian Institution, and that the computations have been made at the expense of the latter.

Very respectfully, yours,

A. D. BACHE.

SECTION I.

MAGNETIC DECLINATION.

1854.

COMMENTS AND ADJUSTMENTS.

Instruments.—The observations for diurnal inequality as well as those for absolute declination, were made with a Jones unifilar magnetometer (No. 3), kindly loaned by Prof. A. D. Bache, Superintendent U. S. Coast Survey. The azimuth circle reads to 20' and the centre division of the scale reads 280. The magnet was suspended by means of a silk thread 9½ inches in length. Several trials to determine the effect of torsion gave such small quantities that it was not considered necessary to take the same into account. The instrument was not originally intended to give absolute declinations, but at the Winter Quarters the observer succeeded in obtaining a few values for absolute declination by detaching the box, containing the magnet, from the circle which bears the telescope. The same was then moved in azimuth until a well defined object within the small range of its vertical motion could be observed. The focus of the telescope was adjusted to the distance. We find the instrument “perched on a pedestal of frozen gravel,” the contents of two barrels. This mounting was considered as stable as the rock underneath. On the 9th of June, 1854, Mr. Sonntag examined the instrument in reference to local disturbance, and found no sensible deviation arising from such a source. “The local deviation seems to have corrected itself; the iron in our comfortless little cell seems to have been so distributed that our results were not affected by it.” (Narrative, vol. I.) The adjustments were made according to Ridel’s magnetical instructions. The mirror attached to the suspended magnet faces the magnetic north. The following are the determinations for the angular value of a scale division:—

Circle.	Scale.	Circle.	Scale.	
Readings; January 13, 1854.		Winter Quarters, Van Rensselaer Harbor.		
120° 60'—58'	454.5	118° 11'—07'	2534.0	} Taking alternate means, we obtain from each set the values:— 1 ^d = 0'.797.
120 16—14	100.7	117 34—30	303.0	
120 16—14	92.5	117 34—30	303.2	
119 30—27	153.5	116 49—46	351.0	
119 30—27	148.0	116 49—46	354.5	
118 48—45	199.0	116 13—10	394.0	
118 48—45	201.0	116 05—00	405.5	
118 11—07	250.5	115 31—29	451.0	

MAGNETIC DECLINATION.

Circle.	Scale.	Circle.	Scale.	
Readings; January 16, 1854.				(Dr. Hayes, observer.)
119° 31'—31'	452 ^d	121° 53'—55'	256 ^d	} 1 ^d = 0'.741.
120 48—46	350	123 19—18	150	
120 48—46	353	123 19—18	149	
122 09—06	251	124 42—40	42	
Readings; February 16, 1854.				
127° 04'—04'	624.5	121° 34'—34'	453 ^d .0	} 1 ^d = 0'.839.
125 55—56	153.0	122 55—56	356.0	
125 55—56	136.0	122 55—56	360.0	
124 18—17	257.0	124 23—24	249.0	
124 18—17	259.7	124 23—24	254.0	
123 00—00	355.0	125 47—47	150.0	
123 00—00	354.5	125 47—47	145.5	
121 34—34	463.0	127 05—05	42.0	
Value resulting, equal mean of all or one division of scale = 0'.804.				
Value adopted = 0'.80.				
An $\left. \begin{array}{l} \text{increase} \\ \text{decrease} \end{array} \right\}$ of scale readings indicates a movement of the north end of the magnet to the $\left. \begin{array}{l} \text{east} \\ \text{west} \end{array} \right\}$.				

A well rated pocket chronometer, nearly showing Greenwich mean time, was used for noting the time.

Diurnal Variation.—The observations for changes of magnetic declination were made during the months of January, February, and March, 1854, at the following dates:—

January 10-11	and	February 10-11
“ 13-14	“	“ 14-15
“ 24-25	“	“ 17-18
“ 27-28	“	“ 21-22
“ 31-32	“	“ 28-29
February 3-4	“	March 3-4
“ 7-8	“	“ 7-8

To these must be added the term days during the same period of the year, viz: January 18-19, February 24-25, and March 22-23. The remaining three terms in April, May, and June, of the same year, furnish values of the change of the diurnal inequality at a later season. Readings (the mean of two extremes during a vibration when the magnet was in motion) were taken every sixth minute, commencing, with but one exception, between 4 and 5 o'clock in the afternoon. The error of the chronometer has been applied and the time in the abstracts is given in local mean (astronomical) time. The readings are, as stated above, uncorrected for torsion, and are expressed in scale divisions. In regard to the observers, Dr. Kane remarks in his narrative: “It was not until the close of the winter that I was able to take my share in the preceding (the observations for variation) or the term-day observations; and I desire to express my obligations to Dr. Hayes and

Mr. Bonsal, as well as to George Stephenson, for their zealous and intelligent co-operation with Mr. Sonntag and myself." Each set of observations extends over twenty-four hours; they were taken nearly one minute earlier (between 56' and 40') than indicated in the abstract. The general remark on page 435 of the second volume of the Narrative, "the scale reading 280 corresponds to a magnetic declination of 108° 3' west, etc.," appears to leave no doubt that the instrument was left undisturbed, and there being no statement to the contrary, we can assume the hourly and daily means at the several days of observation to refer to the same zero or to be comparable amongst themselves. At a later period in June, 1854, the azimuth circle appears to have turned about 19 minutes.

Term-day Observations.—There were six in number. The observations commence at 10 P. M., mean Göttingen time, or about 4^h 37^m 34^s mean Fern Rock time, the difference of longitude being assumed to equal 5^h 22^m 26^s. The observations were not taken at the precise instant as indicated in the abstracts; the small deviation is noted at the head of each table.

Absolute Declination.—The expedition not being provided with a proper instrument, the magnetometer was temporarily converted into a declinometer by Mr. Sonntag, who determined the declination on June 9th, the 14th, and the 26th, 1854. The top of a mountain was used as a mark; it bore south 22° west (magnetic).

The mirror attached to the magnets can be inverted so that the mean reading of mirror direct and mirror reversed corresponds to the reading of the magnetic axis of the magnet.

Geographical Position of Observatory.—The latitude and longitude of the astronomical observatory has been determined as follows: Lat. 78° 37'.0 north, Long. 70° 40' west of Greenwich. (See p. 305, vol. II. of the Narrative, also pp. 385 and 387 of the same volume.) The island (Observatory Island) on which the observatory (Fern Rock Observatory) was placed, was some fifty paces long by perhaps forty broad. (See p. 116, vol. I. of Narrative.) The magnetic observatory was adjoining; it was of stone, ten feet square, with a wooden floor as well as roof, and supplied with a copper fire grate. No iron was used in its construction.

The following is an extract of note 56, p. 464, of vol. I. of the Narrative: "The subjoined are given as aids to physical inquiry on the part of future travellers: Directions to sites of Rensselaer harbor. The observatory was placed upon the northernmost of the rocky group of islets that formed our harbor. It is seventy-six English feet from the highest and northernmost salient point of this island, in a direction S. 14° E., or in one with said point and the S. E. projection of the southernmost islet of the group. A natural face of gneiss rock formed the western wall of the observatory. A crevice in this rock has been filled with melted lead, in the centre of which is a copper bolt. Eight feet from this bolt, and in the direction indicated by the crevice, stood the magnetometer. This direction is given in case of local disturbance from the nature of the surrounding rocks."

The highest point of the island was about thirty feet above the mean tide level of the harbor. The observatory was known by the name of "Fern Rock Observatory."

OBSERVATIONS FOR CHANGES OF THE MAGNETIC DECLINATION AT VAN RENSSELAER HARBOR, 1854.

Mean local time.	36m.	42m.	48m.	54m.	00m.	06m.	12m.	18m.	24m.	30m.	Mean local time.	Hourly means.
Fern Rock Observatory, January 10 and 11, 1854.												
4 ^h	300 ^d	300 ^d	299 ^d .3	299 ^d	295 ^d .5	294 ^d	294 ^d	294 ^d	293 ^d	291 ^d .45	5 ^h	296 ^d .0
5	291	290.8	290.7	300	295.2	292.8	292	290.8	289	288.4	6	292.1
6	290.2	292	290.6	288	290	287.5	284	282.5	281	280	7	286.6
7	280	279	277	276	277.5	278	279.5	280	280.5	281	8	278.9
8	282	283	284	284	285	285	287	286	286	285	9	284.7
9	286	287	286	288	290	289	292	290	287	286	10	288.1
10	289	292	294	295	295	297.5	298	303	304	303	11	297.0
11	300.5	300	300	299	298	298	297	298.5	303	304	12	299.8
12	304	306	307	308	310	307.5	311	311.5	310	310.2	13	308.5
13	310	309	308.5	308.2	309.3	310	309.8	306	313	314	14	309.8
14	312	310	310	309	308	306	303.3	303.5	306	308	15	307.6
15	309.5	308	305.8	306	304.5	303	301.5	306	306	305	16	305.5
16	304	302	298	298	301	301	295	290	289	289	17	296.7
17	289	286	287	288	292	287	302	299	297	299	18	292.6
18	287	285	283	283	282	268	252	241	244	246	19	267.1
19	249	255	256	254	257	270	291	295	294	298	20	271.9
20	290	277	273	271	273	250	275	270	260	251	21	269.0
21	260	266	257	249	248	247	251	253	255.3	248.6	22	253.5
22	246.3	255	260	258	256.5	254	256.5	258.5	257	256	23	255.8
23	258	262	267.5	270	272	278.5	282.3	279.0	280	273.5	0	272.3
0	272	270	263	259	253	251	250	246	254	252	1	257.0
1	252	360	265	268	269	271	273	273	274	274	2	267.9
2	274	279	275	274	278	276	275	276	276	280	3	276.3
3	291	289	294	297	300	301	302	304	304	305	4	298.7
4	312	314	310	312	314						Mean	284.7
Fern Rock Observatory, January 13 and 14, 1854.												
4 ^h	302 ^d	304 ^d	308 ^d	311 ^d	314 ^d	317 ^d	315 ^d	300 ^d	299 ^d	295 ^d	4 ^h	311 ^d .9
5	317	314	311	313	315	319	322	328	335	337	6	321.1
6	339	340	336	331	326	330	328	316	329	335	7	331.0
7	340	338	344	346	348	343	342	342	345	349	8	343.7
8	350	364	371	371	368	366	358	356	350	349	9	360.3
9	344	338	334	329.5	329	327	330	336	342	342	10	335.1
10	339	339.5	335.5	340	347.5	350	349	348.7	350.2	354.8	11	345.4
11	354	352	350.8	353	351	347	343	343	344.8	342.8	12	348.1
12	341	342	343.8	344	343.5	343	342	340.5	340	341	13	342.1
13	341	342	343	347	346	346	347	357	352	348	14	346.9
14	355	352	354	356	352	348	345	344	346	349	15	350.1
15	350	351	352	358	362	371	377	378	374	372	16	364.5
16	370	368	371	374	374	374	371	365	359	358	17	368.4
17	352	352	346	341	339	330	328	325	324	320	18	335.7
18	321	323	330	335	345	347	337	330	293	295	19	325.6
19	295	292.5	288	280	260	263.5	269.5	274	269.8	272	20	276.4
20	274	284	254	263	257.7	266.5	272.5	270	267	285	21	269.4
21	295	297	285	271	272.8	276	271.5	270	266	266	22	277.0
22	265	264	265.5	267	269	270	270	269	266	264	23	267.0
23	261	267	274	275	277	269	262	250	246	242	0	262.3
0	212	218	224	231	242	252	252	255	264	273	1	242.3
1	276	277	278	278	278	276.5	276	277	282	289	2	278.8
2	290	287	288	288	292	301	311	310	305.8	309	3	298.2
3	306	299	296.5	297.5	299.5	300.5	307	318	319.5	315.5	4	305.9
4	315	319	316								Mean	317.0
Value of a division of the scale 0'.80.												
Increase of scale readings corresponds to a movement of the north end of the magnet to the east.												

AT VAN RENSSELAER HARBOR.

Mean local time.	36m.	42m.	48m.	54m.	60m.	66m.	12m.	18m.	24m.	30m.	Mean local time.	Hourly means.
Fern Rock Observatory, January 24 and 25, 1854.												
4 ^h	307 ^d .3	310 ^d	313 ^d	315 ^d	317 ^d	318 ^d	323 ^d	305 ^d	305 ^d	305 ^d	4 ^h	319 ^d .3
5	337	340	342	346	348	350	353	355	353.5	354	6	347.8
6	355	355	357	357	359	360	361.5	363	361	369	7	359.7
7	373	371	366	363	368	367	366	367	367	366	8	367.4
8	364	363	362	357	356	358	360	362	364	365	9	361.1
9	364	361	358	362	365	367	363	359	357	356.5	10	361.2
10	355	354	354.5	357	356	358	358.5	360.5	359	358.5	11	357.1
11	356.5	354	356	358.5	359	361	363	364	359	352	12	358.3
12	350	352	353.5	351.5	352	354	356	359.5	361	363	13	355.2
13	360	355	359	368	370	370	373	366	361	358	14	364.0
14	360	366	365	361	359	353	351	350.8	350	349	15	356.5
15	347	348	347	344	344	344.5	342	343	340	340	16	344.0
16	340	342	344	344	344	344	343	343	343	342	17	342.9
17	340	338	338	337	337	338	338	339	341	342	18	338.8
18	344	345	348	348	347	346	346	346	347	347	19	346.4
19	347	348	348	349	350.5	350	349.5	348	346	336	20	347.2
20	322	316	318	318.5	320	321	308	305	304	301	21	313.3
21	301.5	300.5	292	291	286	291.5	304	302	310	314	22	299.2
22	317	315	315	314	316	316	318	316	314	314	23	315.5
23	315	313	312	313	314	310	309	309	308	300	0	310.3
0	298	301	304	302	292	287	282	285	288	294	1	293.3
1	300	305	300	294	292	304	304	311	309	310	2	302.9
2	312	314	316	312	308	310.5	314	315	315	314.5	3	313.1
3	316	316.5	318	316	310.5	310	310	312	315.6	318.5	4	314.3
4	311.5	310.5									Mean	337.0

Fern Rock Observatory, January 27 and 28, 1854.												
4 ^h	306 ^d	305 ^d	307 ^d	313 ^d	320 ^d	327 ^d	321 ^d	315 ^d	312 ^d	308 ^d	5 ^h	313 ^d .4
5	304	302	302	306	307	308	306	308	314	316	6	307.3
6	320	325	330	332	328	326	324	323	325	326	7	325.9
7	326	328	323	324	324	325	325	320	319	320	8	323.4
8	319	319	319	319	318	319	320.5	321	322	322	9	319.8
9	322	322	322	322	323	324	323.7	324	323	323	10	322.9
10	322	320	322	323.7	325.8	326.5	327	327.3	325	328	11	324.7
11	329	329.8	330	329	328	326	326	337	338	334.7	12	330.7
12	332	342	342.2	341	339.5	334	331	328	330	331	13	335.1
13	331.4	336	337	334	330	336	334	332	331	330	14	333.1
14	330	332	334	330	338	347	357	353	348	344	15	341.3
15	346	348	348	346	345	345	346	351	356	350	16	348.1
16	346	345	347	348	349	355	359	364	368	370	17	355.1
17	378	380	384	386	388	389.5	388	387	387.5	386	18	385.4
18	386	386	386	386	385	381	378	375	375	374	19	381.2
19	374	373	370.8	365	365	360	355	355.5	352	349.5	20	362.0
20	360	365	362	360	356	353	352	351.5	353	356	21	356.8
21	354.5	356	357.5	360	362	364.5	365	365.5	363	361	22	363.8
22	359	360	361	362	363	365	367	368	365	363	23	363.3
23	360	356	341	346	341.5	336	337	338	338	335	0	342.8
0	332	335	339	342	341	340	340	341	342	346	1	339.8
1	351	356	360	359	358	363	355	362	357	354	2	357.5
2	350	350	350	348	346	350	345	344	349	350	3	348.2
3	352	352	353	353	353	359	354	340	333	332	4	348.8
4	336	340	343	345	345						Mean	342.9

Value of a division of the scale 0'.80.

Increase in scale readings corresponds to a movement of the north end of the magnet to the east.

Aurora visible on the 27th and 28th.

Mean local time.	36m.	42m.	48m.	54m.	00m.	06m.	12m.	18m.	24m.	30m.	Mean local time.	Hourly means.
Fern Rock Observatory, January 31 and February 1, 1854.												
4 ^h	332 ^{d.5}	340 ^d	341 ^{d.5}	335 ^{d.5}	345 ^d	333 ^{d.5}	334 ^{d.5}	304 ^d	306 ^d	325 ^d	4 ^h	335 ^{d.0}
5	326	327	328.5	324	318	311	313	320	325	330	5	322.2
6	338	344	348	356	358	359.5	356	357	358	358	6	353.2
7	359	359	360	360.5	361	362	363.5	365	367	368.5	7	362.5
8	370	372	372	374	371	370	371	371	371	372	8	371.4
9	372	372	373	373	374	372	372	372	371	370	9	372.1
10	368	368	367	364	361	365	371	370	369	367	10	367.0
11	365	366	370	377	376	377	380	387	384	382	11	376.4
12	379	374	375	376	374	373	370	368	374	375	12	373.8
13	376	376	380	384.5	385	384	383.5	382	380	378	13	380.9
14	379	381.5	383	384	385.5	383	380	379	376	370	14	380.1
15	368	365	364	365	367	369	371	373.5	374	375	15	369.1
16	374.5	375	375	374.5	374	375	374	374	373	373	16	374.2
17	373	374	374.5	375	374	374	374	375	378	382	17	375.3
18	385	387	390	389	388	388	389	390	385	386	18	387.2
19	387	388	389.8	387	389	389	389	387	387	386	19	387.9
20	385	385	385	384.5	383	382	382	382	376	370	20	381.4
21	367	369	370	370	292	288	278	284	285	291	21	319.4
22	294	297	311	328	338	348	359	359.5	351	350	22	333.5
23	342	338	334	318.5	314	312	311	314	318	323	23	322.4
0	329.5	331	322	332	333	342	346	350	359	365	0	340.9
1	370	370	370	375	381	379	375	372	368	364	1	372.4
2	359	356	355	354	352	351	351	350	363	373	2	356.4
3	375	377	377	380	383	376	376	378	380	386	3	378.8
4	390	396	400	398	396	407	419	430	440		4	
											Mean	362.2
Fern Rock Observatory, February 3 and 4, 1854.												
8 ^h	348 ^d	353 ^d	358 ^d	363 ^{d.5}	367 ^{d.5}	372 ^d	374 ^d	336 ^d	335 ^d	342 ^d	8 ^h	366 ^{d.0}
9	377	376	375	373	370	365	363	362	362	363	9	368.6
10	369	370	372	372.5	374	377	378	378.7	379	385	10	375.5
11	386	388	390	393	400	408	407	404	402	398	11	397.6
12	403	408	406	407	410	408	406	405	408	410	12	407.1
13	413	410	411	415	435	450	454	456	457	430	13	433.1
14	425	415	412	411	411	410	406	405	400	400	14	409.5
15	400.5	400	398	397	396	394	390	385	392	408	15	396.0
16	411	414	418.5	408	397	393	389	389.5	389	389	16	399.8
17	390	392	393	391	389	388	378	362	342	337	17	376.2
18	335.5	336	342	351	362	380	386	409	367	350	18	361.8
19	339	320	308	323	316	309	296	285	270	262	19	302.8
20	261.5	260	258	261	262	275	270	274	278	287	20	268.6
21	295	302	303	299	296	300	303	320	334	340	21	309.2
22	355	354	344	332	340	362	350	342	340	344	22	346.3
23	348	352	345	341	330	320	315	314	314	315	23	329.4
0	320	332	336	340	345	340	339	350	348	346	0	339.6
1	316.5	346	345	350	340	332	340	346	325	305	1	337.5
2	298	308	315.5	316	314	311	311	310	308.5	306	2	309.8
3	304	302	300	294	286	291	301	307	319	333	3	304.0
4	345	349	349	353	358	361	362	364	364	362	4	356.7
5	360	358	356	359	362	362	364	362	368	370	5	362.1
6	369	366	371	375	378	377	375	380	390	389	6	376.0
7	389	379	373	371	370	370	370	371	371		7	373.5
											Mean	358.6
Value of a division of the scale 0'.80.												
Increase in scale readings corresponds to a movement of the north end of the magnet to the east.												

NOTE.—Another stove had been put up temporarily; it was removed at the close of the observations.

AT VAN RENSSELAER HARBOR.

9

Mean local time.	36m.	42m.	48m.	54m.	00m.	06m.	12m.	18m.	24m.	30m.	Mean local time.	Hourly means.
Fern Rock Observatory, February 7 and 8, 1854.												
4 ^h	316 ^{d.5}	317 ^d	317 ^d	316 ^d	314 ^d	314 ^d	315 ^d	316 ^d	317 ^d	317 ^d	4 ^h	315 ^{d.7}
5	319	320	322	323	322	320	321	323	326	329	5	322.5
6	333	336	339	342	344	345	347	349	345	339	6	341.9
7	341	345	349	355	355	361	454	346	352	356	7	351.4
8	357	356.5	356	355	354	354	355	355	355	356	8	355.3
9	356	356	356	355	354	352	352	354	355	360	9	355.0
10	369	370	369	368	368	369	370	372	374	375	10	370.4
11	377	379	375	370	367	368	368	368	368	368	11	370.8
12	367	367	368	369	370	372	375	377	380	383	12	372.8
13	386	389	392	395	396	394	392	389	389	390	13	391.2
14	389	387	386	384	381	378	375	372	369	365	14	378.6
15	362	359	355	350	346	342	337	336	334	333	15	345.4
16	333	334	334	335	336	338	339	339	338	336	16	336.2
17	330	325	320	314	311	308	304	302	301	302	17	311.7
18	302	302	298	294	290	287	284	280	276	273.5	18	288.6
19	271	270	268	266.5	274	283	287	290	294	294	19	279.7
20	295	297	298	300	301	305	307	310	313	313	20	303.9
21	313	312	312	311	303	295	287	294	294	295	21	301.6
22	297	298	296	295	293	294	301	310	319	326	22	302.9
23	322	323	325	323	322	321	319	318	314	312	23	319.9
0	306	299	300	301	303	306	310	320	328	334	0	310.7
1	335	336	337	336	332	329.5	330	332	332	330	1	332.9
2	327.5	320	313	308	301	296	288	291	308	315	2	306.7
3	317	315	312	309	313	320	329	333	333	334	3	321.5
4	336	341	347	350	352						4	
											5	
											Mean	332.8

Fern Rock Observatory, February 10 and 11, 1854.

4 ^h	261 ^d	266 ^d	272 ^d	284 ^d	294 ^d	300 ^d	306 ^d	251 ^d	254 ^d	256 ^d	4 ^h	293 ^{d.6}
5	330	340	352	366	368	362	354	352	355	362	5	354.1
6	360	358	357.5	360	366	365	365	364	366	368	6	362.9
7	371	373	376	378	380	384	385	385	390	396	7	381.8
8	396	395.5	394	392.7	394	390	390	389	387	387	8	391.4
9	387	386	386	386	380	382	382	382	382	382	9	383.5
10	382	381	380	378	377	376	376	375	374	374	10	377.3
11	376	380	383	385	385	385	386	386	386	387	11	383.9
12	388	389	389	392	393	392	390	390	392	394	12	390.9
13	396	397	396	394	392	400	412	420	424	422	13	405.3
14	422	430	444	460	464	470	487	480	493.5	498	14	464.8
15	501	504	503	499	479	460	448	429	417	407	15	464.7
16	405	400	398	397	395	389	383	379	371	368	16	388.5
17	362	370	377	373	369	365	357	348	348	350	17	361.9
18	350	329	329	325	321	317	312.5	297	288	280	18	314.8
19	272	265	263	261	261	262	262	263	265	266	19	264.0
20	267	268	269	270	273	276	279	274	270	265	20	271.1
21	261	256	251	246	240	238	225	231	239	235	21	242.2
22	216	196	196	193	203	203	202	201	206	211	22	202.7
23	215	216	215	215	211	208	205	203	200	195	23	208.3
0	200	203	201	201	200	199	203	211	215	220	0	205.3
1	227	232	239	254	280	300	311	325	320	320	1	281.1
2	319	319	319	321	327	331	345	350	362	369	2	336.2
3	353	359	361	363	365	365	361	364	365	364	3	362.0
4	361	361	354	351	347						4	
											5	
											Mean	337.2

Value of a scale division 0'.80.

Increase of scale readings corresponds to a movement of the north end of the magnet to the east.

Mean local time.	36m.	42m.	48m.	54m.	00m.	06m.	12m.	18m.	24m.	30m.	Mean local time.	Hourly means.
Fern Rock Observatory, February 14 and 15, 1854.												
4 ^h			304 ^d	303 ^d	304 ^d	303 ^d	307 ^d	311 ^d	316 ^d	324 ^d	5 ^h	(307.40)
5	331 ^d	339 ^d	343	347	350	352	355	358	359	360	6	349.4
6	362	362	365	369	372	380	387	396	401	410	7	380.4
7	393	398	398	401	417	449	440	435	440	440	8	421.1
8	435	434	428	420	420	412	405	408	413	422	9	419.7
9	439	450	470	478	487	486	486	494	482	465	10	473.7
10	462	458	451	443	438	432	426	431	443	457	11	444.1
11	472	483	494	493	491	487	483	477	458	436	12	477.4
12	434	414	410	409	410	407	406	408	413	419	13	413.0
13	428	441	452	456	459	462	473	464	465	462	14	456.2
14	458	454	450	449	447	446	458	473	478	481	15	459.4
15	486	489	491	492	490	492	494	494	490	485	16	490.3
16	478	470	468	460	452	444	434	430	428	420	17	448.4
17	416	420	414	414	409	404	401	399	396	394	18	406.7
18	391	376	376	377	378	392	391	366	359	356	19	376.2
19	349	344	338	320	312	334	340	336	329	329	20	333.1
20	331	339	350	356	359	354	349	345	331	317	21	343.1
21	296	292	289	292	292	291	289	287	284	278	22	289.0
22	275	273	258	246	244	238	234	228	223	218	23	243.7
23	212	208	211	186	160	138	146	136	132	129	0	165.8
0	131	144	159	171	181	192	203	211	218	226	1	183.6
1	236	244	245	246	247	257	269	252	236	238	2	247.0
2	241	242	240	243	247	254	249	249	251	254	3	247.0
3	257	266	278	292	316	322	316	311	319	332	4	300.9
4	331	351	360								Mean	360.7
Fern Rock Observatory, February 17 and 18, 1854.												
4 ^h	190 ^d	184 ^d	172 ^d	172 ^d	169 ^d	172 ^d	181 ^d	193 ^d	193 ^d	194 ^d	4 ^h	182 ^d .2
5	193	183	185	188	180	182	185	195	207	208	5	190.6
6	208	230	258	298	296	286	272	271	270	270	7	265.9
7	265	258	252	244	237	230	227	225	226	228	8	239.2
8	232	235	238	242	249	255	260	260	261	262	9	249.4
9	262	263	265	268	273	276	279	281	291	300	10	275.8
10	302	300	280	273	260	249	242	236	228.5	237	11	260.7
11	241	247.5	245	240	236	231	232	230	229	227.8	12	235.9
12	225	222	240	238	242	239	236	230	247	253	13	237.2
13	261	248	240	231	233	237	250	244	242	240	14	242.6
14	238	236	235	238	243	242	240.5	237	234	231	15	237.4
15	229	229.5	234	239.5	239	238	240	241	243	247	16	238.0
16	249	251	250	247	245	242	237	233	228	223	17	240.5
17	218	220	223	228	232	235	237	238	239	240	18	231.0
18	235	232	230	233	235	237	233	228	234	237	19	233.4
19	240	234	228	220	204	166	164	147	130	152	20	188.5
20	179	188	206	230	256	250	241	236	226	217	21	222.9
21	218	221	224	221	217	208	221	237	244	245	22	225.6
22	244	248	254	250	247	244	242	241	240.5	240	23	245.0
23	240	250	252	247.5	238	227	220	219	216	214	0	232.3
0	214	215	216	220	226	232	236	240	247	255	1	230.1
1	262	271	180*	190	187	184	181	177	175	174	2	198.1
2	169	163	156	150	144	146	148	147	152.5	151	3	152.6
3	154	151	161	175	187	192	201	202	202	208	4	183.3
4	210	209	226	233							Mean	226.6
Value of a scale division 0'.80.												
Increase of scale readings corresponds to a movement of the north end of the magnet to the east.												

NOTE.—The mean in brackets includes two interpolated values.

* A sudden change of 90^d occurring at 6^h 30^m chronometer time (Greenwich time nearly).

Mean local time.	36m.	42m.	48m.	54m.	00m.	06m.	12m.	18m.	24m.	30m.	Mean local time.	Hourly means.
Fern Rock Observatory, February 21 and 22, 1854.												
4 ^h	268 ^d	268 ^d	273 ^d	276 ^d	271 ^d	260 ^d	252 ^d	270 ^d	269 ^d	268 ^d	4 ^h	
5	252	253	256	256	253	254	256	257	258	260	5	262 ^d .4
6	261	263	263	265	267	267	267	268	269	271	6	255.5
7	274	275	276	277	280	282	286	291	296	301	7	266.7
8	302	302	303	303	302	302	301	302	301	299	8	283.8
9	296	293	290	289	287	286	284	283	283	283.5	9	301.7
10	282.5	280.5	278.5	276	274	274	274	279	284	287	10	287.4
11	288	289	290	294	297	299	300	296	294	293	11	278.9
12	292	292	290	287	284	281	276	276	275	280	12	294.0
13	285	287	290	293	297	290	282	280	278	276	13	283.3
14	276	278	282	282	284	285	287	287	287	288	14	288.3
15	288	288	289	290	293	293	294	294	296	296	15	283.6
16	295	295	293	292	291	291	293	290	287	283	16	292.1
17	280	278	275	272	271	268	267	266	265	263	17	291.0
18	261	260	258	255	254	255	257	260	262	263	18	270.5
19	264	262	259	260	261	261	260.5	260	259	256	19	258.5
20	251	244	240	242	230	218	216	212	205	203	20	260.2
21	206	210	216	221	233	224	230	237	250	250	21	226.1
22	250	250	254	257	258	262	260	260	261	263	22	226.7
23	261	260	260	258	260	261	262	262	262	262	23	257.5
0	262	262	262	262	263	263	262	261	261	260	0	260.8
1	259	259	258	257	258	259	259	260	261	263	1	261.8
2	264	266	269	271	273	275	277	280	278	274	2	259.3
3	274	275	278	290	294	304	293	286	282	280	3	272.7
4	283	282	279	276							4	285.6
											Mean	271.2

Fern Rock Observatory, February 28 and March 1, 1854.												
4 ^h	218 ^d	216 ^d	213 ^d	207 ^d	200 ^d	191 ^d	183 ^d	220 ^d	220 ^d	219 ^d	4 ^h	
5	184	186	189	191	192	193	193	179	180	182	5	196 ^d .9
6	195	198	202	210	219	227	230	192	193	193	6	190.6
7	272	274	280	278	242	226	220	244	256	260	7	224.1
8	344	333	321	310	306	322	335	250	300	320	8	266.2
9	353	352	350	355	368	365	360	341	350	362	9	332.4
10	374	378	399	402	408	404	398	370	371	372	10	361.6
11	398	396	397	402	405	408	407	394	390	400	11	394.7
12	452	476	484	483	450	438	418	421	436	440	12	411.0
13	372	363	354	343	337	343	347	400	390	381	13	437.2
14	372	355	340	324	315	320	326	352	357	364	14	353.2
15	331	327	325	324	322	325	314	330	333	335	15	335.0
16	326	338	346	363	362	356	348	320	315	314	16	321.7
17	325	322	324	318	316	324	312	342	342	339	17	346.2
18	319	318	317	314	312	316	317	310	318	322	18	319.1
19	320	315	314	310	308	309	308	312	314	317	19	315.8
20	306	306	302	298	297	299	302	307	308	308	20	310.7
21	298	299	300	301	296	284	274	302	301	301	21	301.4
22	272	278	280	283	286	288	284	269	264	268	22	285.3
23	285	303	320	332	341	350	362	279	276	280	23	280.6
0	345	333	321	310	296	293	305	374	366	356	0	338.9
1	274	276	266	264	258	256	252	296	289	280	1	306.8
2	278	260	261	262	265	268	276	259	251	255	2	261.1
3	299	301	299	302	306	310	314	280	286	291	3	272.7
4	319	317	318	315	312			316	317	320	4	308.4
											5	
											Mean	311.3

Value of a scale division 0'.80.

Increase of scale readings corresponds to a movement of the north end of the magnet to the east.

Mean local time.	36m.	42m.	48m.	54m.	00m.	06m.	12m.	18m.	24m.	30m.	Mean local time.	Hourly means.
Fern Rock Observatory, March 3 and 4, 1854.												
4 ^h	248 ^d	249 ^d	240 ^d	238 ^d	242 ^d	245 ^d	248 ^d	250 ^d	247 ^d	246 ^d	4 ^h	248 ^d .5
5	258	269	281	284	330	279	277	274	275	277	6	275.4
6	280.5	279	272.5	275	270	280	286	290	298	296	7	282.7
7	288	311	315	332	329	326	321	329	347	349	8	324.2
8	356	356	360	352	347	346	330	302	291	283	9	332.3
9	287	290	282	286	275	264	265	267	269	270	10	275.5
10	272	274	276	278	280	282	285	287	290	292	11	281.6
11	295	298	302	306	313	318	322	325	327	329	12	313.6
12	330	337	345	349	352	350	348	345	343	336	13	343.5
13	325	321	313	302	295	299	308	314	309	302	14	308.8
14	297	294	288	292	286	284	280	276	272	285	15	285.4
15	291	294	291	289	282	276	268	264	260	258	16	277.3
16	257	257	256	258	259	260	262	260	258	258	17	258.5
17	257	255	251	244.5	238	230	220	205	190	172	18	226.2
18	152	144	133	134	136	140	143	160	174	198	19	151.4
19	209	216	210	205	201	195	190	186	181	177	20	197.0
20	173	170	167	164	171	178	184	189	193	199	21	178.8
21	206	200	194	188	183	178	172	170	169	164	22	182.4
22	152	160	156	156	153	155	157	154	150	150	23	154.3
23	156	176	195	184	155	160	125	131	131	134	0	154.7
0	135	137.5	153	179	195	184	187	200	197.5	192	1	176.2
1	195	200	190	185	182	179	150	136	150	156	2	172.3
2	173	190	200	206	217	204	196	190	186	183	3	194.5
3	189	192	199	204	209	216	222	229	234	243	4	213.7
4	249	251	254	257							Mean	242.0
Fern Rock Observatory, March 7 and 8, 1854.												
4 ^h	218 ^d	223 ^d	213 ^d	218 ^d	228 ¹	224 ^d	221 ^d	231 ^d	190 ^d	202 ^d	4 ^h	224 ^d .1
5	242	243	246	247	251	270	275	275	274	274	6	259.7
6	269	261	268	260	273	270	269	255	268	271	7	266.4
7	275	271	279	284	278	269	281	282	281	286	8	278.6
8	292	304	294	302	303	312	306	299	297	293	9	300.2
9	284	288	286	287	291	294	300	305	298	290	10	292.3
10	287	280	276	270	277	280	286	281	278	273	11	278.8
11	269	272	267	270	272	274	267	268	272	280	12	271.1
12	273	279	284	290	289	291	294	291	283	274	13	284.8
13	290	288	285	282	283	291	297	300	296	291	14	290.3
14	285	278	281	284	298	291	289	286	284	283	15	285.9
15	281	282	285	288	290	292	295	297	298	298	16	290.6
16	299	300	302	297	291	285	280	278	283	288	17	290.3
17	292	296	299	297	295	293	289	287	281	275	18	290.4
18	269	264	260	256	260	255	258	260	266	270	19	261.8
19	275	272	277	264	270	268	270	259	271	268	20	269.4
20	264	276	278	270	264	260	268	282	284	286	21	273.2
21	280	278	281	285	287	274	291	297	295	291	22	285.9
22	284	276	274	268	263	257	264	271	286	293	23	273.6
23	300	299	287	285	281	274	278	271	267	265	0	280.7
0	261	246	252	245	247	243	242	246	250	252	1	248.4
1	252	252	250	250	249	250	252	255	256	258	2	252.4
2	260	265	270	272	275	276	276	280	285	280	3	273.9
3	285	284	274			258	242	247	258	263	4	(264.3)
4	262	265	268	258	245						5	
											Mean	274.5
Value of a scale division 0'.80.												
Increase of scale readings corresponds to a movement of the north end of the magnet to the east.												
NOTE.—The mean in brackets includes two interpolated values.												

Diurnal Range of the Declination.—The diurnal range being an index to the magnitude of the diurnal excursions, is best presented before the examination of the diurnal inequality. The following table contains the highest and lowest scale readings in the hourly series, and the maximum and minimum values observed, together with the corresponding ranges. One division of scale = 0'.80.

DAILY RANGE OF THE DECLINATION.

DATE.	IN HOURLY SERIES.		OBSERVED.		RANGE.	
	Highest.	Lowest.	Maximum.	Minimum.	In hourly series.	Total observed.
1854.						
January 10-11	309 ^d .8	253 ^d .5	314 ^d .0	241 ^d .0	56 ^d .3	73 ^d .0
" 13-14	368.4	242.3	378.0	212.0	126.1	166.0
" 18-19	357.9	109.7	369.0	85.0	248.2	284.0
" 24-25	367.4	293.3	373.0	282.0	74.1	91.0
" 27-28	385.4	307.3	389.5	302.0	78.1	87.5
" 31-32	387.9	319.4	440.0	278.0	68.5	162.0
February 3-4	433.1	268.6	457.0	258.0	164.5	199.0
" 7-8	391.2	279.7	396.0	266.5	111.5	119.5
" 10-11	464.8	202.7	504.0	195.0	262.1	309.0
" 14-15	490.3	165.8	494.0	129.0	324.5	365.0
" 17-18	275.8	152.6	302.0	130.0	123.2	172.0
" 21-22	301.7	226.1	304.0	203.0	75.6	101.0
" 24-25	531.3	321.4	558.5	268.0	209.9	290.5
March 0-1	437.2	190.6	484.0	179.0	246.6	305.0
" 3-4	343.5	151.4	360.0	125.0	192.1	235.0
" 7-8	300.2	224.1	312.0	190.0	76.1	122.0
" 22-23	290.5	238.8	304.0	228.0	51.7	76.0

The mean diurnal total range observed during the above period becomes 2° 28'.6, and the maximum diurnal range observed took place on the 14-15 February, and amounted to 4° 52'.0. For comparison with similar quantities at other high latitude stations we may take Lake Athabasca, where the greatest range in any one day between October, 1843, and February, 1844, was 2° 35', it happened October 16, 1843; at Fort Simpson the maximum range was 7° 27', observed on the 16th of April, 1844, in a series of observations extending over April and May, 1844. The mean diurnal range during January and February, 1844, at Lake Athabasca, was 31'.4, and the mean range at Fort Simpson in April and May of that year was 1° 12', these two quantities, however, were taken from the hourly series.

If we classify the ranges according to this magnitude we obtain the following results:—

Daily range less than	1°	.	.	.	.	.	.	1
" " between	1 and 2°	.	.	.	.	.	.	6
" " "	2 and 3	.	.	.	.	.	.	4
" " "	3 and 4	.	.	.	.	.	.	3
" " "	4 and 5	.	.	.	.	.	.	3
" " greater than	5	.	.	.	.	.	.	0

The diurnal range in the winter months, January, February, and March, when compared with its annual fluctuation, is probably below the mean value of the year.

Diurnal Inequality of the Declination.—The following table contains the hourly means of all observations at the Winter quarters, between January 10 and March 23, 1854. The remaining observations on term-days at a later season have been excluded on account of their isolation. The above period includes the coldest season of the year, and during more than one-half of the period the sun was below the horizon.

The hourly means were made out separately for each month, the general mean includes seventeen values for each of the twenty-four hours. In January we have complete observations on six days, in February on seven, and in March on four days. The table also contains the monthly means, and all numbers are expressed in scale divisions (one division = 0'.80).

AT VAN RENSSELAER HARBOR.

15

ABSTRACT OF HOURLY MEANS DURING THE MONTHS OF JANUARY, FEBRUARY, AND MARCH, 1854, OBSERVED AT FERN ROCK MAGNETIC OBSERVATORY.

(The readings are given in scale divisions; the values taken from the term-day observations embrace the same number of single readings between the same times.)

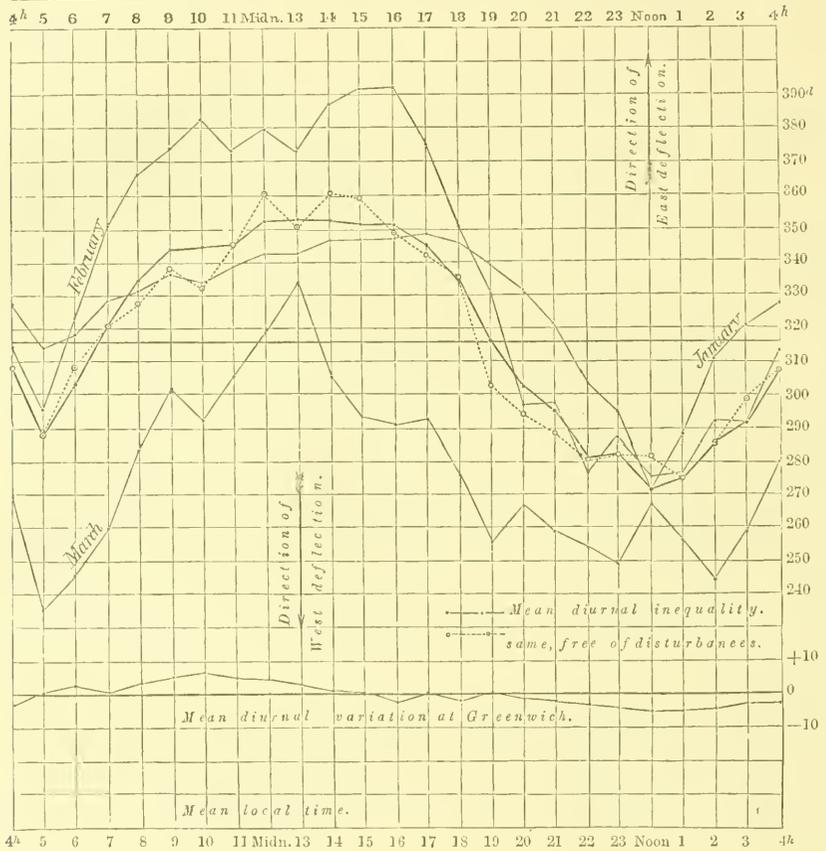
Fern Rock mean time.	5h.	6h.	7h.	8h.	9h.	10h.	11h.	12h.	13h.	14h.	15h.	16h.	17h.
Fern Rock Observatory, January and March, 1854.													
Jan'y 10-11	296.0	292.1	286.6	278.9	284.7	288.1	297.0	299.8	308.5	309.8	307.6	305.5	296.7
" 13-14	311.9	321.1	331.0	343.7	360.3	353.1	345.4	348.1	342.1	346.9	350.1	364.5	368.4
" 18-19	308.2	316.9	317.3	313.3	319.9	321.8	343.3	346.7	338.4	345.3	347.8	353.8	357.9
" 24-25	319.3	347.8	359.7	367.4	361.1	361.2	357.1	358.3	355.2	364.0	356.5	344.0	342.9
" 27-28	313.4	307.3	325.9	323.4	319.8	322.9	324.7	330.7	335.1	333.1	341.3	348.1	355.1
" 31-32	335.0	322.2	353.2	362.5	371.4	372.1	367.0	376.4	373.8	380.9	380.1	369.1	374.2
Means	313.9	317.9	329.0	331.5	336.2	333.6	339.1	343.3	342.2	346.7	347.2	347.5	349.2
Feb'y 3-4	*356.7	*362.1	*377.0	*(373.5)	366.0	368.6	375.5	397.6	407.1	433.1	409.5	396.0	399.8
" 7-8	315.7	322.5	341.9	351.4	355.3	355.0	370.4	370.8	372.8	391.2	378.6	345.4	336.2
" 10-11	293.6	354.1	362.9	381.8	391.4	383.5	377.3	383.9	390.9	405.3	464.8	464.7	388.5
" 14-15	(307.0)	349.4	380.4	421.1	419.7	473.7	444.1	477.4	413.0	456.2	459.4	490.3	448.4
" 17-18	182.2	190.6	265.9	239.2	249.4	275.8	260.7	235.9	237.2	242.6	237.4	238.0	240.5
" 21-22	262.4	255.5	266.7	233.8	301.7	287.4	278.9	294.0	283.3	288.3	283.6	292.1	291.0
" 24-25	344.7	429.6	461.2	514.1	531.3	526.4	491.8	498.3	498.2	496.2	501.2	512.4	520.8
Means	294.6	323.4	350.9	366.4	373.5	381.5	371.3	379.7	371.8	387.6	390.7	391.3	375.0
March 0-1	196.9	190.6	224.1	266.2	332.4	361.6	394.7	411.0	437.2	353.2	335.0	321.7	346.2
" 3-4	248.5	275.4	282.7	324.2	332.3	275.5	281.6	313.6	343.5	308.8	285.4	277.3	258.5
" 7-8	224.1	259.7	266.4	278.6	300.2	292.3	278.8	271.1	284.8	290.3	285.9	290.6	290.3
" 22-23	261.3	246.3	258.5	258.6	240.9	238.8	270.1	280.3	274.3	266.7	260.8	269.6	269.8
Means	232.7	243.0	257.9	281.9	301.5	292.1	306.3	319.0	334.9	304.8	291.8	289.8	291.2
General means	286.9	302.5	321.3	334.2	343.3	343.5	344.6	352.6	352.7	353.5	352.0	352.1	346.2

Fern Rock mean time.	18h.	19h.	20h.	21h.	22h.	23h.	Noon-0h.	1h.	2h.	3h.	4h.	Daily means.
Jan'y 10-11	292.6	267.1	271.9	269.0	253.5	255.8	272.3	257.0	267.9	276.3	298.7	284.7
" 13-14	335.7	325.6	276.4	269.4	277.0	267.0	262.3	242.3	278.8	298.2	305.9	317.0
" 18-19	347.7	327.9	348.1	336.3	306.4	236.2	109.7	246.6	289.3	333.1	321.3	313.9
" 24-25	338.8	346.4	347.2	313.3	299.2	315.5	310.3	293.3	302.9	313.1	314.3	337.0
" 27-28	385.4	381.2	362.0	356.8	363.8	363.3	342.8	339.8	357.5	348.2	348.8	342.9
" 31-32	375.3	387.2	387.9	381.4	319.4	333.5	322.4	340.9	372.4	356.4	378.8	362.2
Means	345.9	239.2	332.3	321.0	303.2	295.2	270.0	286.7	311.5	320.9	328.0	326.8
Feb'y 3-4	376.2	361.8	302.8	268.6	309.2	346.3	329.4	339.6	337.5	309.8	304.0	358.6
" 7-8	311.7	288.6	279.7	303.9	301.6	302.9	319.9	310.7	332.9	306.7	321.5	332.8
" 10-11	361.9	314.8	264.0	271.1	242.2	202.7	208.3	205.3	281.1	336.2	362.0	337.2
" 14-15	406.7	376.2	333.1	343.1	289.0	243.7	165.8	183.6	247.0	247.0	300.9	360.7
" 17-18	231.0	233.4	188.5	222.9	225.6	245.0	232.3	230.1	198.1	152.6	183.3	226.6
" 21-22	270.5	258.5	260.2	226.1	226.7	257.5	260.8	261.8	259.3	272.7	285.6	271.2
" 24-25	492.4	494.0	448.1	433.8	321.4	401.2	(389.9)	378.7	377.7	407.7	443.7	454.8
Means	350.1	332.5	296.6	295.6	273.7	285.6	272.3	272.8	290.5	290.4	314.4	334.6
March 0-1	319.1	315.8	310.7	301.4	285.3	280.6	333.9	306.8	261.1	272.7	308.4	311.3
" 3-4	226.2	151.4	197.0	178.8	182.4	154.3	154.7	176.2	172.3	194.5	213.7	242.0
" 7-8	290.4	261.8	269.4	273.2	285.9	273.6	380.7	248.4	252.4	273.9	(264.3)	274.5
" 22-23	255.0	286.0	(285.0)	(275.8)	254.7	287.0	290.1	287.0	247.3	244.8	290.5	266.6
Means	272.7	253.8	265.5	257.3	252.1	248.9	266.1	254.6	233.3	246.5	269.2	273.6
General means	330.4	316.3	302.0	295.5	279.0	280.3	270.0	273.5	284.4	290.8	308.6	317.3

The values in the above table do not refer exactly to the even hour but to 3^m later.
 Figures between brackets () are means derived from less than ten readings.
 * These four values were observed on the 4th at the hours indicated.

CHANGES OF THE MAGNETIC DECLINATION

MEAN MONTHLY CURVES OF THE DIURNAL CHANGES OF THE MAGNETIC DECLINATION AT VAN
 KENSSELAER HARBOR, 1854.
 AND SIMULTANEOUS MEAN DIURNAL VARIATION AT GREENWICH.



The irregularities in the daily curves compared on succeeding days are very considerable, as may be seen by glancing the eye over the last column of the preceding table, headed "daily means." No observations on account of disturbances have been excluded from the table, and the following mean diurnal inequality, therefore, contains their full effect. Comparing each hourly mean in the last horizontal line of the above table with the general mean, the following figures represent the resulting diurnal inequality of the declination during the first three months of the year 1854. For the sake of comparison the diurnal inequality observed at Greenwich during the same seventeen days has been made out and is given in the last column.

MEAN DIURNAL INEQUALITY OF DECLINATION DURING SEVENTEEN DAYS IN JANUARY, FEBRUARY, AND MARCH, 1854, AT VAN RENNELAER HARBOR, AND AT GREENWICH DURING THE SAME DAYS; EXPRESSED IN MINUTES OF ARC.

Local mean time.	Van Rensselaer.	Greenwich.	Local mean time.	Van Rensselaer.	Greenwich.	Local mean time.	Van Rensselaer.	Greenwich.	Local mean time.	Van Rensselaer.	Greenwich.
5 ^h	+24'.3	-0'.5	11 ^h	-21'.8	-4'.5	17 ^h	-23'.1	-0'.3	23 ^h	+29'.6	+3'.5
6	+11.8	-2.5	Midn.	-28.2	-4.1	18	-10.5	+0.6	Noon	+37.8	+5.8
7	-3.2	-1.6	13	-28.3	-3.1	19	+0.8	-0.4	1	+35.0	+5.8
8	-13.5	-3.9	14	-29.0	-0.8	20	+12.2	+0.5	2	+26.3	+5.0
9	-20.8	-4.5	15	-27.8	-0.3	21	+17.4	+1.0	3	+21.2	+3.9
10	-21.0	-5.1	16	-27.8	+0.5	22	+30.6	+2.3	4	+7.0	+2.6

A negative sign indicates a deflection to the east, a positive one a deflection to the west of the mean position.

The diurnal inequality at the two stations presents in general the same characteristic features, namely, the principal deflection to the west shortly after noon, and the opposite eastern position about midnight; in regard to the diurnal inequality, therefore, the motion of the magnet at Van Rensselaer Harbor follows in general the same law as recognized in lower geographical latitudes.

The extreme westerly position is attained at noon; after this hour the westerly declination diminishes gradually, with an exception of a period of opposite motion of very limited range between the hours of four and five. The easterly extreme is reached two hours after midnight. Whether the small irregularity just noticed, producing apparently a secondary minimum and maximum, is real or only caused by the accidental deviations of the few observations under discussion, it is not easy to decide with certainty. The motion from 14 hours to 24 hours is performed with great uniformity. Thus, while the diurnal motion agrees with that observed at Lake Athabasca, Fort Simpson, Sitka, Toronto, etc., it shows no trace of that marked deviation observed at Reikiavik, in Iceland, or at Fort Confidence. In 1824 (June), at the Whalefish islands the maximum westerly deviation happened about a quarter past one o'clock P. M.; the time of the maximum eastern deflection was not determined. At Port Bowen the maximum westerly variation appears to have occurred between the hours of 10 A. M. and 1 P. M., the mean result being 11^h 49^m; the greatest deflection of the north end of the needle to the eastward took place between 8 P. M. and 2 A. M., the mean hour being 10 P. M. These observations were made during January, February, March, and April, 1825.

The range of the mean diurnal inequality is 1° 06'.8, when it is at Greenwich during the same time 10'.9.

Analysis of Disturbances of the Declination.—The declination at the commencement and end of the observations appears to have remained nearly the same; the daily and monthly means indicate at first a gradual decrease of westerly declination, which motion, however, is speedily overcome in the month of March. No further attention need be paid to this circumstance in the following discussion of the disturbances, and of their effect upon the diurnal inequality.

The mean disturbance for each of the 24 hours has been obtained by comparing the monthly mean with each hourly reading; let Δ equal this difference, n the

number of hourly readings (equal to 17), and m the mean disturbance, then $m = \pm \sqrt{\frac{\sum \Delta^2}{n-1}}$. This quantity is analogous to the mean error of an observation. In the following comparisons we must always bear in mind that the observations for the present discussion are rather limited, and that the comparisons with results at Lake Athabasca and Fort Simpson are of a date nearly ten years earlier. This interval is perhaps favorable to the comparison.

At Van Rensselaer Harbor the mean disturbance force is greater than at either place just named, and pretty regular during two well-marked periods, as shown by the following table:—

TABLE OF THE MEAN DISTURBANCE OF THE DECLINATION AT VAN RENSSELAER HARBOR, TAKEN WITHOUT REGARD TO DIRECTION, FOR EACH OF THE OBSERVATION HOURS, AND EXPRESSED IN MINUTES OF ARC.

Local Mean Time.

5h.	6h.	7h.	8h.	9h.	10h.	11h.	Midn.	13h.	14h.	15h.	16h.
± 31'	41	37	47	49	50	46	52	51	47	50	± 53'
17h.	18h.	19h.	20h.	21h.	22h.	23h.	Noon.	1h.	2h.	3h.	4h.
± 49'	42	54	48	46	31	46	60'	46	39	45	± 41'

The disturbing force is least during the day (if such an expression is admissible in this case), from 10 A. M. to 7 P. M., and greater and equally regular during the hours of the night (?), from 8 P. M. to 8 or 9 A. M. At Lake Athabasca the hours of least disturbance are between 9 A. M. and 7 P. M., and at Fort Simpson from 10 A. M. to 7 P. M. Captain Lefroy, in his discussion of the disturbances of the declination remarks: "There are indications in each of the three curves (for Lake Athabasca, Toronto and Sitka) of a small increase in the mean disturbance about noon." At Van Rensselaer Harbor we find the maximum disturbance at this very hour preceded and followed by quite small values; this circumstance certainly deserves our particular attention. Further coincidences of the disturbing force can be noticed at 5 P. M., at which hour at Van Rensselaer, Lake Athabasca, and Sitka the minimum disturbance has been observed. At Fort Simpson, in April and May, 1844, the mean disturbance was but one-fourth of that observed in January, February and March at Van Rensselaer, and the ratio of the minimum to the maximum value was 5.6 and 2.0 at the two places respectively.

By adding the squares of the differences for each hour of the day and month, we find the mean monthly disturbance by the formula $\sqrt{\frac{[\sum \Delta^2]}{N-24}}$. The mean disturbance for each month is as follows:—

In January, 1854	. . . . .	± 30'
In February, "	. . . . .	± 65
In March, "	. . . . .	± 40

? Principally due to a very large disturbance.

The month of February was, therefore, that of the maximum amount of disturbance. At Lake Athabasca the greatest mean disturbance occurred in January (from observations between October and February inclusive). At Toronto,¹ on the contrary, the months of January and June are those of least disturbance. It is quite possible that at Van Rensselaer the above values are surpassed in other months of the year, yet relatively February contains the greatest mean disturbance during the period of observations.

Hitherto the recognition and separation of the disturbed observations have been effected by an arbitrary process of fixing upon a certain deviation from the mean as the greatest allowable departure, and regarding all observations beyond this limit as disturbances. In the present case, I have sought to introduce a more definite idea by the application of Pierce's criterion for the rejection of doubtful observations,² or what is equivalent—for the recognition of the disturbances—they following a different law from the general one. The average mean deviation of the readings composing an hourly mean I find = $+ 46'$, and for 17 values $a^2 = 4.55$; hence readings deviating from the mean more than $1^\circ 38'$ or 123d are to be recognized as disturbances.

The table of hourly readings contains 23 such values, or one disturbed observation for every 18 ordinary readings. In the five years of hourly observations ending June 30, 1848, at Toronto, the disturbances averaged one in 17 of the whole body. Excluding the above 23 values from the mean, the diurnal inequality freed of the disturbances undergoes no material change, as shown by the following table:—

5h.	6h.	7h.	8h.	9h.	10h.	11h.	Midn.	13h.	14h.	15h.	16h.
+237.7	+6.0	—3.8	—9.3	—16.4	—12.5	—22.5	—34.7	—27.3	—35.1	—34.1	—267.0
17h.	18h.	19h.	20h.	21h.	22h.	23h.	Noon.	1h.	2h.	3h.	4h.
—207.1	—8.0	+9.0	+19.0	+23.3	+30.0	+29.0	+29.2	+34.4	+25.7	+13.6	+67.9

The maximum west deflection is displaced from noon to one o'clock. The general mean changed from 317.3^d to 316.5^d , and the range of the mean inequality from $1^\circ 06'.8$ to $1^\circ 09'.5$. Eleven deflections were towards the east and twelve towards the west. The limited number of observations renders it necessary to conclude the foregoing examination of the disturbances.

Aurora Borealis.—In connection with the disturbances, a short notice of the auroral displays witnessed at the winter quarters will here find an appropriate place. In conformity with the supposed periodicity of this phenomenon, as recognized by Prof. Olmstead, no brilliant and complete auroras have been seen; with an exception of a very few, they may all be placed in his fourth class, to which the most simple forms of appearances have been referred. The aurora of October 24, 1854,

¹ See Vol. III. of the Magnetical and Meteorological Observations at Toronto, Canada. Discussion by Major-General E. Sabine. London, 1857.

² See Gould's *Astronomical Journal*, Nos. 45 and 83.

at 9 P. M. (see first volume of the Narrative), appears to have been one of the more conspicuous displays. A full record of the rest will be found in the 8th volume of the Smithsonian Contributions to Knowledge, in the collection made by Peter Force, Esq. There are 19 in number. The following statement is given in a foot-note: "The processes have no apparent connection with the magnetic dip, and in *no* case did the needle of our unifilar indicate disturbance."

Term-day Observations for Change of Magnetic Declination.—These observations were made at the following dates: January 18–19, February 24–25, March 22–23, April 19–20, May 26–27, and June 21–22, 1854. The readings are given in the following tables:—

TERM-DAY OBSERVATIONS FOR CHANGES OF MAGNETIC DECLINATION AT VAN RENSSELAER HARBOR, 1854.

Göttingen mean time.	0m.	06m.	12m.	18m.	24m.	30m.	36m.	42m.	48m.	54m.	Fern Rock mean time. (to 0m.)
Fern Rock Observatory, January 18 and 19, 1854.											
Readings taken 2 ^m 14 ^s earlier than indicated.											
10 ^h	305 ^d	305 ^d	305 ^d	307 ^d	308 ^d	312 ^d	311 ^d .8	306 ^d .5	309 ^d .5	312 ^d .5	4 ^h 37 ^m .5
11	311.2	313	314	315.8	318.5	317	317	319.7	320.5	322.5	5 "
12	320	314.8	315	315.7	317	320	321	320	316	314	6 "
13	311	307	309	311	313	315	317	318	317	315	7 "
14	320	322	319	316	320	320	322	318	320	322	8 "
15	321	323	323.3	322.3	320	319	320	320	325	325	9 "
16	329	329	330	330	327	336	350	366	367	369	10 "
17	362	354	353	347	347	346	346	341	337	334	11 "
18	330	332	335	338	338	340	342	343.5	342	344	12 "
19	344	346.5	345	344	344	345	346	346.5	347	345	13 "
20	346	345	345.5	345	348	347.5	349	351.5	351.5	349.5	14 "
21	349	354	359	363.5	359.5	351	350	351	350.8	351	15 "
22	356	358	359	361.5	361	355	352.3	357.8	358	360.5	16 "
23	360.5	358	355	351.5	350	349	346	340	332	335	17 "
0	336	333	330.5	326	320	320	323	226	328	337	18 "
1	343	352	350	346	340	348	353	357	349	343	19 "
2	337	332	328	324	322	336	340	343	346	345	20 "
3	342	339	329	320	313	300	292	284	277.5	268	21 "
4	251	244.5	240.5	250	261	254	243	230	235	155	22 "
5	115	90	89	96	88	85	105	129	145	155	23 "
6	163	180	193	220	254	290	291	307	298	270	0 "
7	268	254	240	266	289	297	320	318	320	321	1 "
8	336	336	336	331	337	337	337	330	327	324	2 "
9	314	326	332	338	323	318	316	316	316	314	3 "
10	312	310									4 "
The series commences with readings 304 ^d , 303 ^d , and 304 ^d , at 9 ^h 42 ^m , 48 ^m , and 54 ^m .											
Fern Rock Observatory, February 24 and 25, 1854.											
Readings taken 2 ^m 15 ^s earlier than indicated.											
10 ^h	312 ^d	322 ^d	329 ^d	338 ^d	341 ^d .5	319 ^d .5	342 ^d	359 ^d	377 ^d	407 ^d	4 ^h 37 ^m .5
11	408	411	405	418	437	445	445	447	441	439	5 "
12	438	438	440	432	460	482	477	471	480	494	6 "
13	490	493	506	520	516	509	519	531	530	527.5	7 "
14	541	558.5	532	527	518	511	521	532	538	535	8 "
15	532	529	527	528	530.5	542	526	521	516	513	9 "
16	510	508	506	504	493	483	446	470	503	495	10 "
17	490	493	496	498	500	502	500	500	501	503	11 "
18	503	502	502	502	503	500	494	490	492	494	12 "
19	496	495	495	492	488	499	506	498	492	501	13 "
20	514	509	502	506	509	501	491	490	492	498	14 "
21	504	509	517	516	514	512	511	512	512	517	15 "
22	521	529	535	536	529	508	510	516	514	510	16 "
23	511	507	490	491	489	489	488	488	486	485	17 "
0	502	499	496	489	496	500	499	500	484	475	18 "
1	456	448	440	435	442	447	451	457	456	449	19 "
2	445	440	425	412	427	438	449	445	440	417	20 "
3	370	312	284	289	268	298	326	332	360	375	21 "
4	330	400	415	408	405	404	392	396	401	401	22 "
5	404	408	390	375	370	372	—	393	403	402	23 "
6	402	407	390	374	370	358	355	370	381	380	0 "
7	376	377	379	380	382.5	365	370	373	380	395	1 "
8	381	385	372	386	398	406	435	437	438	439	2 "
9	438	438	437	442	446	444	455	448	446	443	3 "
10	450	469	482	497							4 "
The series commences with readings 290 ^d , 288 ^d , 282 ^d , at 9 ^h 42 ^m , 48 ^m , and 54 ^m .											
Value of a scale division 0'.80.											
Increase of scale readings denotes a movement of the north end of the magnet to the east.											

Göttingen mean time.	0m.	06m.	12m.	18m.	24m.	30m.	36m.	42m.	48m.	54m.	Fern Rock mean time. (to 0m.)
Fern Rock Observatory, March 22 and 23, 1854. Readings taken 1 ^m 34 ^s earlier than indicated.											
10 ^h	269 ^d	262 ^d	265 ^d	272 ^d	285 ^d	295 ^d	250 ^d	232 ^d	228 ^d	255 ^d	4 ^h 37 ^m .5
11	240	261	243	246	232	228	236	260	259	258	5 "
12	258	256	254	256	258	258	259	260	263	263	6 "
13	262	253	258	264	263	267	265	256	251	247	7 "
14	235	237	239	239	240	244	243	247	245	240	8 "
15	240	238	239	237	234	233	234	237	245	251	9 "
16	268	265	267	279	280	277	272	264	260	269	10 "
17	275	279	277	282	279	280	282	284	283	282	11 "
18	281	280	278	277	275	273	272	270	269	268	12 "
19	269	268	268	268	267	267	268	266.5	264	262	13 "
20	261	261	262	261	261	258	258	259	262	265	14 "
21	269	267	266	264	264.5	262	269	273	278	284	15 "
22	283	282	278.5	275	270.5	263	265	260	260	261	16 "
23	260	257	256	250	253	256	248	250	257	263	17 "
0	272	280	283	285	292	288	289	287	290	294	18 "
1	300	302	291	290	292	283	277	273	271	—	19 "
2	—	—	—	—	—	280	284	278	271	269	20 "
3	267	267	263	255	248	247	252	249	248	251	21 "
4	260	265	274	292	296	295	298	298	297	295	22 "
5	291	290	290	293	292	294.5	291	292	288	290	23 "
6	293	291	291	290	294	295	290	281	276	269	0 "
7	264	252	250	249	242	239	235	242	252	248.5	1 "
8	246	245	243	242	240	239	241	244	250	258	2 "
9	270	282	284	286.5	288	292	297	300	304	302	3 "
10	301	300	299	—	—	—	—	—	—	—	4 "
Fern Rock Observatory, April 19 and 20, 1854. Readings taken 2 ^m 14 ^s earlier than indicated.											
10 ^h	—	—	—	—	—	—	—	—	—	—	4 ^h 37 ^m .5
11	—	—	—	—	—	—	—	—	—	—	5 "
12	—	—	—	—	—	—	—	—	—	—	6 "
13	—	—	—	—	—	—	—	—	—	—	7 "
14	—	—	—	—	—	—	—	—	—	—	8 "
15	—	—	—	—	—	—	—	—	—	—	9 "
16	—	—	—	272 ^d	271 ^d	275 ^d	273 ^d	272 ^d .5	278 ^d	282 ^d	10 "
17	289 ^d	299 ^d	298 ^d	312	310	305	301	296	299	262	11 "
18	271	287	294	290	289	286	280	268	254	230	12 "
19	236	250	245	242	239	234	229	230	242	256	13 "
20	265	262	260	256	252	247	243	236	231	228	14 "
21	225	224	230	236	229	226	231	233	230	227	15 "
22	226	222	218	215	213	189	187	183	190	187	16 "
23	184	182	194	220	221	223	218	220	222	225	17 "
0	231	236	242	236	238	240	235	224	215	203	18 "
1	194	190	187	184	181	180	178	178	168	164	19 "
2	175	208	236	242	212	205	202	190	190	193	20 "
3	194	196	199	200	210	192	180	175	164	152	21 "
4	140	137	139	148	147	160	164	152	140	121	22 "
5	107	113	116	136	145	132	130	120	90	63	23 "
6	+62	+43	+30	+32	—	—	—	—	+4	+8	0 "
7	+30	+23	+16	+12	+16	+11	+5	—2	+25	+58	1 "
8	71	67	73	77	79	81	75	73	76	80	2 "
9	75	74	97	110	128	132	138	147	142	134	3 "
10	126	122	128	132	—	—	—	—	—	—	4 "
Value of a scale division 0'.80.											
Increase of scale readings denotes a movement of the north end of the magnet to the east.											

^d Watch stopped.

Gättingen mean time.	0m.	06m.	12m.	18m.	24m.	30m.	36m.	42m.	48m.	54m.	Fern Rock mean time. (to 0m.)
Fern Rock Observatory, May 26 and 27, 1854. Readings taken 1 ^m 34 ^s earlier than indicated.											
10 ^h	244 ^d	243 ^d	258 ^d	262 ^d	278 ^d	280 ^d	279 ^d	276 ^d	292 ^d	304 ^d	4 ^h 37 ^m .5
11	330	345	357	365	372	369	365	360	364	368	5 "
12	360	355	345	342	350	348	341	333	330	338	6 "
13	349	356	364	359	354	351	355	360	381	395	7 "
14	403	413	411	408	400	389	395	400	407	410	8 "
15	414	423	428	436	442	443	442	438	436	433	9 "
16	435	434	440	450	476	490	520	555	570	575	10 "
17	593	600	575	548	533	523	516	506	498	492	11 "
18	485	482	479	477	477	476	475	475	477	480	12 "
19	483	487	493	495	488	495	527	552	568	587	13 "
20	595	612	624	630	633	631	625	620	612	604	14 "
21	599	603	609	612	615	626	633	635	644	650	15 "
22	663	667	665	661	658	659	653	646	640	637	16 "
23	639	641	632	618	595	590	583	572	559	541	17 "
0	543	545	546	546	544	540	537	536	535	537	18 "
1	538	525	523	539	527	520	515	513	480	479	19 "
2	487	493	498	503	506	509	509	533	562	571	20 "
3	573	553	537	517	495	489	486	488	496	510	21 "
4	512	510	507	513	514	512	511	506	497	487	22 "
5	486	485	483	484	480	477	476	476	477	463	23 "
6	449	443	442	440	441	443	447	454	463	470	0 "
7	478	483	487	489	488	483	471	459	457	446	1 "
8	435	447	460	468	475	490	487	478	485	491	2 "
9	493	513	525	530	533	535	534	515	500	—	3 "
10	—	—	—	—	—	—	—	—	—	—	4 "

Observations commence at 9^h 24^m, scale readings 280^d, 271^d, 266^d, 235^d, 231^d, 240^d, corresponding to 9^h 24^m, 30^m, 36^m, 42^m, 48^m, and 54^m respectively.

Fern Rock Observatory, June 21 and 22, 1854. Readings taken 1 ^m 34 ^s earlier than indicated. (Magnet suspended, I. 7.) ¹											
10 ^h	—	—	—	—	—	—	—	—	—	295 ^d	4 ^h 37 ^m .5
11	297 ^d	299 ^d	300 ^d	302 ^d	305 ^d	309 ^d	312 ^d	313 ^d	313 ^d	314	5 "
12	315	315	314	314	313	312	310	316	325	333	6 "
13	337	340	344	347	351	352	350	350	351	352	7 "
14	348	346	343	337	333	334	338	348	350	355	8 "
15	354	355	358	364	366	374	374	374	373	367	9 "
16	366	367	366	370	373	377	377	377	378	383	10 "
17	384	385	379	379	379	381	383	384	383	384	11 "
18	387	384	385	382	384	386	386	382	385	387	12 "
19	384	382	383	385	387	386	387	390	392	396	13 "
20	400	402	400	396	394	394	388	376	384	394	14 "
21	390	383	382	381	379	370	364	368	372	370	15 "
22	367	363	358	355	357	361	367	369	367	364	16 "
23	364	363	361	355	350	350	352	355	359	362	17 "
0	363	363	370	369	367	368	370	363	355	351	18 "
1	348	343	337	335	333	329	330	331	331	328	19 "
2	322	318	320	322	325	327	328	328	326	324	20 "
3	322	318	319	322	323	323	322	324	326	331	21 "
4	326	315	334	330	326	326	319	318	318	318	22 "
5	312	316	318	317	323	321	317	310	312	308	23 "
6	306	320	316	316	318	323	304	303	312	290	0 "
7	291	287	286	286	291	283	275	281	283	288	1 "
8	289	290	292	289	291	293	297	298	302	304	2 "
9	304	309	313	312	308	303	295	290	282	273	3 "
10	264	257	245	283	232	230	234	239	242	228	4 "
11	212	207	—	—	—	—	—	—	—	—	5 "

Value of a division of the scale 0'.80.
Increase of scale readings denotes a movement of the north end of the magnet to the east.

¹ This magnet I. 7 was undoubtedly used on all previous occasions. Mark reads on circle 338° 22', circle reads 314° 12'.

The results of the preceding tables have been thrown into curves, to which the corresponding readings at Greenwich and Washington have been added.¹ These readings have all been referred to the same scale, and thus present at a glance the great difference in the magnitude of the diurnal motion as well as that of the disturbances. The Greenwich observations were taken by means of photography; the Washington corresponding observations were also obtained by means of Brooke's automatic photographic registration, and have as yet only been published in the 6th volume of the Astronomical Expedition to Chili, under the direction of Lieut. Gilliss, U. S. N.; Washington, D. C., 1856.

For the Greenwich curves the zero line corresponds to 22° west declination. A remarkable absence of disturbances of any magnitude as well as a small diurnal range of motion at the time of the vernal equinox, is shown by the March curves both for Van Rensselaer and Greenwich.

There appear to be some disturbances common to both places, and if these indications should not be accidental they are of an opposite character, that is, a magnetic east deflection is presenting itself as a magnetic west deflection at the other station, and *vice versa*. For this the reader may examine hours 17 and 5½ of the curve for January 18 and 19, hours from 6 to 8, April 20th, and one or two other less striking cases. The needle at Van Rensselaer Harbor actually points with its north end to the south of the astronomical west, and its meridional component of the direction is pointing in a southern or opposite direction to the same component at Greenwich or Washington.

Absolute Declination.—The magnetic declination at Van Rensselaer Harbor was determined on three occasions in the summer of 1854. Two different magnets were used,

Determination of June 9th. Magnet A 6S, mirror facing magnetic north.

Position.	Circle reads. Mark.	P. Circle reads. Magnetic meridian (south).	P. Circle reads. Mark.
I.	338° 06' 06'	I. 316° 01' 00	I. 338° 02' 01
II.	338 00 337 59	II. 315 57 56	II. 338 05 04
Means	338 02.8	315 58.5 at 6 ^h 35 ^m Green. t.	338 03.0

Mean reading on mark	338° 03'
Astronomical bearing (N.)	93 29 E.
Reading of meridian (N.)	244 31
Magnetic meridian (N.)	135 59
Declination	108° 35'
W. (of north) at 1 ^h 52 ^m P. M. local time.	

¹ See accompanying plates 1 and 2.

Determination of June 14. Magnet I. 10. Mirror facing magnetic north.

Mark.		Magnetic south meridian.		Mark.	
I.	338° 09'	I.	317° 10'	I.	338° 04'
	08		at 5 ^h 12 ^m Gr. t.		02
II.	338 05		09	II.	338 09
	04	II.	317 02		08
Means	338 06.5		01		338 05.8
			317 05.5		

Mean reading on mark	338° 06'
Astronomical bearing (N.)	93 29 E.
Reading of true meridian	244 37
Reading of magnetic meridian	137 05
Declination	107° 32'

W. at 0^h 29^m P. M. local time.

The magnet showed considerable agitation during the day.

Determination of June 26. Mirror facing magnetic north.

Magnetic south meridian.		Mark.		Magnetic south meridian.	
I.	315° 49'	I.	338° 24'	I.	315° 52'
	47		23		50
II.	316 18	II.	338 20	II.	315 40
	17		19		38
Means	316 02.7		338 21.5		315 45.0
at 1 ^h 3 ^m P. M. local time.				at 2 ^h 0 ^m P. M. local time	

Mark reads	338° 21'
Astronomical bearing (N.)	93 29 E.
N. meridian (true)	244 52
Magnetic meridian	135 53
Declination	108° 59'

W. at 1^h 31^m P. M.

Resulting mean declination (for June 16) 108° 22' W.; if we omit the 2d determination on account of disturbance, and apply a correction for diurnal change to the mean of the first and last determination, we find 108° 12' W.

SECTION II.

OBSERVATIONS OF THE MAGNETIC INCLINATION.

1853, 1854, AND 1855.

SECTION II.

MAGNETIC INCLINATION.

Instrument and Remarks.—The observations for dip were made by Mr. Sonntag by means of a Barrow dip circle received from Prof. Henry, of the Smithsonian Institution, through the courtesy of Col. Sabine. The inclinometer was supplied with Lloyd needles, for determining the total intensity, but unfortunately the complete record of these observations could not be recovered; the absence of the record for determining the constants necessary for their reduction being wanted, no use could be made of these observations, even for relative intensity at Saikatle and Marshall Bay, and the partial results given in Appendix XV., vol. II. of the Narrative, must, therefore, remain fruitless for the present. There is likewise a deficiency in the record of the dip observations at Van Rensselaer Harbor after February 23, 1854; the results, however, are all preserved in the Appendix just mentioned.

In regard to the index error of the dipping needles, we can only make an approximate comparison. The observations at New York, where the dip has been represented by the formula

$$I = 72^{\circ}.69 - 0.00491(t - 1845) + 0.00114(t - 1845)^2,$$

with a probable error of any single observation¹ of $\pm 3'.3$, would apparently produce a correction to needle 1 of $-9'$, and to needle 2 of $-14'$, the changes, however, from one station to another in the immediate vicinity of the city are much greater, and these quantities may, therefore, as well indicate local deviation as index error. The polarity of the needles has been reversed at each station, the effect of this operation upon the resulting dip is somewhat irregular, and will be found exhibited in tabular form.

¹ See Coast Survey Report of 1856, p. 240. The formula includes dip observations taken between December, 1822, and August, 1855 (exclusive of the observations of the present expedition).

MAGNETIC INCLINATION

STATION No. I. NEW YORK, AT MR. RUTHERFORD'S OBSERVATORY.

Latitude $40^{\circ} 43'.8$. Longitude $73^{\circ} 58'.9$ W. of G.

May 18, 1853. 4 ^h P. M. Needle No. 2. Poles direct. Magnetic meridian reads $248^{\circ} 10'$.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
$72^{\circ} 57'$ 72 56	$72^{\circ} 37'$ 72 35	$73^{\circ} 08'$ 73 05	$73^{\circ} 27'$ 73 24	$72^{\circ} 51'$ 72 54	$72^{\circ} 52'$ 72 54	$72^{\circ} 53'$ 72 56	$73^{\circ} 25'$ 73 29
72 56.5	72 36.0	73 06.5	73 25.5	72 52.5	72 53.0	72 54.5	73 27.0
72 46.2		73 16.0		72 52.7		73 10.7	
73 01.1				73 01.7			
73 01.4							
Needle No. 2. Poles reversed.							
CIRCLE WEST.				CIRCLE EAST.			
Face west.		Face east.		Face west.		Face east.	
$72^{\circ} 08'$ 72 10	$72^{\circ} 16'$ 72 18	$72^{\circ} 17'$ 72 30	$73^{\circ} 17'$ 73 30	$73^{\circ} 20'$ 73 19	$72^{\circ} 38'$ 72 36	$73^{\circ} 00'$ 73 00	$73^{\circ} 05'$ 73 06
72 09.0	72 17.0	72 23.5	73 23.5	73 19.5	72 37.0	73 00.0	73 05.5
72 13.0		72 53.5		72 58.2		73 02.8	
72 33.2				73 00.5			
72 46.8							
May 18, 1853. 22 ^h 30 ^m . Needle No. 2. Poles reversed. Magnetic meridian reads $248^{\circ} 10'$.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
$73^{\circ} 07'$ 73 03	$73^{\circ} 28'$ 73 26	$72^{\circ} 42'$ 72 40	$72^{\circ} 44'$ 72 47	$72^{\circ} 50'$ 72 54	$73^{\circ} 11'$ 73 13	$72^{\circ} 37'$ 72 40	$72^{\circ} 37'$ 72 34
73 05.0	73 27.0	72 41.0	72 45.5	72 52.0	73 12.0	72 33.5	72 35.5
73 16.0		72 43.2		73 02.0		72 37.0	
72 59.6				72 49.5			
72 54.6							
Needle No. 2. Poles direct.							
CIRCLE WEST.				CIRCLE EAST.			
Face west.		Face east.		Face west.		Face east.	
$72^{\circ} 52'$ 72 55	$72^{\circ} 51'$ 72 55	$72^{\circ} 49'$ 72 52	$72^{\circ} 54'$ 72 59	$73^{\circ} 37'$ 73 34	$73^{\circ} 51'$ 73 48	$72^{\circ} 58'$ 72 57	$73^{\circ} 20'$ 73 17
72 53.5	72 53.0	72 50.5	72 56.5	73 35.5	73 49.5	72 57.5	73 18.5
72 53.2		72 53.5		73 42.5		73 08.0	
72 53.4				73 25.2			
73 09.3							

May 20, 1853. 4 ^h . Needle No. 1. Poles direct.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
71° ^a 37'	72° ^b 00'	75° ^a 55'	76° ^b 22'	73° ^a 11'	73° ^b 02'	73° ^a 41'	74° ^b 04'
71 34	71 59	75 52	76 21	73 13	73 04	73 45	74 06
71 35.5	71 59.5	75 53.5	76 21.5	73 12.0	73 03.0	73 43.0	74 05.0
71 47.5		76 07.5		73 07.5		73 54.0	
73 57.5				73 30.7			
73 44.1							
Needle No. 1. Poles reversed.							
CIRCLE WEST.				CIRCLE EAST.			
Face west.		Face east.		Face west.		Face east.	
69° ^a 58'	70° ^b 10'	73° ^a 17'	72° ^b 52'	72° ^a 32'	73° ^b 08'	72° ^a 56'	73° ^b 09'
70 00	70 13	73 16	72 55	72 30	73 06	72 53	73 06
69 59.0	70 11.5	73 16.5	72 53.5	72 31.0	73 07.0	72 54.5	73 07.5
70 05.2		73 05.0		72 49.0		73 01.0	
71 35.1				72 55.0			
72 15.1							
May 20, 1853. Needle No. 1. Poles direct.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
71° ^a 48'	72° ^b 03'	74° ^a 18'	74° ^b 48'	72° ^a 38'	72° ^b 33'	74° ^a 26'	74° ^b 27'
71 45	72 01	74 17	74 45	72 40	72 35	74 29	74 31
71 46.5	72 02.0	74 17.5	74 46.5	72 39.0	72 34.0	74 27.5	74 29.0
71 54.2		74 32.0		72 36.5		74 28.2	
73 13.1				73 32.3			
73 22.7							
Needle No. 1. Poles reversed.							
CIRCLE EAST.				CIRCLE WEST.			
Face west.		Face east.		Face west.		Face east.	
72° ^a 47'	73° ^b 21'	73° ^a 13'	73° ^b 32'	69° ^a 55'	69° ^b 48'	72° ^a 24'	72° ^b 27'
72 45	73 19	73 11	73 30	69 59	69 51	72 28	72 29
72 46.0	73 20.0	73 12.0	73 31.0	69 57.0	69 49.5	72 26.0	72 28.0
73 03.0		73 21.5		69 53.2		72 27.0	
73 12.2				71 10.1			
72 11.2							

MAGNETIC INCLINATION

STATION No. II. FISKERNAES, FLAGSTAFF NEAR THE GOVERNOR'S HOUSE.
Latitude $63^{\circ} 05'.3$. Longitude $50^{\circ} 34'.4$. W. of G.

June 29, 1853. Needle No. 2. Poles reversed. Meridian reads $106^{\circ} 01'$.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
$80^{\circ} 07'$ 80 11	$80^{\circ} 05'$ 80 07	$82^{\circ} 08'$ 82 08	$81^{\circ} 59'$ 81 58	$80^{\circ} 28'$ 80 25	$80^{\circ} 36'$ 80 34	$80^{\circ} 30'$ 80 28	$80^{\circ} 50'$ 80 49
80 09.0	80 06.0	82 08.0	81 58.5	80 26.5	80 35.0	80 29.0	80 49.5
80 07.5		82 03.3		80 30.7		80 39.2	
81 05.4				80 34.9			
80 50.2							
Needle No. 2. Poles direct.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
$80^{\circ} 47'$ 80 46	$80^{\circ} 38'$ 80 41	$80^{\circ} 28'$ 80 28	$80^{\circ} 29'$ 80 29	$80^{\circ} 13'$ 80 10	$80^{\circ} 24'$ 80 22	$80^{\circ} 42'$ 80 40	$80^{\circ} 41'$ 80 39
80 46.5	80 39.5	80 28.0	80 29.0	80 11.5	80 23.0	80 41.0	80 40.0
80 43.0		80 28.5		80 17.2		80 40.5	
80 35.7				80 28.9			
80 32.3							

STATION No. III. FISKERNAES HARBOR, ON A SMALL ISLAND ON THE NORTH SIDE OF HARBOR.

July 1, 1853. Needle No. 2. Poles direct. Meridian reads $150^{\circ} 29'$.							
CIRCLE WEST.				CIRCLE EAST.			
Face west.		Face east.		Face west.		Face east.	
$82^{\circ} 24'$ 82 27	$83^{\circ} 01'$ 83 04	$79^{\circ} 54'$ 79 57	$80^{\circ} 03'$ 80 06	$81^{\circ} 59'$ 81 59	$82^{\circ} 05'$ 82 03	$80^{\circ} 53'$ 80 50	$79^{\circ} 49'$ 79 51
82 25.5	83 02.5	79 55.5	80 04.5	81 59.0	82 04.0	80 51.5	79 50.0
82 44.0		80 00.0		82 01.5		80 20.7	
81 22.0				81 11.1			
81 16.6							
Needle No. 2. Poles reversed.							
CIRCLE WEST.				CIRCLE EAST.			
Face east.		Face west.		Face east.		Face west.	
$81^{\circ} 07'$ 81 11	$81^{\circ} 23'$ 81 23	$79^{\circ} 52'$ 79 55	$80^{\circ} 00'$ 80 02	$80^{\circ} 49'$ 80 46	$80^{\circ} 52'$ 80 58	$79^{\circ} 54'$ 79 53	$79^{\circ} 54'$ 79 53
81 09.0	81 23.0	79 53.5	80 01.0	80 47.5	80 55.0	79 53.5	79 53.5
81 16.0		79 57.2		80 51.2		79 53.5	
80 36.6				80 22.3			
80 29.4							

STATION No. IV. SAIKATLE, ISLAND SOUTH FROM SUKKERTOPPEN.

(Latitude and longitude not determined.)

The magnetic station was on a small bay on the southeast side of the island, and is covered with water at high tide. The Lloyd needles only were used.

STATION No. V. SUKKERTOPPEN, IN THE GARDEN NEAR THE GOVERNOR'S HOUSE.

(Latitude and longitude not determined.)

July 9, 1853. 15 ^b . Needle No. 2. Poles reversed. Meridian reads 75° 20'.							
CIRCLE WEST.				CIRCLE EAST.			
Face east.		Face west.		Face east.		Face west.	
80° ^a 30'	80° ^b 43'	81° ^a 15'	81° ^b 48'	80° ^a 46'	80° ^b 30'	81° ^a 20'	81° ^b 20'
80 28	80 46	81 15	81 45	80 46	80 33	81 20	81 21
80 29.0	80 44.5	81 15.0	81 46.5	80 46.0	80 31.5	81 20.0	81 20.5
80 36.7		81 30.7		80 38.8		81 20.2	
81 03.7				80 59.5			
81 01.6							
Needle No. 2. Poles direct.							
CIRCLE WEST.				CIRCLE EAST.			
Face east.		Face west.		Face east.		Face west.	
81° ^a 30'	82° ^b 25'	80° ^a 17'	80° ^b 40'	80° ^a 53'	80° ^b 42'	79° ^a 31'	79° ^b 04'
81 28	82 24	80 14	80 37	80 57	80 45	79 34	79 05
81 29.0	82 24.5	80 15.5	80 38.5	80 55.0	80 43.5	79 32.5	79 04.5
81 56.7		80 27.0		80 49.2		79 18.5	
81 11.8				80 03.8			
80 37.8							

MAGNETIC INCLINATION

STATION No. VI. PROVEN, GROUND NEAR THE GOVERNOR'S HOUSE.
Latitude $72^{\circ} 25'.9$. Longitude $55^{\circ} 25'$ (both approximate).

July 19, 1853. Needle No. 2. Poles direct. Magnetic meridian $0^{\circ} 33'$.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
$82^{\circ} 35'$ 82 34	$82^{\circ} 45'$ 82 44	$83^{\circ} 16'$ 83 14	$83^{\circ} 19'$ 83 17	$82^{\circ} 38'$ 82 40	$82^{\circ} 41'$ 82 43	$83^{\circ} 44'$ 83 47	$83^{\circ} 44'$ 83 47
82 34.5	82 44.5	83 15.0	83 18.0	82 39.0	82 42.0	83 45.5	83 45.5
82 39.5		83 16.5		82 40.5		83 45.5	
82 58.0				83 13.0			
83 05.5							
Needle No. 2. Poles reversed.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
$83^{\circ} 15'$ 83 14	$83^{\circ} 14'$ 83 12	$83^{\circ} 11'$ 83 10	$83^{\circ} 30'$ 83 28	$83^{\circ} 30'$ 83 30	$83^{\circ} 19'$ 83 21	$82^{\circ} 14'$ 82 17	$82^{\circ} 23'$ 82 25
83 14.5	83 13.0	83 10.5	83 29.0	83 30.0	83 20.0	82 15.5	82 24.0
83 13.7		83 19.7		83 25.0		82 19.8	
83 16.7				82 52.4			
83 04.5							
Needle No. 2. Poles direct. Meridian reads $0^{\circ} 33'$.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
$83^{\circ} 10'$ 83 08	$83^{\circ} 20'$ 83 01	$81^{\circ} 30'$ 81 30	$81^{\circ} 35'$ 81 34	$82^{\circ} 22'$ 82 23	$82^{\circ} 27'$ 82 29	$83^{\circ} 28'$ 83 29	$83^{\circ} 41'$ 83 44
83 09.0	83 01.5	81 30.0	81 34.5	82 22.5	82 28.0	83 28.5	83 42.5
83 05.2		81 32.2		82 25.2		83 35.5	
82 18.7				83 00.3			
82 39.5							
Needle No. 2. Poles reversed.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
$83^{\circ} 13'$ 83 15	$83^{\circ} 20'$ 83 19	$82^{\circ} 57'$ 82 55	$82^{\circ} 52'$ 82 49	$83^{\circ} 03'$ 83 05	$83^{\circ} 19'$ 83 20	$82^{\circ} 30'$ 82 32	$82^{\circ} 32'$ 82 34
83 14.0	83 19.5	82 56.0	82 50.5	83 04.0	83 19.5	82 31.0	82 33.0
83 16.7		82 53.3		83 11.7		82 32.0	
83 05.0				82 51.8			
82 58.4							

STATION No. VII. UPERNAVIK, STATION IN GARDEN NEAR THE GOVERNOR'S HOUSE.
(Latitude and longitude not determined.)

July 22, 1853. Needle No. 2. Poles direct. Magnetic meridian reads 239° 18'.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
82° 42' 82 39	82° 43' 82 40	84° 22' 84 21	84° 21' 84 18	83° 13' 83 16	83° 33' 83 36	83° 59' 84 01	84° 12' 84 14
82 40.5	82 41.5	84 21.5	84 19.5	83 14.5	83 34.5	84 00.0	84 13.0
82 41.0		84 20.5		83 24.5		84 06.5	
83 30.7				83 45.5			
83 38.1							
Needle No. 2. Poles reversed.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
84° 15' 84 13	84° 40' 84 37	83° 22' 83 20	83° 20' 83 18	83° 33' 83 34	83° 44' 83 45	83° 40' 83 42	83° 28' 83 30
84 14.0	84 38.5	83 21.0	83 19.0	83 33.5	83 44.5	83 41.0	83 29.0
84 26.2		83 20.0		83 39.0		83 35.0	
83 53.1				83 37.0			
83 45.0							

STATION No. VIII. BEDEVILLED REACH, FORCE BAY. STATION HALF A MILE EAST OF ANCHORAGE(?).
Latitude 78° 34'.5. Longitude 71° 33'.6.

August 12, 1853. Needle No. 2. Poles direct. Meridian reads 248° 30'.							
CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
84° 54' 84 48	85° 03' 84 59	86° 12' 86 17	86° 35' 86 30	84° 16' 84 14	84° 17' 84 14	86° 18' 86 19	86° 02' 86 04
84 51.0	85 01.0	86 14.5	86 32.5	84 15.0	84 15.5	86 18.5	86 03.0
84 56.0		86 23.5		84 15.2		86 10.7	
85 39.7				85 12.9			
85 26.3							
Needle No. 2. Poles reversed.							
CIRCLE WEST.				CIRCLE EAST.			
Face west.		Face east.		Face west.		Face east.	
84° 15' 84 20	84° 04' 84 10	84° 55' 84 55	85° 04' 85 03	84° 13' 84 09	84° 43' 84 38	85° 44' 85 40	85° 43' 85 39
84 17.5	84 07.0	84 55.0	85 03.5	84 11.0	84 40.5	85 42.0	85 41.0
84 12.2		84 59.3		84 25.8		85 41.5	
84 35.8				85 03.6			
84 49.7							

MAGNETIC INCLINATION

STATION No. IX. NEAR MARSHALL BAY.

Latitude $78^{\circ} 52'$. Longitude $69^{\circ} 01'$.¹

The observations on September 3d, 1853, were made with the Lloyd needle, No. 1, Box B. The dip by the statical needle is $85^{\circ} 26'$, and the resulting corrected dip $84^{\circ} 49'$. See Narrative, vol. I. p. 99.

STATION No. X. VAN RENSSELAER HARBOR, WINTER QUARTERS. MAGNETIC OBSERVATORY ON FERN ROCK.

Latitude $78^{\circ} 37'$. Longitude $70^{\circ} 40'$. W. of G.

January 26, 1854. Needle No. 2. Poles direct. Magnetic meridian reads on circle $9^{\circ} 02'$.							
CIRCLE WEST.				CIRCLE EAST.			
Face east.		Face west.		Face east.		Face west.	
$83^{\circ} 05'$ 83 05	$83^{\circ} 02'$ 83 03	$83^{\circ} 48'$ 83 47	$85^{\circ} 06'$ 85 05	$82^{\circ} 53'$ 82 47	$82^{\circ} 30'$ 82 26	$85^{\circ} 16'$ 85 10	$85^{\circ} 22'$ 85 17
83 05.0	83 02.5	83 47.5	85 05.5	82 50.0	82 28.0	85 13.0	85 19.5
83 03.7		84 26.5		82 39.0		85 16.2	
83 45.1				83 51.6			
83 51.3							
Needle No. 2. Poles reversed.							
CIRCLE WEST.				CIRCLE EAST.			
Face east.		Face west.		Face east.		Face west.	
$84^{\circ} 48'$ 84 48	$85^{\circ} 22'$ 85 23	$84^{\circ} 09'$ 84 15	$84^{\circ} 40'$ 84 39	$86^{\circ} 20'$ 86 15	$86^{\circ} 05'$ 86 00	$84^{\circ} 27'$ 84 21	$85^{\circ} 20'$ 85 16
84 48.0	85 22.5	84 12.0	84 39.5	86 17.5	86 02.5	84 24.0	85 18.0
85 05.2		84 25.8		86 10.0		84 51.0	
84 45.5				85 30.5			
85 08.0							

¹ Erroneously given $67^{\circ} 01'$ in the Narrative, vol. II. p. 431; the date should also be changed as given above.

February 16, 1854. Needle No. 2. Poles direct. Meridian reads 69° 30'.

CIRCLE WEST.				CIRCLE EAST.			
Face west.		Face east.		Face west.		Face east.	
$85^{\circ} 38'$ 85 38	$86^{\circ} 02'$ 86 02	$84^{\circ} 41'$ 84 41	$84^{\circ} 30'$ 84 28	$85^{\circ} 24'$ 85 23	$85^{\circ} 38'$ 85 39	$83^{\circ} 51'$ 83 56	$83^{\circ} 44'$ 83 44
85 38.0	86 02.0	84 41.0	84 29.0	85 23.5	85 38.5	83 53.5	83 44.0
85 50.0		84 35.0		85 31.0		83 48.7	
85 12.5				84 39.9			
84 56.2							

Needle No. 2. Poles reversed.

CIRCLE WEST.				CIRCLE EAST.			
Face west.		Face east.		Face west.		Face east.	
$84^{\circ} 28'$ 84 30	$84^{\circ} 25'$ 84 23	$84^{\circ} 53'$ 84 52	$84^{\circ} 49'$ 84 49	$84^{\circ} 35'$ 84 36	$84^{\circ} 33'$ 84 33	$85^{\circ} 11'$ 85 13	$85^{\circ} 38'$ 85 38
84 29.0	84 24.0	84 52.5	84 49.0	84 35.5	84 33.0	85 12.0	85 38.0
84 26.5		84 50.7		84 34.2		85 25.0	
84 38.6				84 59.6			
84 49.1							

February 23, 1854. Needle No. 2. Poles reversed. Magnetic meridian 67° 35'.

CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
$85^{\circ} 30'$ 85 26	$85^{\circ} 35'$ 85 30	$85^{\circ} 11'$ 85 06	$85^{\circ} 14'$ 85 10	$85^{\circ} 06'$ 85 08	$85^{\circ} 04'$ 85 07	$84^{\circ} 26'$ 84 27	$84^{\circ} 12'$ 84 14
85 28.0	85 32.5	85 08.5	85 12.0	85 07.0	85 05.5	84 26.5	84 13.0
85 30.2		85 10.2		85 06.2		84 19.8	
85 20.2				84 43.0			
85 01.6							

Needle No. 2. Poles direct.

CIRCLE EAST.				CIRCLE WEST.			
Face east.		Face west.		Face east.		Face west.	
$84^{\circ} 27'$ 84 24	$84^{\circ} 08'$ 84 04	$85^{\circ} 01'$ 84 57	$85^{\circ} 21'$ 85 18	$84^{\circ} 28'$ 84 29	$84^{\circ} 12'$ 84 14	$85^{\circ} 06'$ 85 07	$85^{\circ} 13'$ 85 15
84 25.5	84 06.0	84 59.0	85 19.5	84 28.5	84 13.0	85 06.5	85 14.0
84 15.7		85 09.3		84 20.7		85 10.2	
84 42.5				84 45.4			
84 44.0							

RECAPITULATION OF RESULTS.

RECAPITULATION OF RESULTS FOR MAGNETIC INCLINATION.

No. of station.	Locality.	Date.	No. of needle.	DIP.		Difference for change of polarity.	Mean and resulting dip.
				Pole direct.	Pole reversed.		
I.	New York city	May 18, 1853	2	73° 01'.4	72° 46'.8	+14'.6	72° 55'.6
"	" "	" "	2	73 09.3	72 54.6	+14.7	
"	" "	May 20, "	1	73 44.1	72 15.1	+89.0	
"	" "	" "	1	73 22.7	72 11.2	+71.5	
II.	Fiskernaes	June 29, "	2	80 32.3	80 50.2	-17.9	80 41.3
III.	Fiskernaes Harbor	July 1, "	2	81 16.6	80 29.4	+47.2	80 53.0
IV.	Saikatle	July 9, "	Ll.	(Approximate.)		—	80 56.0
V.	Sukkertoppen	July 9, "	2	80 37.8	81 01.6	-23.8	80 49.7
VI.	Proven	July 19, "	2	83 05.5	83 04.5	+ 1.0	83 05.0
"	"	" "	2	82 39.5	82 58.4	-18.9	82 49.0
VII.	Upernavik	July 22, "	2	83 38.1	83 45.0	- 6.9	83 41.5
VIII.	Bedevilled Reach	Aug. 12, "	2	85 26.3	84 49.7	+36.6	85 08.0
IX.	Marshall Bay	Sept. 3, "	Ll.	(Approximate.)		—	84 49.0
X.	Fern Rock Observatory, Van Rensselaer Harbor	Jan. 26, 1854	2	83 51.3	85 08.0	-76.7	84 45.8
"	" "	Feb. 16, "	2	84 56.2	84 49.1	+ 7.1	
"	" "	Feb. 23, "	2	84 44.0	85 01.6	-17.6	
"	" "	March 2, "	2	—	—	—	
"	" "	June 10, "	2	—	—	—	
"	" "	" "	2	—	—	—	
"	" "	April 24, 1855	2	(12 sets.)	—	—	
"	" "	May 20, "	2	—	—	—	

The resulting dip at Van Rensselaer Harbor may be taken as corresponding in time to June, 1854.

SECTION III.

OBSERVATIONS OF MAGNETIC INTENSITY.

1854 AND 1855.

SECTION III.

OBSERVATIONS AND DISCUSSION OF THE MAGNETIC INTENSITY.

THE instrument used (a unifilar magnetometer) has already been described. For the determination of the intensity, the long magnet A. 67 has exclusively been used for oscillations and deflections. The effect of the torsion in the suspension was found so small that it was neglected. The vibrations have been observed in sets of two, one containing the readings of the chronometer when the magnet was moving in the direction of the scale readings, and the other when the magnet was moving in the opposite direction.¹ A mean time pocket chronometer was generally used for noting the time, and its rate was too small to affect sensibly the duration of a single vibration. In the deflections, the magnets were always kept at right angles to one another; the distance of the middle of the deflecting magnet, A. 67, from the suspended magnet, is given by a scale divided into feet and decimals of a foot.² The observations were made by Mr. A. Sonntag. At Van Rensselaer Harbor the observations extend over the time from January, 1854, to May, 1855. Two other stations were occupied, one in June, 1855, at Hakluyt Island, the other in July, on the coast between Parker Snow Point and Cape York, at the return of the party.

The necessary constants have been determined at Washington, D. C.

Magnet A. 67 is nearly three inches in length, the two other magnets, I. 7 and I. 10, are somewhat shorter.

¹ The vibrations given in the Narrative, vol. II., Appendix, No. XV., pp. 431—434, are, therefore, double vibrations, and should have been noted as such.

² By some inadvertence, Appendix No. XV. of vol. II. of the Narrative contains the distances expressed in inches; it should have been given in feet and decimals, thus, 13 inches should be 1.3 feet, and 9 inches should read 0.9 feet.

January 17, 1854. Fern Rock Observatory, Van Rensselaer Harbor.				
A. 67 suspended. Experiments of vibrations. (From right to left.)				
No.	Time by pocket chronometer.	No.	Time by pocket chronometer.	Time of 45 double vibrations.
1	5 ^h 58 ^m 37 ^s .3	46	6 ^h 10 ^m 10 ^s .8	11 ^m 33 ^s .5
2	52.9	47	26.3	33.4
3	59 08.0	48	41.4	33.4
4	23.8	49	57.0	33.2
5	38.7	50	11 12.7	34.0
6	54.5	51	28.0	33.5
7	6 00 09.9	52	43.3	33.4
8	25.9	53	58.4	32.5
9	40.2	54	12 14.0	33.8
10	55.8	55	29.6	33.8
				Mean 11 ^m 33 ^s .45
Arc at beginning 4° 40'. Temp. 50°. Time of 2 vibrations				
" end 1 28 15°.410.				
The vibrations from left to right could not be observed.				
January 18, 1854. Fern Rock Observatory.				
Experiments of vibrations. (From right to left.)				
No.	Time by pocket chronometer.	No.	Time by pocket chronometer.	Time of 50 double vibrations.
1	5 ^h 30 ^m 43 ^s .0	51	5 ^h 43 ^m 37 ^s .5	12 ^m 54.5
2	58.8	52	53.8	55.0
3	31 14.0	53	44 08.8	54.8
4	29.3	54	23.9	54.6
5	44.4	55	39.8	55.4
6	32 00.0	56	54.0	54.0
7	15.3	57	45 10.8	55.5
8	31.5	58	25.8	54.3
9	46.5	59	41.8	55.3
10	33 02.0	60	57.0	55.0
11	18.1	61	46 12.5	54.5
				12 54.81
Arc at beginning 4° 40'. Temp. 68. Time of 2 vibrations				
" end 1 12 15°.496.				
January 18, 1854. Fern Rock Observatory.				
Experiments of vibrations. (From left to right.)				
No.	Time by pocket chronometer.	No.	Time by pocket chronometer.	Time of 50 double vibrations.
1	5 ^h 30 ^m 50 ^s .8	51	5 ^h 43 ^m 46 ^s .7	12 ^m 55 ^s .9
2	31 06.7	52	44 02.0	55.3
3	22.0	53	18.4	56.4
4	36.9	54	32.7	55.8
5	52.9	55	49.0	56.1
6	32 08.0	56	45 04.8	56.8
7	23.8	57	20.0	56.2
8	39.2	58	35.3	56.1
9	54.8	59	51.0	56.2
10	33 10.3	60	46 07.0	56.7
11	26.0	61	22.2	56.2
				12 56.15
Arcs and temp. as before. Time of 2 vibrations 15°.523.				
(Dr. Hayes assisted in these observations.)				

February 21, 1854.

Fern Rock Observatory.

Experiments of vibrations. (From right to left.)

No.	Time by pocket chronometer.	No.	Time by pocket chronometer.	Time of 50 double vibrations.
1	4 ^h 59 ^m 26 ^s .0	51	5 ^h 12 ^m 23 ^s .5	12 ^m 57.5
2	41.8	52	39.4	57.6
3	56.4	53	55.0	58.6
4	5 00 12.6	54	13 10.2	57.6
5	28.2	55	26.2	58.0
6	43.5	56	41.5	58.0
7	58.9	57	57.3	58.4
8	01 14.6	58	14 12.8	58.2
9	30 2	59	28.3	58.1
10	45.6	60	43.5	57.9
11	02 01.3	61	59.2	57.9
				12 57.98

Arc at beginning 5° 52'.
 " end 2 24

Temp. 79°.

Time of 2 vibrations
 15^s.560.

Experiments of vibrations. (From left to right.)

No.	Time by pocket chronometer.	No.	Time by pocket chronometer.	Time of 50 double vibrations.
1	4 ^h 59 ^m 33 ^s .5	51	5 ^h 12 ^m 31 ^s .8	12 ^m 58 ^s .3
2	48.3	52	47.1	58.8
3	5 00 04.8	53	13 02.8	58.0
4	20.4	54	18.4	58.0
5	35.7	55	34.0	58.3
6	51.2	56	49.5	58.3
7	01 06.9	57	14 05.2	58.3
8	22.5	58	20.8	58.3
9	38.0	59	36.2	58.2
10	53.5	60	51.7	58.2
11	02 09.5	61	15 07.4	57.9
				12 58.24

Ares and temp. as before.

Time of 2 vibrations 15^s.565.

February 21, 1854.

Fern Rock Observatory.

Experiments of vibrations. (From right to left.)

No.	Time by pocket chronometer.	No.	Time by pocket chronometer.	Time of 50 double vibrations.
1	6 ^h 20 ^m 47 ^s .5	51	6 ^h 33 ^m 42 ^s .6	12 ^m 55.1
2	21 03.0	52	58.0	55.0
3	19.0	53	34 14.0	55.0
4	34.3	54	29.6	55.3
5	49.5	55	45.0	55.5
6	22 05.5	56	35 00.3	54.8
7	20.9	57	16.8	55.9
8	36.3	58	32.0	55.7
9	51.5	59	47.0	55.5
10	23 07.0	60	36 03.7 ¹	56.7
				12 55.45

Arc at beginning 5° 20'.
 " end 1 36

Temp. 55°.

Time of 2 vibrations
 15^s.509.

¹ Corrected by 10^s.

February 21, 1854. **Fern Rock Observatory.**
Experiments of vibrations. (From left to right.)

No.	Time by pocket chronometer.	No.	Time by pocket chronometer.	Time of 50 double vibrations.
1	6 ^h 20 ^m 55 ^s .2	51	6 ^h 33 ^m 51 ^s .0	12 ^m 55.8
2	21 11.0	52	34 06.5	55.5
3	27.0	53	22.6	55.6
4	42.0	54	37.5	55.5
5	57.5	55	53.4	55.9
6	22 13.3	56	35 08.6	55.3
7	29.0	57	25.0	56.0
8	43.8	58	39.6	55.8
9	59.2	59	55.5	56.3
10	23 15.3	60	36 12.0	56.7
				12 55.84
Arcs and time as before.			Time of 2 vibrations 15 ^s .517.	

RECAPITULATION OF RESULTS.

January 17, 1854.	Time of 2 vibrations 15 ^s .410	Temp. 50°
" 18, "	" " 15.496}	" 68 }
" 18, "	" " 15.523}	" 68 }
February 21, "	" " 15.560}	" 79 }
" 21, "	" " 15.565}	" 79 }
" 21, "	" " 15.509}	" 55 }
" 21, "	" " 15.517}	" 55 }
Combination by two means		15.499
Time of one vibration		63.0
		7.749

January 31, 1854. Experiments of deflections. Distance 1.3 feet. Deflecting magnet A 67.

Magnet.	North pole.	Circle reads.	Mean.	Diff. or 2 n.	Temp.
E.	W.	318° 40'	40'.5	30° 43'.5	68°
"	E.	287 57			73
		57	57.0		
W.	E.	288 47	47.0	30 50.0	75
"	W.	319 37	37.0		72.5
				Means 30 46.7	72.1

February 13, 1854. Experiments of deflections. Distance 0.975 feet.

Magnet.	North pole.	Circle reads.	Mean.	2 n.	Temp.
E.	E.	162° 07'	06'.5	78° 56'.5	50°
"	W.	83 06			61
		10	10.0		
W.	W.	86 24	24.0	78 23.0	65
"	E.	164 47	47.0		66
				Means 78 40.0	60.5

February 27, 1854.		Experiments of deflections.		Distance 1.3 feet.	
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
E.	E.	140° 54'.5	54'.5	30° 56'.0	58°
"	W.	109 58	58.5		58
W.	W.	110 31	31.5	30 43.5	58
"	E.	141 15	15.0		56
				30 49.7	57.5

June 7, 1854. Experiments of vibrations. (Left to right.)

No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 45 double vibrations.
1	3 ^h 04 ^m 34 ^s .2	46	3 ^h 16 ^m 02 ^s .5	11 ^m 28 ^s .3
2	49.4	47	17.8	28.4
3	05 05.0	48	33.0	28.0
4	20.3	49	48.3	28.0
5	35.8	50	17 03.6	27.8
6	51.1	51	19.0	27.9
7	06 06.3	52	34.2	27.9
8	21.8	53	49.4	27.6
9	36.9	54	18 04.8	27.9
10	52.1	55	20.0	27.9
				11 27.97

Arc at beginning 6° 8'. Temp. +33°. Time of 2 vibrations 15^s.288.
 " end 2 48

Rate of mean time chronometer 2721 (showing nearly Greenwich time), about 2^s.0 losing.

June 7, 1854. Experiments of vibrations. (Right to left.)

No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 45 double vibrations.
1	3 ^h 04 ^m 42 ^s .3	46	3 ^h 16 ^m 10 ^s .2	11 ^m 27 ^s .9
2	57.6'	47	25.5	27.9
3	05 12.7	48	40.8	28.1
4	28.1	49	56.0	27.9
5	43.3	50	17 11.2	27.9
6	58.8	51	26.5	27.7
7	06 13.8	52	41.9	28.1
8	29.2	53	57.4	28.2
9	44.4	54	18 12.5	28.1
10	07 00.0	55	27.8	27.8
				11 27.96

Arcs and temp. as before. Time of 2 vibrations 15^s.288.

June 7, 1854. Experiments of vibrations. (Left to right.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 45 double vibrations.
1	3 ^h 22 ^m 08 ^s .0	46	3 ^h 33 ^m 37 ^s .0	11 ^m 29 ^s .0
2	23.3	47	52.3	29.0
3	38.5	48	34 07.6	29.1
4	53.8	49	23.0	29.2
5	23 09.2	50	38.2	29.0
6	24.5	51	53.7	29.2
7	39.7	52	35 09.0	29.3
8	55.0	53	24.5	29.5
9	24 10.3	54	39.6	29.3
10	25.7	55	54.9	29.2
				11 29.18
Arcs at beginning 6° 8'.		Temp. 33°.		Time of 2 vibrations 15 ^s .315.
" end 2 48				
June 7, 1854. Experiments of vibrations. (Right to left.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 45 double vibrations.
1	3 ^h 22 ^m 16 ^s .0	46	3 ^h 33 ^m 45 ^s .0	11 ^m 29 ^s .0
2	31.2	47	34 00.2	29.0
3	46.3	48	15.5	29.2
4	23 01.8	49	30.9	29.1
5	17.0	50	46.3	29.3
6	32.3	51	35 01.5	29.2
7	47.8	52	16.8	29.0
8	24 03.1	53	32.2	29.1
9	18.3	54	47.3	29.0
10	33.3	55	36 02.5	29.2
				11 29.11
Arcs and temp. as before.		Time of 2 vibrations 15 ^s .313.		
June 7, 1854. Experiments of vibrations. (Left to right.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 54 double vibrations.
1	8 ^h 12 ^m 39 ^s .1	55	8 ^h 26 ^m 30 ^s .7	13 ^m 51 ^s .6
2	54.5	56	46.0	51.5
3	13 09.8	57	27 01.5	51.7
4	25.1	58	17.0	51.9
5	40.3	59	32.2	51.9
6	56.0	60	47.8	51.8
7	14 11.3	61	28 03.2	51.9
8	26.5	62	18.8	52.3
9	42.1	63	34.0	51.9
10	57.5	64	49.3	51.8
				13 51.83
Arcs at beginning 6° 40'.		Temp. 35.		Time of two vibrations 15 ^s .103.
" end 2 56				

June 7, 1854. Experiments of vibrations. (Right to left.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 54 double vibrations.
1	8 ^h 12 ^m 46 ^s .8	55	8 ^h 26 ^m 38 ^s .5	13 ^m 51 ^s .7
2	13 02.0	56	54.0	52.0
3	17.2	57	27 09.3	52.1
4	32.6	58	24.8	52.2
5	48.1	59	40.3	52.2
6	14 03.3	60	55.7	52.4
7	18.7	61	28 11.1	52.4
8	34.0	62	26.4	52.4
9	49.5	63	41.9	52.4
10	15 05.0	64	57.4	52.4
				13 52.22
Ares and time as before. Time of 2 vibrations 15 ^s .412.				
June 7, 1854. Experiments of vibrations. (Left to right.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 50 double vibrations.
1	8 ^h 35 ^m 17 ^s .1	51	8 ^h 48 ^m 07 ^s .8	12 ^m 50 ^s .7
2	32.2	52	23.1	50.9
3	48.0	53	38.6	50.6
4	36 03.3	54	54.0	50.7
5	19.0	55	49 09.3	50.3
6	34.3	56	24.8	50.5
7	49.6	57	40.1	50.5
8	37 05.1	58	55.6	50.5
9	20.6	59	50 10.9	50.3
10	36.2	60	26.3	50.1
11	51.5	61	41.6	50.1
				12 50.47
Arc 7° 28'. Temp. 35°. Time of 2 vibrations 15 ^s .409.				
3 12				
June 7, 1854. Experiments of vibrations. (Right to left.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 50 double vibrations.
1	8 ^h 35 ^m 24 ^s .7	51	8 ^h 48 ^m 15 ^s .2	12 ^m 50 ^s .5
2	40.0	52	30.7	50.7
3	55.2	53	46.0	50.8
4	36 10.8	54	49 01.3	50.5
5	26.2	55	16.8	50.6
6	42.0	56	32.2	50.2
7	57.2	57	47.7	50.5
8	37 12.7	58	50 03.0	50.3
9	28.3	59	18.7	50.4
10	43.8	60	33.8	50.0
11	59.0	61	49.2	50.2
				12 50.43
Ares and temp. as before. Time of 2 vibrations 15 ^s .409.				

RECAPITULATION OF RESULTS, JUNE 7, 1854.					
Set No. 1.	Time of 2 vibrations			15 ^s .288	Temp. 33°
				15.288	" 33
Set No. 2.	" "			15.315	" 33
				15.313	" 33
Set No. 3.	" "			15.403	" 35
				15.412	" 35
Set No. 4.	" "			15.409	" 35
				15.409	" 35
June 7, 1854.	Mean			15.355	+ 34.0
	Time of 1 vibration			7.678	

June 7, 1854. Experiments of deflections.					
Deflecting magnet A. 67.		Deflected magnet I. 10.		Distance 0.9 feet.	
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
W.	E.	374° 16'.3	15'.7	108° 21'.2	36°.2
"	W.	265 55.0 54.0			38.0
W.	W.	260 58.0 55.5	56.7	107 33.8	36.0
"	E.	368 31.0 30.0	30.5		34.0
				Means 107 57.5	36.0

Experiments of deflections. Distance 1.3 feet.					
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
E.	E.	331° 33'.0 31.0	32'.0	30° 58'.5	34°.5
"	W.	300 34.0 33.0	33.5		34.3
W.	W.	301 01.0 00.0	00.5	31 35.5	35.8
"	E.	332 37.0 35.0	36.0		35.0
				Means 31 17.0	34.9

These two sets of deflections were observed between the second and third set of the preceding vibrations.

June 8, 1854. Experiments of vibrations. (Left to right.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 40 double vibrations.
1	3 ^h 16 ^m 20 ^s .0	41	3 ^h 26 ^m 40 ^s .4	10 ^m 20 ^s .4
2	35.5	42	56.0	20.5
3	50.9	43	27 11.5	20.6
4	17 06.5	44	27.2	20.7
5	22.2	45	42.6	20.4
6	37.8	46	58.1	20.3
7	53.3	47	28 13.5	20.2
8	18 08.8	48	29.1	20.3
9	24.3	49	44.6	20.3
10	39.8	50	29 00.5	20.7
11	55.2	51	15.5	20.3
				10 20.43
Arcs 5° 36'. Temp. 35°. Time of 2 vibrations 15 ^s .511. 3 20				
June 8, 1854. Experiments of vibrations. (Right to left.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 40 double vibrations.
1	3 ^h 16 ^m 27 ^s .3	41	3 ^h 26 ^m 48 ^s .0	10 ^m 20 ^s .7
2	43.2	42	27 03.5	20.3
3	58.6	43	19.0	20.4
4	17 14.2	44	34.6	20.4
5	29.7	45	50.0	20.3
6	45.3	46	28 05.6	20.3
7	18 00.8	47	21.1	20.3
8	16.2	48	36.5	20.3
9	31.8	49	52.2	20.4
10	47.3	50	29 07.6	20.3
11	19 02.9	51	23.3	20.4
				10 20.37
Arcs and temp. as before. Time of 2 vibrations 15 ^s .509.				
June 8, 1854. Experiments of vibrations. (Left to right.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 40 double vibrations.
1	3 ^h 31 ^m 33 ^s .3	41	3 ^h 41 ^m 53 ^s .9	10 ^m 20 ^s .6
2	49.0	42	42 09.2	20.2
3	32 04.5	43	24.7	20.2
4	20.0	44	40.2	20.2
5	35.6	45	55.8	20.2
6	51.2	46	43 11.2	20.0
7	33 06.7	47	26.7	20.0
8	22.1	48	42.1	20.0
9	37.6	49	57.7	20.1
10	53.1	50	44 13.0	19.9
11	34 08.3	51	28.5	20.2
				10 20.15
Arcs 6° 8'. Temp. 35°.2. Time of 2 vibrations 15 ^s .503. and 3 12				

June 8, 1854. Experiments of vibrations. (Right to left.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 40 double vibrations.
1	3 ^h 31 ^m 40 ^s .8	41	3 ^h 42 ^m 01 ^s .2	10 ^m 20 ^s .4
2	56.4	42	16.5	20.1
3	32 11.9	43	32.2	20.3
4	27.3	44	47.5	20.2
5	43.1	45	43 03.0	19.9
6	58.6	46	18.4	19.8
7	33 14.1	47	33.9	19.8
8	29.6	48	49.4	19.8
9	45.1	49	44 04.9	19.8
10	34 00.7	50	20.3	19.6
11	16.2	51	35.8	19.6
				10 19.93
Ares and temp. as before. Time of 2 vibrations 15 ^s .498.				
(4 sets of deflections were taken after the above, for which see below.)				
June 8, 1854. Experiments of vibrations. (Left to right.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 40 double vibrations.
1	8 ^h 31 ^m 54 ^s .3	41	8 ^h 42 ^m 09 ^s .5	10 ^m 15 ^s .2
2	32 10.2	42	24.9	14.7
3	25.3	43	40.2	14.9
4	40.8	44	55.5	14.7
5	56.2	45	43 10.9	14.7
6	33 11.4	46	26.2	14.8
7	27.0	47	41.7	14.7
8	42.3	48	56.9	14.6
9	57.4	49	12.3	14.9
10	34 13.1	50	27.5	14.4
11	28.3	51	42.9	14.6
				10 14.75
Ares 6° 48'. Temp. 35°. Time of 2 vibrations 15 ^s .369. and 2 08				
June 8, 1854. Experiments of vibrations. (Right to left.)				
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 40 double vibrations.
1	8 ^h 32 ^m 02 ^s .3	41	8 ^h 42 ^m 18 ^s .3	10 ^m 16.0
2	17.8	42	33.6	15.8
3	33.2	43	49.0	15.8
4	48.7	44	43 04.4	15.7
5	33 04.0	45	19.9	15.9
6	19.3	46	35.2	15.9
7	34.8	47	50.6	15.8
8	50.2	48	41 06.0	15.8
9	34 05.5	49	21.4	15.9
10	21.2	50	36.9	15.7
11	36.8	51	52.3	15.5
				10 15.80
Ares and temp. as before. Time of 2 vibrations 15 ^s .395.				

June 8, 1854.		Experiments of vibrations. (Left to right.)		
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 40 double vibrations.
1	8 ^h 48 ^m 52 ^s .0	41	8 ^h 59 ^m 04 ^s .6	10 ^m 12 ^s .6
2	49 07.3	42	19.7	12.4
3	23.0	43	35.3	12.3
4	38.2	44	50.5	12.3
5	53.4	45	9 00 05.8	12.4
6	50 08.9	46	21.1	12.2
7	24.3	47	36.3	12.0
8	39.6	48	51.6	12.0
9	54.7	49	1 07.0	12.3
10	51 10.1	50	22.2	12.1
11	25.3	51	37.5	12.2
				10 12.25
Arcs 6° 56'.		Temp. 35°.	Time of 2 vibrations 15 ^s .306.	
and 3 20				

June 8, 1854.		Experiments of vibrations. (Right to left.)		
No.	Time by chronometer 2721.	No.	Time by chronometer 2721.	Time of 40 double vibrations.
1	8 ^h 48 ^m 59 ^s .8	41	8 ^h 59 ^m 12 ^s .0	10 ^m 12 ^s .2
2	49 15.1	42	27.5	12.4
3	30.3	43	42.8	12.5
4	45.8	44	58.0	12.2
5	50 01.1	45	9 00 13.4	12.3
6	16.3	46	28.6	12.3
7	31.8	47	43.9	12.1
8	47.2	48	59.3	12.1
9	51 02.2	49	01 14.6	12.4
10	17.8	50	29.9	12.1
11	33.0	51	45.3	12.3
				10 12.26
Arcs and temp. as before.		Time of 2 vibrations 15 ^s .306.		
Daily rate of chronometer 2721, losing 1 ^s .0.				

RECAPITULATION OF RESULTS, JUNE 8, 1854.

Set No. 1.	Time of 2 vibrations	. . . . .	15 ^s .511	Temp. 35°
			15.509	" 35
Set No. 2.	" "	. . . . .	15.503	" 35.2
			15.498	" 35.2
Set No. 3.	" "	. . . . .	15.369	" 35
			15.395	" 35
Set No. 4.	" "	. . . . .	15.306	" 35
			15.306	" 35
Means			15.425	35.0
Time of 1 vibration			7.712	

The following deflections correspond in time to the middle of the above vibration results.

June 8, 1854.		Experiments of deflections.		Distance 1.3 feet.	
Deflecting magnet A. 67.		Deflected magnet I. 10.			
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
W.	E.	329° 46'	45'.5	31° 10'.5	36°.7
"	W.	298 36 34	35 0		37.7
E.	W.	298 08 06	07.0	31 33.5	37.0
"	E.	329 41 40	40.5		36.2
				Means 31 22.0	36.9
Experiments of deflections.		Distance 0.9 feet.			
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
E.	E.	365° 52'.5 51.0	51'.7	110° 58'.2	37°.2
"	W.	254 54 53	53.5		36.6
W.	W.	262 30 28	29.0	106 38.0	37.0
"	E.	369 08 06	07.0		37.0
				Means 108 48.1	36.9
Experiments of deflections.		Distance 0.9 feet.			
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
W.	E.	369° 08'.0 06.5	07'.2	106° 48'.2	37°.2
"	W.	262 20 18	19.0		37.0
E.	W.	254 41 40	40.5	110 06.7	37.6
"	E.	364 48.0 46.5	47.2		36.6
				Means 108 27.4	37.1
Experiments of deflections.		Distance 1.3 feet.			
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
E.	E.	328° 52'	52'.0	31° 29'.5	36°.0
"	W.	297 23 22	22.5		35.2
W.	W.	298 03 02	02.5	31 10.5	36.3
"	E.	329 13 13	13.0		37.0
				Means 31 20.0	36.1

June 19, 1854.		Experiments of deflections.			
Deflecting magnet A. 67.		Deflected magnet I. 7.		Distance 0.9 feet.	
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
W.	W.	268° 50'	49.5	107° 33'.0	40°.6
"	E.	49 376 23			41.6
E.	E.	22 373 05	04.5	106 05.0	41.2
"	W.	04 267 00	59.5		41.2
				Means 106 49.0	41.1
Experiments of deflections.		Distance 1.3 feet.			
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
E.	W.	303° 38'	37.5	30° 43'.0	40°.8
"	E.	37 334 21			41.0
W.	E.	20 334 46	46.0	30 42.5	43.5
"	W.	03 304 04	03.5		43.0
				Means 30 42.7	42.1
June 19, 1854.		Experiments of vibrations. (Left to right.)			
No.	Time. ¹	No.	Time. ¹	Time of 40 double vibrations.	
1	4 ^h 33 ^m 20 ^s .1	41	4 ^h 43 ^m 38 ^s .6	10 ^m 18 ^s .5	
2	35.3	42	54.0	18.7	
3	51.0	43	44 09.5	18.5	
4	34 06.5	44	25.0	18.5	
5	21.9	45	40.4	18.5	
6	37.3	46	55.9	18.6	
7	52.8	47	45 11.2	18.4	
8	35 08.3	48	26.6	18.3	
9	23.8	49	42.1	18.3	
10	39.3	50	57.7	18.4	
11	54.9	51	46 13.0	18.1	
				10	18.44
Arcs 7° 28' and 3 44		Temp. 43°.	Time of 2 vibrations 15 ^s .461.		

¹ Number of chronometer not stated.

June 19, 1854.		Experiments of vibrations. (Right to left.)		
No.	Time.	No.	Time.	Time of 40 double vibrations.
1	4 ^h 33 ^m 28 ^s .2	41	4 ^h 43 ^m 46 ^s .8	10 ^m 18 ^s .6
2	43.4	42	44 02.3	18.9
3	59.0	43	17.8	18.8
4	34 14.3	44	33.2	18.9
5	29.9	45	48.6	18.7
6	45.3	46	45 04.2	18.9
7	35 00.9	47	19.5	18.6
8	16.3	48	35.1	18.8
9	31.9	49	50.1	18.5
10	47.2	50	46 05.8	18.6
11	36 02.8	51	21.4	18.6
				10 18.72
Arcs and temp. as before.		Time of 2 vibrations 15 ^s .463.		
Experiments of vibrations. (Left to right.)				
No.	Time.	No.	Time.	Time of 40 double vibrations.
1	4 ^h 50 ^m 26 ^s .2	41	5 ^h 00 ^m 44 ^s .0	10 ^m 17 ^s .8
2	41.8	42	59.3	17.5
3	57.3	43	01 14.8	17.5
4	51 12.9	44	30.3	17.4
5	28.2	45	45.9	17.7
6	43.5	46	02 01.3	17.8
7	59.1	47	16.7	17.6
8	52 14.5	48	32.2	17.7
9	29.9	49	47.7	17.8
10	45.4	50	03 03.2	17.8
11	53 01.0	51	18.8	17.8
				10 17.67
Arcs 6° 56'. and 4 00		Temp. 43°.		Time of 2 vibrations 15 ^s .442.
Experiments of vibrations. (Right to left.)				
No.	Time.	No.	Time.	Time of 40 double vibrations.
1	4 ^h 50 ^m 34 ^s .1	41	5 ^h 00 ^m 51 ^s .6	10 ^m 17 ^s .5
2	49.5	42	01 07.1	17.6
3	51 04.9	43	22.4	17.5
4	20.3	44	37.9	17.6
5	35.9	45	53.4	17.5
6	51.2	46	02 08.9	17.7
7	52 06.9	47	24.3	17.4
8	22.2	48	39.6	17.4
9	37.8	49	55.0	17.2
10	53.1	50	03 10.3	17.2
11	53 08.6	51	25.8	17.2
				10 17.44
Arcs and temp. as before.		Time of 2 vibrations 15 ^s .436.		

June 19, 1854. Experiments of vibrations. (Left to right.)				
No.	Time.	No.	Time.	Time of 40 double vibrations.
1	5 ^h 13 ^m 12 ^s .2	41	5 ^h 23 ^m 30 ^s .3	10 ^m 18 ^s .1
2	27.9	42	45.7	17.8
3	43.3	43	24 01.2	17.9
4	58.9	44	16.8	17.9
5	14 14.2	45	32.3	18.1
6	29.5	46	47.9	18.4
7	45.1	47	25 03.4	18.3
8	15 00.3	48	18.9	18.6
9	16.1	49	34.1	18.0
10	31.3	50	49.7	18.4
11	46.9	51	26 05.1	18.2
				10 18.15
Arcs 6° 48'. Temp. 42°.4. Time of 2 vibrations 15 ^s .454.				
3 36				
Experiments of vibrations. (Right to left.)				
No.	Time.	No.	Time.	Time of 40 double vibrations.
1	5 ^h 13 ^m 20 ^s .2	41	5 ^h 23 ^m 37 ^s .6	10 ^m 17 ^s .4
2	35.7	42	52.9	17.2
3	51.2	43	24 08.3	17.1
4	14 06.5	44	24.0	17.5
5	22.1	45	39.5	17.4
6	37.5	46	54.9	17.4
7	53.2	47	25 10.2	17.0
8	15 08.4	48	25.2	16.8
9	23.7	49	40.8	17.1
10	39.2	50	56.5	17.3
11	54.8	51	26 11.7	16.9
				10 17.19
Arcs and temp. as before. Time of 2 vibrations 15 ^s .430.				
Experiments of vibrations. (Left to right.)				
No.	Time.	No.	Time.	Time of 40 double vibrations.
1	5 ^h 33 ^m 23 ^s .3	41	5 ^h 43 ^m 39 ^s .5	10 ^m 16 ^s .2
2	38.9	42	54.9	16.0
3	54.2	43	44 10.3	16.1
4	34 09.5	44	25.8	16.3
5	25.2	45	41.3	16.1
6	40.4	46	56.7	16.3
7	55.9	47	45 11.9	16.0
8	35 11.2	48	27.4	16.2
9	26.8	49	42.8	16.0
10	42.2	50	58.2	16.0
11	57.6	51	46 13.6	16.0
				10 16.11
Arcs 7° 04'. Temp. 42°.4. Time of two vibrations 15 ^s .403.				
3 28				

Experiments of vibrations. (Right to left.)					
No.	Time.	No.	Time.	Time of 40 double vibrations.	
1	5 ^h 33 ^m 31 ^s .2	41	5 ^h 43 ^m 47 ^s .2	10 ^m 16 ^s .0	
2	46.5	42	44 02.8	16.3	
3	34 02.1	43	18.1	16.0	
4	17.4	44	33.5	16.1	
5	33.0	45	49.0	16.0	
6	48.4	46	45 04.5	16.1	
7	35 03.7	47	19.8	16.1	
8	19.0	48	35.2	16.2	
9	34.3	49	50.6	16.3	
10	49.5	50	46 05.9	16.4	
11	36 05.2	51	21.3	16.1	
				10	16.15
Arcs and temp. as before.			Time of 2 vibrations 15 ^s .404.		
RECAPITULATION OF RESULTS, JUNE 19, 1854.					
Set No. 1.	Time of 2 vibrations	. . . . .	15 ^s .461	Temp.	43°
			15.463	"	43
Set No. 2.	"	"	15.442	"	43
			15.436	"	43
Set No. 3.	"	"	15.454	"	42.4
			15.430	"	42.4
Set No. 4.	"	"	15.403	"	42.4
			15.404	"	42.4
Means			15.437	42.7	
Time of 1 vibration			7.718		
June 19, 1854. Experiments of deflections.					
Deflecting magnet A. 67.		Deflected magnet I. 7.		Distance 1.3 feet.	
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
W.	W.	298° 54'	53'.5	30° 53'.0	42° 0
"	E.	329 47			42.2
		46	46.5		
E.	E.	329 20	19.5	30 50.0	43.2
"	W.	298 30	29.5		42.0
		29			42.4
Means			30	51.5	42.4
Experiments of deflection. Distance 0.9 feet.					
Magnet.	North pole.	Circle reads.	Mean.	2 u.	Temp.
E.	W.	259° 19'	18'.5	106° 11'.5	42° 0.2
"	E.	365. 31			42.0
		29	30.0		
W.	E.	369 39	38.5	106 30.5	43.2
"	W.	263 09	08.0		41.8
		07			42.3
Means			106	21.0	42.3

June 24, 1854.		Experiments of deflections.			
Deflecting magnet A. 67.		Deflected magnet I. 7.		Distance 0.9 feet.	
Magnet.	North pole.	Circle reads.	Means.	2 u.	Temp.
W.	W.	264° 10'	09'.5	105° 32'.0	38°.0
"	E.	369 42 41	41.5		38.0
E.	E.	365 00 364 59	59.5	105 10.0	38.0
"	W.	259 50 49	49.5		38.0
				Means 105 21.0	38.0
Experiments of deflection.		Distance 1.3 feet.			
Magnet.	North pole.	Circle reads.	Means.	2 u.	Temp.
E.	W.	298° 37'	36'.5	30° 44'.5	38°.5
"	E.	329 21 21	21.0		38.6
W.	E.	330 13 12	12.5	30 31.0	40.3
"	W.	299 42 41	41.5		40.0
				Means 30 37.7	39.4
June 24, 1854.		Experiments of vibrations. (Left to right.)			
No.	Time by chronometer 264.	No.	Time by chronometer 264.	Time of 40 double vibrations.	
1	4 ^h 21 ^m 34 ^s .3	41	4 ^h 31 ^m 53 ^s .3	10 ^m 19 ^s .0	
2	49.6	42	32 08.8	19.2	
3	22 05.2	43	24.2	19.0	
4	20.7	44	39.6	18.9	
5	36.3	45	55.0	18.7	
6	51.8	46	33 10.4	18.6	
7	23 07.3	47	26.3	19.0	
8	22.8	48	41.8	19.0	
9	38.4	49	57.2	18.8	
10	53.8	50	34 12.5	18.7	
11	24 09.1	51	28.0	18.9	
				10 18.89	
Arcs 6° 16' and 3 20		Temp. 41°.2.		Time of 2 vibrations 15 ^s .472.	
The chronometer nearly shows Greenwich mean time, and its daily rate is less than 0 ^s .5 (gaining).					

June 24, 1854. Experiments of vibrations. (Right to left.)				
No.	Time by chronometer 264.	No.	Time by chronometer 264.	Time of 40 double vibrations.
1	4 ^h 21 ^m 41 ^s .8	41	4 ^h 31 ^m 59 ^s .0	10 ^m 17 ^s .2
2	57.1	42	32 14.3	17.2
3	22 12.6	43	29.2	16.6
4	28.2	44	44.4	16.2
5	43.4	45	59.5	16.1
6	59.0	46	33 14.9	15.9
7	23 14.3	47	30.3	16.0
8	29.8	48	45.8	16.0
9	45.2	49	34 01.0	15.8
10	24 00.8	50	16.3	15.5
11	16.2	51	31.6	15.4
				10 16.17
Arcs and temp. as before. Time of 2 vibrations 15 ^s .404.				
June 24, 1854. Experiments of vibrations. (Left to right.)				
No.	Time by chronometer 264.	No.	Time by chronometer 264	Time of 40 double vibrations.
1	4 ^h 40 ^m 31 ^s .1	41	4 ^h 50 ^m 46 ^s .0	10 ^m 14 ^s .9
2	46.5	42	51 01.3	14.8
3	41 02.0	43	16.8	14.8
4	17.4	44	32.0	14.6
5	32.8	45	47.5	14.7
6	48.2	46	52 02.8	14.6
7	42 03.5	47	18.1	14.6
8	18.9	48	33.4	14.5
9	34.3	49	48.8	14.5
10	49.8	50	53 04.1	14.3
11	43 05.1	51	19.4	14.3
				10 14.60
Arcs 5° 52'. Temp. 41° 2. Time of 2 vibrations 15 ^s .365. and 3 20				
June 24, 1854. Experiments of vibrations. (Right to left.)				
No.	Time by chronometer 264.	No.	Time by chronometer 264.	Time of 40 double vibrations.
1	4 ^h 40 ^m 38 ^s .8	41	4 ^h 50 ^m 53 ^s .8	10 ^m 15 ^s .0
2	54.2	42	51 09.2	15.0
3	41 09.5	43	24.6	15.1
4	24.9	44	40.0	15.1
5	40.2	45	55.4	15.2
6	55.8	46	52 10.8	15.0
7	42 11.1	48	26.2	15.1
8	26.3	47	41.6	15.3
9	41.9	49	57.0	15.1
10	57.2	50	53 12.3	15.1
11	43 12.6	51	27.8	15.2
				10 15.11
Arcs and temp. as before. Time of 2 vibrations 15 ^s .378.				

June 24, 1854. Experiments of vibrations. (Left to right.)

No.	Time by chronometer 264.	No.	Time by chronometer 264.	Time of 40 double vibrations.
1	5 ^h 03 ^m 29 ^s .3	41	5 ^h 15 ^m 44 ^s .5	10 ^m 15.2
2	44.9	42	59.5	14.6
3	04 00.3	43	14 15.1	14.8
4	15.6	44	30.4	14.8
5	31.0	45	45.9	14.9
6	46.4	46	15 01.3	14.9
7	05 01.8	47	16.8	15.0
8	17.1	48	32.2	15.1
9	32.3	49	47.7	15.4
10	47.8	50	16 02.9	15.1
11	06 03.2	51	18.2	15.0
				10 14.982

Arcs 6° 16'. Temp. 41°.2. Time of 2 vibrations 15°.375.
and 3 28

June 24, 1854. Experiments of vibrations. (Right to left.)

No.	Time by chronometer 264.	No.	Time by chronometer 264.	Time of 40 double vibrations.
1	5 ^h 03 ^m 37 ^s .1	41	5 ^h 13 ^m 52 ^s .0	10 ^m 14.9
2	52.4	42	14 07.6	15.2
3	04 07.8	43	23.0	15.2
4	23.2	44	38.3	15.1
5	38.4	45	53.8	15.4
6	53.8	46	15 09.1	15.3
7	05 09.3	47	24.5	15.2
8	24.5	48	39.9	15.4
9	40.0	49	55.2	15.2
10	55.0	50	16 10.6	15.6
11	06 10.8	51	26.0	15.2
				10 15.24

Arcs and temp. as before. Time of 2 vibrations 15°.381.

June 24, 1854. Experiments of vibrations. (Left to right.)

No.	Time by chronometer 264.	No.	Time by chronometer 264.	Time of 40 double vibrations.
1	5 ^h 18 ^m 38 ^s .3	41	5 ^h 28 ^m 54 ^s .8	10 ^m 16 ^s .5
2	54.0	42	29 10.1	16.1
3	19 09.3	43	25.3	16.0
4	24.9	44	40.8	15.9
5	40.3	45	56.2	15.9
6	55.7	46	30 11.6	15.9
7	20 11.2	47	27.0	15.8
8	26.7	48	42.4	15.7
9	42.2	49	57.8	15.6
10	57.5	50	31 13.1	15.6
11	21 12.9	51	28.7	15.8
				10 15.89

Arcs 6° 48'. Temp. 41°.2. Time of 2 vibrations 15°.397.
3 20

June 24, 1854. Experiments of vibrations. (Right to left.)					
No.	Time by chronometer 264.	No.	Time by chronometer 264.	Time of 40 double vibrations.	
1	5 ^h 18 ^m 46 ^s .2	41	5 ^h 29 ^m 02 ^s .7	10 ^m 16 ^s .5	
2	19 01.9	42	18.0	16.1	
3	17.2	43	33.6	16.4	
4	32.8	44	49.0	16.2	
5	48.2	45	30 04.2	16.0	
6	20 03.6	46	19.7	16.1	
7	19.0	47	35.0	16.0	
8	34.3	48	50.4	16.1	
9	49.7	49	31 05.8	16.1	
10	21 05.1	50	21.5	16.4	
11	20.6	51	36.8	16.2	
				10	16.19
Arcs and temp. as before.			Time of 2 vibrations 15 ^s .405.		
RECAPITULATION OF RESULTS, JUNE 24, 1854.					
Set No. 1.	Time of 2 vibrations		15 ^s .472	Temp.	41 ^o .2
			15.404	"	41.2
Set No. 2.	" "		15.365	"	41.2
			15.378	"	41.2
Set No. 3.	" "		15.375	"	41.2
			15.381	"	41.2
Set No. 4.	" "		15.397	"	41.2
			15.405	"	41.2
	Mean		15.397		41.2
	Time of 1 vibration		7.699		
June 24, 1854. Experiments of deflections.					
Deflecting magnet A. 67.		Deflected magnet I. 7.		Distance 1.3 feet.	
Magnet.	North pole.	Circle reads.	Means.	2 u.	Temp.
W.	W.	300 ^o 17' 15	16'.0		44 ^o .2
"	E.	330 ^o 29' 27	28.0	30 ^o 12'.0	43.0
E.	E.	330 ^o 41' 40	40.5	30 37.0	42.2
"	W.	300 ^o 04' 03	03.5		42.4
				Means 30 24.5	42.9
Experiments of deflections. Distance 0.9 feet.					
Magnet.	North pole.	Circle reads.	Means.	2 u.	Temp.
E.	W.	261 ^o 24' 22	23'.0		41.4
"	E.	367 ^o 31' 30	30.5	106 ^o 07'.5	41.0
W.	E.	373 ^o 07' 05	06.0	109 04.5	42.4
"	W.	264 ^o 02' 01	01.5		41.7
				Means 107 36.0	41.6

The detail record of the observations of deflections and vibrations at Van Rensselaer Harbor, in May, 1855, and of the vibrations at Ilakluyt Island, and near Cape York, in June and July, 1855, could not be found; the results, however, are preserved in Appendix No. XV. of the Narrative (vol. II.), and are here-with subjoined.

SYNOPSIS OF RESULTS OF VIBRATIONS AND DEFLECTIONS, OBSERVED AT VAN RENSSELAER HARBOR DURING THE YEARS 1854 AND '55.

Date.	Temp.'s observed.	Time of 1 vibration.	Mean adopted. <i>T.</i>	Corresponding temp. <i>t.</i>	Angle of deflection. <i>u.</i>	Distance in feet. <i>r.</i>				
1854.										
January 17	50° 0	7 ^s .705	7 ^s .749	63° 0	15° 23'.3 39 20.0	1.3 0.975				
" 18	68.0	7.748								
" 18	68.0	7.761								
" 31	72.1									
February 13	60.5									
" 21	79.0	7.780								
" 21	79.0	7.782								
" 21	55.0	7.755								
" 21	55.0	7.758			15 24.8	1.3				
" 27	57.5									
June 7	33.0	7.644	7.678	34.0	53 58.7 15 38.5	0.9 1.3				
" 7	33.0	7.644								
" 7	33.0	7.657								
" 7	33.0	7.656								
" 7	34.0									
" 7	34.9									
" 7	35.0	7.702								
" 7	35.0	7.706								
" 7	35.0	7.705								
" 7	35.0	7.704								
June 8	35.0	7.755	7.712	35.0	15 41.0 54 24.0 54 13.7 15 40.0	1.3 0.9 0.9 1.3				
" 8	35.0	7.754								
" 8	35.2	7.752								
" 8	35.2	7.749								
" 8	36.9									
" 8	36.9									
" 8	37.1									
" 8	36.1									
" 8	35.0	7.685								
" 8	35.0	7.697								
" 8	35.0	7.653								
" 8	35.0	7.653								
June 19	41.1		7.718	42.7	53 24.5 15 21.3	0.9 1.3				
" 19	42.1									
" 19	43.0	7.730								
" 19	43.0	7.731								
" 19	43.0	7.721								
" 19	43.0	7.718								
" 19	42.4	7.727								
" 19	42.4	7.715								
" 19	42.4	7.702								
" 19	42.4	7.702								
" 19	42.4								15 25.7	1.3
" 19	42.3								53 10.5	0.9

62 MAGNETIC INTENSITY, FERN ROCK OBSERVATORY.

Date.	Temp.'s observed.	Time of 1 vibration.	Mean adopted. <i>T</i> .	Corresponding temp. <i>t</i> .	Angle of deflection. <i>u</i> .	Distance in feet. <i>r</i> .
1854.						
June 24	38°.0				52° 40'.5	0.9
" 24	39.4				15 18.8	1.3
" 24	41.2	7.736	7.699	41°.2		
" 24	41.2	7.702				
" 24	41.2	7.683				
" 24	41.2	7.689				
" 24	41.2	7.688				
" 24	41.2	7.690				
" 24	41.2	7.698				
" 24	41.2	7.702				
" 24	42.9				15 12.3	1.3
" 24	41.6				53 48.0	0.9
1855.						
May 16	17.0	7.448	7.405	19.3		
" 16	19.3	7.416				
" 16	17.0					
" 16	17.0					
" 16	22.0	7.384				
" 16	19.0	7.371				
May 17	23.0	7.394	7.391	23.0		
" 17	23.0	7.388				
" 17	23.0					
" 17	23.0					
May 18	15.0	7.383	7.384	15.0		
" 18	15.0	7.385				
" 18	27.0					
" 18	27.0					
May 19	28.0	7.407	7.405	28.2		
" 19	28.5	7.413				
" 19	28.0	7.396				
" 19	27.0					
" 19	27.0					

ABSTRACT OF OBSERVATIONS OF VIBRATIONS AT HAKLUYT ISLAND.

Approx. lat. 77° 23'. Approx. long. 72° 30' W. of Gr.

1855. June 21.	33°.3	7°.020	7°.026	33°.5
" 21.	33.3	7.026		
" 21.	33.8	7.033		

ABSTRACT OF OBSERVATIONS OF VIBRATIONS AT A STATION IN LAT. 76° 03' AND LONG. 68° 00' W. OF GR., ON THE COAST BETWEEN PARKER SNOW'S POINT AND CAPE YORK.

1855. July 19.	40°.0	6°.475	6°.495	40°.5
" 19.	41.5	6.489		
" 19.	41.2	6.544		
" 19.	39.5	6.474		

DETERMINATION OF THE MOMENT OF INERTIA OF MAGNET A. 67.

(With stirrup and mirror attached.)

No determination of the moment of inertia of magnet A. 67 having been made by the expedition, it became necessary to determine the same afterwards. The following observations for this purpose were made by myself at the Coast Survey Office, Washington, D. C.

After adjusting the instrument and suspending A. 67, the following experiments of vibrations were made:—

March 18; 1858. Mean time chronometer Kessels 1285.					
No. of vibrations.	Mean local time by chronometer 1285.	20 vibrations.	No of vibrations.	Time by chronometer 1285.	18 vibrations.
0	9 ^h 31 ^m 10 ^s .7		0	10 ^h 28 ^m 51 ^s .3	
20	32 32.4	1 ^m 21 ^s .7	18	30 04.5	1 ^m 13 ^s .2
40	33 54.0	21.6	36	31 18.0	13.5
60	35 15.1	21.1	54	32 31.0	13.0
80	36 36.5	21.4	72	33 44.8	13.8
100	37 58.0	21.5	90	34 57.9	13.1
		Mean 1 21.47			Mean 1 13.32
Temp. 71°.8. (Rate of chronometer too small to affect the result.) 1 vibration=4 ^s .073.			Arc 234 ^d and 328 ^d 242 318		Temp. 71°.0. 1 vibration=4 ^s .073

The mirror was below the magnet in these two sets; in the following four sets it was above.

Magnet suspended with inertia ring Z, of the following dimensions: Outer diameter 2.322 inches; inner diameter 1.837 inches; thickness 0.188 inches at 69°; weight 648.937 grains: hence $K_1 = \frac{1}{2}(r^2 + r_1^2)w = 4.936$ (in feet and grains), $lg K_1 = 0.69338$.

Vibrations with ring.					
No. of vibrations.	Time by chronometer 1285.	20 vibrations.	No. of vibrations.	Time by chronometer 1285.	20 vibrations.
0	12 ^h 34 ^m 06 ^s .0		0	12 ^h 48 ^m 13 ^s .6	
20	36 32.2	2 ^m 26 ^s .2	20	50 39.5	2 ^m 25 ^s .9
40	38 58.8	26.6	40	53 05.3	25.8
60	41 24.1	25.3	60	55 31.5	26.2
80	43 49.6	25.5	80	58 00.4	28.9 ¹
100	46 15.4	25.8	100	13 00 26.6	26.2
		2 25.88			2 26.02
Arc 190 ^d —360 ^d 228 —321			Temp. 75°. 1 vibration 7 ^s .294.		
Arc 229 ^d —321 ^d 239 —301			Temp. 71°.0. 1 vibration=7 ^s .301		
Vibrations without ring.					
No. of vibrations.	Time by chronometer 1285.	20 vibrations.	No. of vibrations.	Time by chronometer 1285.	20 vibrations.
0	1 ^h 17 ^m 29 ^s .9		0	1 ^h 26 ^m 50 ^s .7	
20	18 51.2	1 ^m 21 ^s .3	20	28 12.1	1 ^m 21 ^s .4
40	20 12.5	21.3	40	29 33.0	20.9
60	21 34.0	21.5	60	30 54.5	21.5
80	22 55.1	21.1	80	32 15.9	21.4
100	24 17.0	21.9	100	33 37.0	21.1
		1 21.42			1 21.26
Arc 298 ^d —230 ^d 1 vibration 4 ^s .071.			Temp. 76°. 1 vibration=4 ^s .063.		

¹ Omitted, disturbed by a current of air.

Observations for torsion.				
Torsion circle.	Scale readings.	Mean.	Diff.	
74°	248—304	276	21 ^d	
164	361—234	297	77	
344	11—428	220	60	
74	190—370	280		
For torsion with ring use			42	
31' = 39 ^d for 90°				
March 19, 1858. Vibrations without ring. (Mirror above.)				
No. of vibrations.	Time by chronometer 1285.	20 vibrations.		
0	9 ^h 23 ^m 31 ^s .9	1 ^m 21 ^s .2	Temp. 75°.	
20	24 53.1	21.2		
40	26 14.3	21.2		
60	27 35.5	21.4		
80	28 56.9	21.1		
100	30 18.0	1 21.22		
			1 vibration = 4 ^s .061.	
Vibrations with ring.				
No. of vibrations.	Time by chronometer 1285.	20 vibrations.		
0	9 ^h 50 ^m 17 ^s .0	2 ^m 26 ^s .3	1 vibration = 7 ^s .301.	
20	52 43.3	26.4		
40	55 09.7	25.8		
60	57 35.5	25.6		
80	60 01.1			
		2 26.02		
RECAPITULATION OF RESULTS.				
March 18, 1858.	1 vibration, without ring	4 ^s .073	—	Temp. 71° 8
“ “	“ “ “	4.073	—	“ 71.0
“ “	“ with “	—	7 ^s .294	“ 75.0
“ “	“ “ “	—	7.301	“ 75.0
“ “	“ without “	4.071	—	“ 76.0
“ “	“ “ “	4.063	—	“ 76.0
March 19, 1858.	“ “ “	4.061	—	“ 75.0
“ “	“ with “	—	7,301	“ 75.0
Mean by combination		T = 4.069 at 74° 0	T ₁ = 7.299 at 75° 0	

The moment of inertia of the magnet (with appendages) K becomes for the temp. 69° (and^o corrected for torsion)

$$K = K_1 \left(\frac{T^2}{T_1^2 - T^2} \right) = 2.220 \text{ and } \lg K = 0.34631.$$

Using 0.0000068 for the coefficient of dilatation for 1° Fabr., the above $\lg K$ for different temperatures becomes:

$$\begin{array}{llll} \text{For } 62^\circ, & \lg K = 0.34628 & \text{and } \lg \pi^2 K = 1.34058 \\ \text{“ } 32, & \text{“ } 0.31609 & \text{“ } = 1.34039 & \text{(CHAS. A. S.)} \end{array}$$

The value of the induction coefficient

$$P = -\frac{r^2 r_1^5 \sin. u_1 - r_1^2 r^5 \sin. u}{r_1^6 \sin. u_1 - r^5 \sin. u}$$

may be put in the following convenient form—

$$P = -r^2 \frac{\sigma - \varrho^3}{\sigma - \varrho^5} \text{ where } \sigma = \frac{\sin. u^1}{\sin. u} \text{ and } \varrho = \frac{r}{r_1}.$$

We find:	June	7,	1854	.	.	.	.	.	.	$P = -0.007$
	"	8,	"	.	.	.	.	.	.	-0.003
	"	8,	"	.	.	.	.	.	.	-0.006
	"	19,	"	.	.	.	.	.	.	$+0.009$
	"	19,	"	.	.	.	.	.	.	-0.003
	"	24,	"	.	.	.	.	.	.	-0.001
	"	24,	"	.	.	.	.	.	.	-0.001
	May	16,	1855	.	.	.	.	.	.	$\left\{ \begin{array}{l} +0.033 \\ +0.035 \end{array} \right\}$
	"	17,	"	.	.	.	.	.	.	$\left\{ \begin{array}{l} +0.035 \\ +0.039 \end{array} \right\}$
	"	18,	"	.	.	.	.	.	.	-0.011
	"	19,	"	.	.	.	.	.	.	-0.011

If we take the indiscriminate mean of the above values we find $P = +0.007$, and if we reject the three values marked by brackets, $P = -0.004$; the latter value is probably nearer the truth than the first one, but both are so small that they may be neglected in the computation of the intensity.

In the absence of observations, the temperature coefficient for the magnetic moment or q may be assumed $= 0.0003$, a value found for other magnets of the same magnetic moment and size; with but three exceptions, the temperature corrections are small.

After correcting for difference of temperature, the following results for magnetic moment m and horizontal intensity X have been computed by the formulæ

$$\frac{m}{X} = \frac{1}{2} r^3 \sin. u \text{ and } m X = \frac{\pi^2 k}{T^2}.$$

TABLE OF RESULTS OF $\log \frac{m}{X}$, $\log m X$, OF m THE MAGNETIC MOMENT OF MAGNET A. 67, AND OF THE HORIZONTAL INTENSITY X , AT VAN RENSSELAER HARBOR.

Date.	$\lg. \frac{m}{X}$.	$\lg. m X$.	m .	X .
1854.				
Jan. 31	9.46463	9.56091	0.326	1.117
Feb. 13	9.46795	9.56243	0.327	1.115
" 27	9.46532	9.56282	0.327	1.119
June 7	9.46954	9.56964	0.330	1.122
" 7	9.47155	9.56980	0.331	1.120
" 8	9.47268	9.56583	0.330	1.113
" 8	9.47184	9.56583	0.330	1.114
" 8	9.47091	9.56581	0.330	1.115
" 8	9.47223	9.56593	0.330	1.114
" 19	9.46636	9.56570	0.328	1.121
" 19	9.46371	9.56556	0.327	1.124
" 19	9.46574	9.56552	0.328	1.122
" 19	9.46504	9.56553	0.328	1.123
" 24	9.46218	9.56801	0.327	1.130
" 24	9.46256	9.56782	0.328	1.129
" 24	9.45956	9.56737	0.326	1.133
" 24	9.46855	9.56754	0.330	1.121
1855.				
May 16	9.44285	9.60156	0.332	1.200
" 16	9.45125	9.60156	0.336	1.189
" 17	9.44593	9.60293	0.334	1.198
" 17	9.44065	9.60293	0.332	1.206
" 18	9.43607	9.60219	0.331	1.210
" 18	9.43286	9.60219	0.329	1.215
" 19	9.43956	9.60148	0.332	1.205
" 19	9.44266	9.60148	0.332	1.200
Mean value of $m = 0.330$ at $t = 36^\circ$. ¹				

RECAPITULATION OF VALUES OF X .

January 31, 1854	. . . . .	$X = 1.117$
February 20, "	. . . . .	1.117
June 15, "	. . . . .	1.121
May 18, 1855	. . . . .	1.203
Mean corresponding to June, 1854		1.139

Taking the above value 1.139 for the mean horizontal force during the whole period, and multiplying it by sec. $84^\circ 45'.8$, the total force at Van Rensselaer Harbor during the same period becomes $\phi = 12.479$.

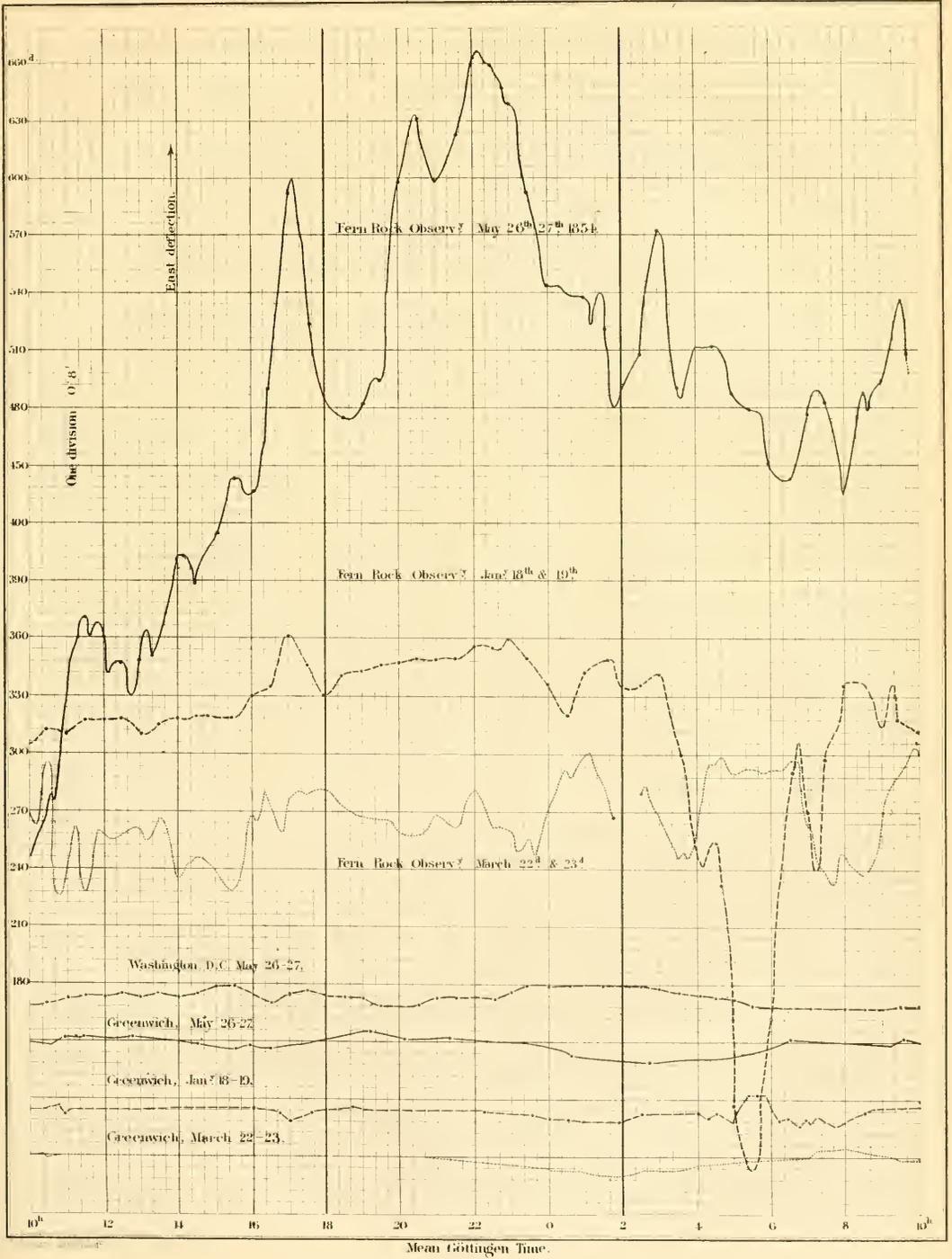
By means of the known value of m the horizontal intensity at the stations Hakluyt Island and coast near Cape York has been computed as follows:—

Hakluyt Island, June 21, 1855	. . . . .	$X = 1.344$
Coast near Cape York, July 19, 1855	. . . . .	$X = 1.573$

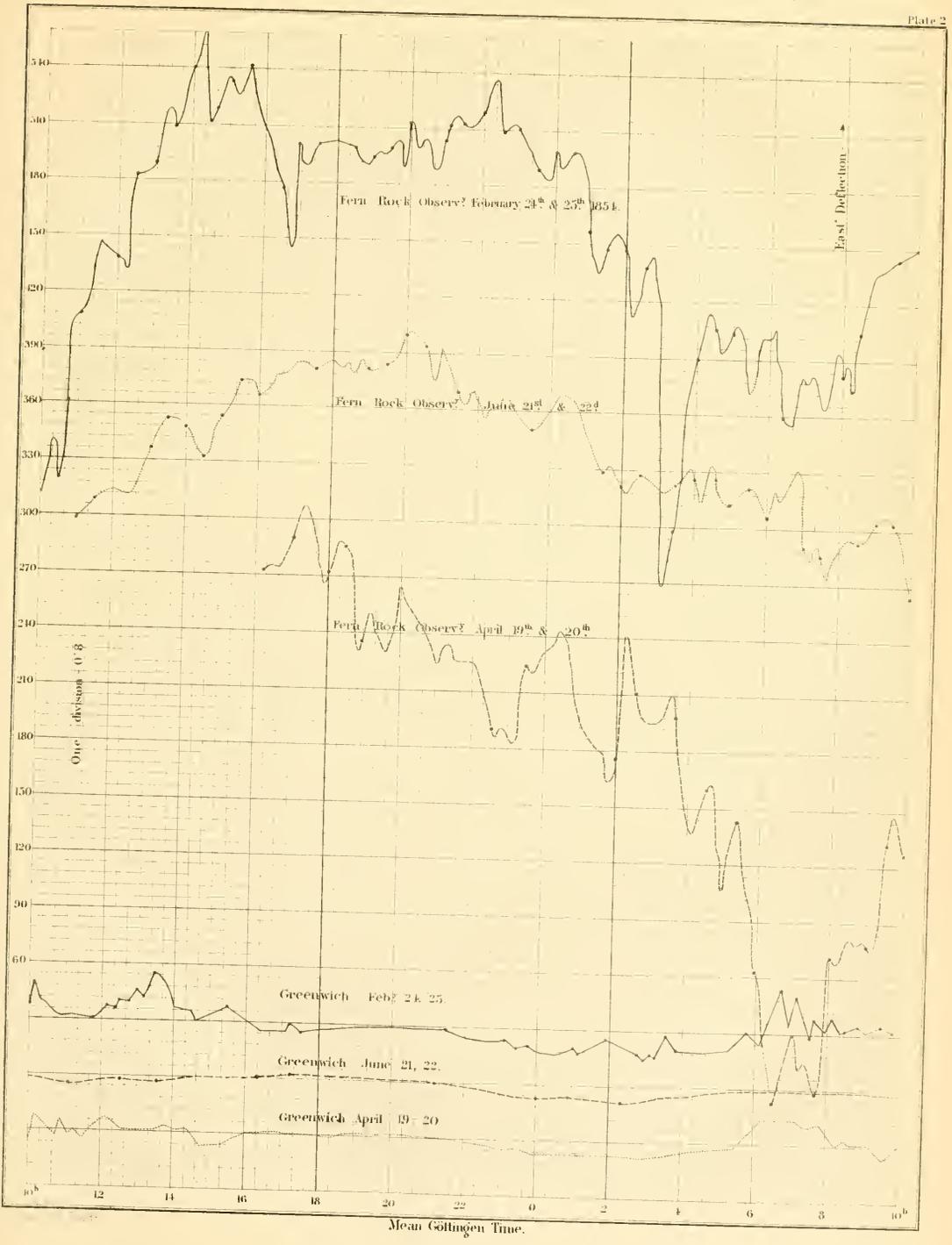
¹ I redetermined m at Washington, D. C., in March, 1858, and found it equal to 0.311, exhibiting but a small loss of magnetism during nearly four years.

DIURNAL CHANGES OF THE MAGNETIC DECLINATION ON TERM-DAYS.

Plate 1



DIURNAL CHANGES OF THE MAGNETIC DECLINATION ON TERM DAYS.



Fern Rock Observ? February 24th & 25th 1854

Fern Rock Observ? June 21st & 22^d

Fern Rock Observ? April 19th & 20th

Greenwich Feb? 24, 25.

Greenwich June 21, 22.

Greenwich April 19, 20

One division = 0.8

East Deflection

SMITHSONIAN CONTRIBUTIONS TO KNOWLEDGE.

GRAMMAR AND DICTIONARY

OF THE

YORUBA LANGUAGE.

WITH AN

INTRODUCTORY DESCRIPTION

OF

THE COUNTRY AND PEOPLE OF YORUBA.

BY THE

REV. T. J. BOWEN

Missionary of the Southern Baptist Convention.

ACCEPTED FOR PUBLICATION,
BY THE SMITHSONIAN INSTITUTION,

MAY, 1858.

R. CRAIGHEAD,
PRINTER, STEREOTYPY, AND ELECTROTYPE,
Carton Building,
81, 83, and 85 Centre Street, N. Y.

ADVERTISEMENT.

THIS work is the result of the labors of one of the members of the Southern Baptist Missionary Society, who resided several years in the Yoruba country, and enjoyed a very favorable opportunity of becoming intimately acquainted with the manners, the customs, the mental character, and the language of the people.

The manuscript was offered to the Smithsonian Institution for publication; but before it was accepted, it was referred by the Secretary to Professor W. W. Turner of this city for critical examination, and was subsequently placed in his hands for general revision and scientific arrangement. It was next submitted to the American Oriental Society for an opinion as to its character, and was finally adopted for publication as one of the Smithsonian Contributions to Knowledge on the receipt of the following report:

BOSTON and NEW HAVEN, *May*, 1858.

The undersigned, having been appointed, by the American Oriental Society, at its meeting held in Boston, May 19th, 1858, a Committee to examine and report upon the Grammar and Dictionary of the Yoruba Language presented to the Smithsonian Institution for publication, have made examination of these works, and declare that they are, in their opinion, true contributions to knowledge, interesting and valuable from the subject and the manner in which it is treated, and that they will be welcomed both by philologists and by those who have at heart the success of philanthropic and Christian effort in Africa.

JOSIAH W. GIBBS, }
W. D. WHITNEY, } *Committee.*
R. ANDERSON, }

The Institution is much indebted to Professor Turner for the labor he has bestowed upon the revision of the work, as well as for the time he has given to it in its passage through the press.

JOSEPH HENRY, *Sec'y S. I.*

Washington, June, 1858.

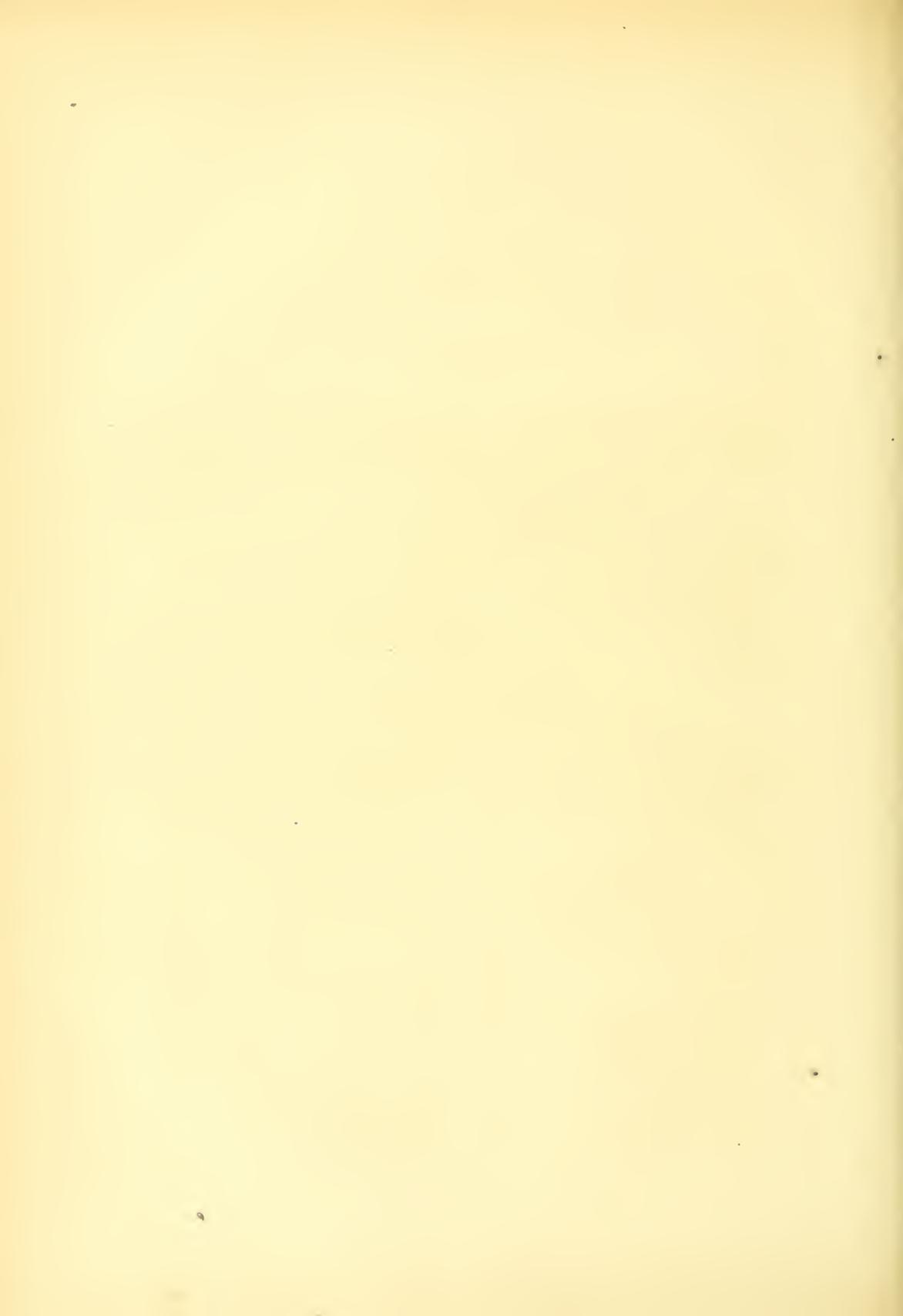
P R E F A C E.

THE task of reducing the Yoruba language to writing was begun about twenty years ago in Sierra Leone, by a youthful Yoruba named Adzàye, since widely known and much beloved under the title of the Rev. Samuel Crowther. His first Grammar and Vocabulary exhibited a rude attempt to write the Yoruba language in English letters without diacritical points or tone-marks. After the Church Missionary Society had agreed on a more appropriate alphabet for the Yoruba, Mr. Crowther prepared a revised edition of his work, which was published in London in 1852. This Vocabulary, which contains "nearly three thousand vocables," is the basis of the present enlarged Dictionary.

The grammatical principles here presented have been deduced from a multitude of sentences taken chiefly from the lips of the natives. With the assistance of Professor W. W. Turner, of Washington, to whom the work was referred by the Smithsonian Institution, the whole has been carefully revised; the orthography of the language has been somewhat modified for the purpose of reducing it to a more harmonious system; and the entire Grammar has been re-arranged and re-written so as to present the phenomena of the language, in accordance with the requirements of modern philology, as nearly as practicable from a native point of view. It is simply justice to say that whatever merits it may possess, as to plan and details, are due to that accomplished scholar.

T. J. B.

Greensboro', Ga., June, 1858.



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INTRODUCTION.

THE YORUBA COUNTRY.

GEOGRAPHICAL AND HISTORICAL DESCRIPTION.

THE Yoruba country includes all the territory which is inhabited by people who speak the Yoruba language. It is bounded on the East by Ibiuin or Benin and the Niger, on the West by Dahomi and Mahi, on the North by Barba (Borghoo) and Nufé, and on the South by the Bight of Benin. At the present time it is divided into eight independent kingdoms, as follows:

1. **Iketu**, situated immediately east of Dahomi, of which the extent is two thousand square miles, with a population of about one hundred thousand;* capital, Iketu. The surface of the country is level; timber and water are scarce, and the soil rather poor. Still this little kingdom has sufficient resources to repel the power of Dahomi, which it has done on two occasions.

2. **Eko**, or **Lagos**, situated immediately on the sea coast, has an area of about four hundred square miles, and a population of thirty thousand. The greater part are in Lagos, the capital, which is situated on a small island in the lagoon or bay, called Osa by the natives, and Cradoo by the English. Lagos claims all the coast to a point some miles west of Badagry. If this claim be allowed, the area and population of the kingdom are two or three times greater than above stated.

For many years Lagos was a stronghold of the slave trade. It was then nominally dependent on Benin; but the turbulent chiefs and people seem to have paid little regard either to Benin or to their own kings, who were frequently deposed and banished. Lagos is now under the protection of the English, but they claim no jurisdiction over the soil or people. It is the residence of several European merchants and missionaries, and bids fair to become one of the most flourishing towns in western Africa. The people speak the Yoruba language, which they frequently call the Eko; just as the Iketus, Egbas, &c., call it, after the name of their own tribes, the Iketu, the Egba, &c. By Europeans it is generally called the Aku language.

3. **Egba** is a small kingdom on the south of Yoruba and east of Iketu, lying on both sides of the Ogunj river, but principally on the east. The whole area, including the fallen kingdom of Ota, is about three thousand square miles, with a population of one hundred thousand; the capital, Abeokuta, has a population of eighty thousand souls. The surface of the country is generally hilly, especially east of the river; the soil is unusually fertile, and the whole region well supplied with streams of clear water.

In ancient times, as the Egba people relate, their country was a province of the Yoruba kingdom. After obtaining their independence, they were governed by a king of their own; but finally growing weary of monarchy, they determined that every town should be ruled by its own chiefs. This led to mutual jealousies and dissensions. About fifty years ago, these dissensions, stimulated by the slave trade and by the machinations of the Idzébus and Yorubas, resulted in civil war. The Egba country then contained more than a hundred towns, some affirm nearly three hundred, several of which were very populous. In the course of twenty-five years, every one of these towns was swept out of existence, with the single exception of Obà, which is yet standing, about ten miles south-west of Abeokuta. It is probable that five hundred thousand people perished by sword and famine. Many thousands were sold to the slave ships, and the remnant of the tribe was scattered abroad.

The city of Abeokuta is situated on the east bank of the Ogunj river, among twenty or thirty immense masses of granite, several of which rise to a height of two or three hundred feet. Forty years ago, a grotto or cave under one of these rocks, which surmounts an abrupt hill, was inhabited by a band

* It is scarcely necessary to remark that these numbers are conjectural.

of robbers. After the Egba country was destroyed, the robbers withdrew, and their place was supplied by a few refugees from some of the desolated towns. Their number was increased from time to time by the arrival of other refugees, and this continued till the new settlement contained about fifty thousand inhabitants, the remnants of about one hundred and thirty towns. In reference to the dwelling of the first inhabitants under the great rock, the town was called *Abẹ-okuta*, literally, *Under-stone*. The rock itself is called *Olumo*, *The Builder*, and some of the Egbas honor it with a sort of worship.

The people of *Ilorin*, of *Ibadan*, of *Idžebu*, and of *Ota* made repeated attempts to destroy the new town and sell the inhabitants for slaves. But the Egbas, now united under a skilful leader named *Šodeke*, were too strong for their assailants. After repelling several invasions, *Šodeke* began to take vengeance on his enemies, and conquered the kingdom of *Ota*. By this means he opened a road by which his people could trade to the sea-coast.

In the meantime several recaptured Egbas returned home from Sierra Leone, where they had learned something of civilization and Christianity. *Šodeke* and the Egbas generally were so much pleased with the accounts of the English furnished by the new comers, that he and the whole tribe invited missionaries to come and settle in *Abeokuta*. The consequence was that the English commenced a mission there in 1846. It is probable that there are now two thousand converts in that city.

On the 3d of March, 1851, the king of *Dahomi* attacked *Abeokuta* with a strong force, said to consist of ten thousand men and six thousand women—for about one third of his army is composed of Amazons.* The king expected a rich booty of slaves and plunder; but he seems to have been greatly mistaken in regard to the real strength of the town. The Egbas met him with a force at least equal to his own. Both parties were armed with guns. The battle raged for about four hours, and occasionally with such fury that the combatants were scarcely visible through the smoke at a distance of one hundred yards. In some cases they broke their empty guns over each other's heads. The king, though long accustomed to victory, was obliged to retreat. On the following day it was ascertained that he left twelve hundred and nine of his warriors dead on the battle-field. Although hotly pursued with continual volleys of musketry, the *Dahomies* retired in good order, and carried away all their wounded.

Since this battle the Egbas have generally enjoyed peace, and have made considerable advances towards civilization. They are now governed by a king, who is one of the ancient royal family of the nation.

4. *Idžebu*, on the south-east of Egba, and extending to the sea-coast, may have an area of five thousand square miles, with a population of two hundred thousand souls. The surface is undulating, and, like all the adjacent territories, is covered with a mixture of forests and grass-fields or prairies. The *Idžebus* are generally, though perhaps unjustly, regarded as the most barbarous of all the *Yoruba* tribes.

5. *Idžesa*, on the east of *Yoruba*, probably has an area of two thousand square miles, with a population of at least two hundred thousand. The capital is *Ileša*, and we hear of other considerable towns in the same vicinity.

6. *Efoŋ* extends from the north-east of *Yoruba* eastward to the *Oya* or *Niger*. Very little is known of this country, but it is understood to contain six thousand square miles, and a population of three hundred thousand souls. It is said to comprise several extensive towns, one of which, *Ibodo* or *Kakanda*, on the *Niger*, is the capital. The *Efoŋ* people are skilful in working brass and copper, and it is affirmed that they have copper mines in operation, six days' journey, or one hundred and twenty miles, east of *Ilorin*.

7. *Ilorin*, so called from its capital city, is a small Mohammedan kingdom, composed chiefly of *Yorubas*, *Fellatahs*, and *Haussas*. Its area is about one thousand square miles, and its inhabitants number at least two hundred thousand, nearly one half of whom are in the capital. This district revolted from *Yoruba* and became independent about thirty years ago. For several years they waged continual war against the heathen population of *Yoruba*, and they succeeded in destroying the capital, old *Oyo* (*Katanga* or *Eyee*), a great city, twenty miles in circuit. But finally they were defeated by the people of *Ibadan*, since which time they have acted chiefly on the defensive. The king and most of the principal people of *Ilorin* are *Pulohs* or *Fellatahs*; but the *Yorubas* and *Haussas*, both of whom are numerous, have some inferior officers of their own tribes.

Ilorin is one of the great marts of Central Africa, and is much frequented by people from various countries beyond the *Niger*, and even by *Moors* and *Arabs*. The principal exports are fine cotton cloths of *Nufé* manufacture, and slaves or prisoners captured in petty wars with the neighboring tribes. The imports consist of Arabian and common horses, salt, trona or crude carbonate of soda from the Great

* On the day after the battle, the writer saw several hundreds of these women lying dead on the field. So far as he has learned, *Dahomi* is the only country in Africa which employs female soldiers. They fought with great fury.

Desert, kola or goraah nuts, guns, swords, and European goods. Much of this traffic is carried on across the Desert, although Ilorin is not two hundred and fifty miles by the road from the Bight of Benin.

8. **Yoruba**, properly so called, lies immediately to the north of Iketu, Egba, and Idzebu, and approaches within sixty miles of the sea-coast. This division is by far the largest of the eight kingdoms which compose the Yoruba country. Its area may be estimated at thirty thousand square miles, and the population at about eight hundred thousand souls. This estimate may seem large; but it must be observed that the principal-towns in this part of Africa are from ten to twelve miles in circuit, and densely peopled. There are thousands of houses in such towns, and each house usually contains from twenty-five to sixty-five persons. The large towns of the Yoruba kingdom are, Ibadan, Idę, Ifę, Iwo, Idzaye, Oyo or Ago-Odza the capital, Ogbomoso, Ofa, Ikiši, Isaki, Isehin, Igana, and Isabe; and besides these crowded cities there are a multitude of smaller towns containing each from two to fifteen thousand people. The kingdom of Yoruba embraces the two former kingdoms of Ifę and Isehin, which are now integral parts of the nation. Another ancient line of hereditary kings resides at Itabo, a small village near Bi-olorun-kpelu, among the mountains.

The entire Yoruba country, comprising the eight kingdoms above mentioned, has an area of about fifty thousand square miles, with a population of nearly two millions. The extent of sea-coast claimed by the two kingdoms of Lagos and Idzebu is about two hundred miles.

The Slave Coast, of which Lagos is nearly the central point, has been formed partly by the sands of an immense drift, which left the coarser materials in the interior of the country, and partly by the gradual upheaval of the land—an action which is still going on, not only here, but at El Mina and Cape Coast Castle. For these reasons the sea grows deeper quite slowly from the sandy beach, which is always lashed by a violent and dangerous surf. The various little rivers which descend with a rapid current from Yoruba are compelled to creep along the coast within a mile or two of the surf, till they meet with the Ogun at Lagos, where they spread out into a broad lagoon called Osa, and force a tumultuous passage into the sea. Hence the landing at Lagos is always dangerous, although there are about two fathoms water on the bar.

Between Abeokuta and the sea the country is nearly level, quite free from stones, and mostly covered with dense entangled forests. Beyond Abeokuta the surface is undulating or hilly, and is generally well supplied with gneiss, granite, claystone, and quartz rocks. This part of the country is mostly open or free from forests, therein resembling some of the partially wooded prairies of North America. It is worthy of remark that this whole region is entirely free from swamps. The streams are clear, rapid, and rocky, and the soil is everywhere dry and firm. From the sea to the interior the surface of the country rises gradually and almost imperceptibly, and yet so rapidly, that the tides do not extend ten miles along the mouth of the Ogun, and the plain at the Ogbomoso is one thousand three hundred and five feet above the level of Lake Osa at Lagos.

The chain of mountains formerly marked on the maps of Yoruba has no existence. The only mountains in the country consist of isolated peaks, or little clusters of rugged hills, which rise abruptly from the surrounding plains, sometimes to a height of a thousand feet.

NATURAL PRODUCTIONS AND CLIMATE.

The only metal known to exist in the Yoruba country is iron, which in some places is quite abundant. The copper mines of Efon are hypothetical; but lead mines are known to exist beyond the Niger.

The plants of Yoruba are similar to those of Western Africa generally. I observed, however, an unusual number of North American genera, together with many others not mentioned in Hooker's Niger Flora. Comparatively few of the somewhat numerous plants which are common to the interior of Africa and the East Indies are noticed in that work. Pine-apples are never found here in the forests, as they are in Liberia;* and there is but one species of *Datura*,—whereas on the Gold Coast there are two, one of which has a double and sometimes a triple corolla. The Cactus, which grows so vigorously at Cape Coast Castle, is never seen in Yoruba; but *Euphorbias* of various species are abundant. Grape-vines of

* In the Yoruba language the pine-apple is called *okpaimbo* (*okpe ambo*), *the white man's palm*. The orange also appears to have been received from the whites, as it is called *orombo* (*oro ambo*), *the white man's mango*.

three or four distinct species are common on the interior plains. Some of them produce large fruit, but too dry and insipid to be valuable.

African travellers have erroneously reported that various plants, as the castor-oil bean, sesame, red pepper, cotton, &c., are indigenous in Africa. The mistake has arisen from seeing such plants on deserted farms, overgrown with bushes, and perhaps far away from any place which is now inhabited. The existence of indigenous coffee is doubtful. I have seen the so-called native coffee-trees in gardens, and the leaves were certainly narrower and yellower than those of the plants introduced from the West Indies. But a tree in the forest which was triumphantly pointed out as coffee happened to be in flower, and inspection proved at once that it belonged to a totally different family. The probability is that the slavers of former days planted coffee-trees, which are now found occasionally growing in the woods.

Among cultivated plants we may mention Indian corn of the variety grown in our Southern States, and yams similar to those of the West Indies, as staple articles of food. The yam is indigenous, and all the cultivated varieties have been reclaimed from the forests where they still grow. It is a traditional saying that yams were the primitive food of man. The first man made an attempt to eat a raw yam, but pronounced it unfit for human food. Afterwards one, accidentally lying near his fire, became roasted; and this was the first discovery in the important art of cooking. Indian corn is said to have been brought from beyond the Niger by a yellow monkey. It may not be irrelevant to remark that the natives sometimes call foreigners monkeys by way of derision. When a white man appears in the streets of Abeokuta, the children usually cry out, *Oibó akiti àgbá! The white man is an old baboon!* Maize is called in the Yoruba language, *agbado* (*agbá odó*), *what is beaten or cleansed in a mortar.*

The other articles of food are, Guinea corn or sorghum, of four varieties, called *baba*, *gero*, and *maiwa*; sugar cane; several kinds of beans; pea-nuts, both oily and mealy; sweet potatoes; onions; and various herbs of little value. The fruits are, oranges, limes, pawpaws, plantains, bananas, and a few pine-apples. The oro, or mango, and a fruit called *osun*, are almost the only wild fruits that can be eaten.

Most farmers plant a little cotton for home consumption, and some attempt to raise tobacco; but neither of these plants succeeds well. The cotton fails, to use a planter's phrase, by "running to weed," *i. e.* the joints of the branches where the pods appear are much too far apart, and the blooms are often fruitless. The defect of the tobacco is a want of strength and flavor. The weeds attendant on cultivation are similar to those of our Southern States; so much so, indeed, that a careless observer would scarcely perceive a difference between a corn-field in Yoruba and one in Georgia or Alabama.

As the inhabitants of Yoruba are all crowded together in towns, and derive their support from circumjacent farms, at least two thirds of their fine region is given up to wild beasts. A broad belt of country, once populous but now totally desolated by war, extends from near the sea to the Niger, running to the eastward of Abeokuta, and to the westward of Idzáye, Oyo, and Ogbomoso. Between the towns there are other desert regions, some of which are twenty miles in breadth. As these partially wooded prairies are covered with grass from eight to twelve feet in height, and the people are not addicted to hunting, the numerous population of the country has not greatly diminished the abundance of animal life. Hyenas prowl around the walls of large towns, and people are sometimes attacked and killed by leopards in the adjacent farms. Even the chase-loving Anglo-Saxon would find it impossible to extirpate the wild animals on the plains of Yoruba, so long as they remain covered with grass, which impedes the progress of the horseman.

The following brief sketch may give some idea of the animals known to exist in this part of Africa. The monkey tribe affords several interesting species, some of which I have not seen in the Zoological Gardens of London, or in any other collection. The most remarkable of these creatures is the well known Chimpanzee, which is found in several of the larger forests of Yoruba. The full-grown male is nearly four feet in height. His weapons of defence are his tusks, which are truly formidable; and his strength is so great, that the negroes consider him as more than a match for a man. He never defends himself with sticks or stones, never walks upright, and never builds a shelter or so much as a nest to defend himself or his young against the weather. He is generally seen on the trees, making prodigious leaps from branch to branch, and exhibiting all the habits of other monkeys. The face of the young Chimpanzee is remarkably human-like; but after the appearance of the tusks, it becomes disgustingly prognathous.

Hyenas are rather common, but I was not able to determine by examination whether or not they differ from those of northern Africa. The *adzako*, or wild dog, is a senseless creature which prowls in solitude.

According to the statement of the natives, which is confirmed by Lander, lions are common in Barba and northern Yoruba; but I have never heard of one's being seen east of the Ogun river. Leopards are common everywhere. Though not so fierce here as in the forests of Liberia, they sometimes, as remarked above, seize men even on the farms. In 1855, an instance of this kind occurred within three

miles of Ogbomoso, which is surrounded for miles by a well cultivated country. There are several smaller animals of the cat-tribe, some of which are spotted like Leopards.

Elephants are common on the prairies of Yoruba, and still more numerous in the forests of Barba. They seldom intrude into the farms, and are not regarded as mischievous animals; but the people have considerable aversion to meeting them on the plains. The hippopotamus is confined to the deep waters of the Osa and the Niger. I believe the rhinoceros is never seen in this region; but the people have heard of it as existing somewhere in the interior. There are two species of wild boar, the larger of which is said to be very fierce; the smaller kind is frequently killed by men who make hunting their occupation, and brought into market. A species of *Hyrax*, different from that of the Cape, but uttering a similar shrill cry, is common among the mountains.

This country nourishes several species of Antelope, some of which are very small, while others are twice the size of the common American deer. A species of Buffalo, called in Sierra Leone the "jack-ass cow," is frequently seen in Yoruba, sometimes singly, but commonly in small droves of ten or twelve.

Birds are very numerous. Among them may be mentioned, a large and a small eagle, both rare; several kinds of hawks and falcons, some of which are migratory; a booted owl; two species of vulture, one quite large; orioles; red and parti-colored sparrows; a blackish mocking-bird with an orange breast, a beautiful songster; swallows; several species of the whip-poor-will family, including the curious long-shafted "goat-sucker" of Sierra Leone; larks; various creepers; crows; sunbirds; kingfishers, one small species of which feeds on butterflies; horn-bills; parrots; two species of Guinea hen; a large and a small partridge; quails; several species of doves; storks and adjutants.

I have seen but one species of Tortoise, a small kind, eight or ten inches in length, which lives in the prairies. According to the natives, there are two species of crocodiles. The several specimens which I have seen appeared to be intermediate between the true crocodile and the alligator. One of them, seen in the Ogun river, was probably twelve feet or more in length. Lizards are very numerous; some of them, analogous to the iguana, are two feet long. I have caught several Chameleons. They creep along very slowly, as if wounded and in pain; but their form is not quite so ungainly as those of Arabia, and their eyes are less prominent. None of the lizards are thought to be poisonous by the natives.

Snakes are not numerous. The largest is the python, which, I believe, never attains a greater length than about fifteen feet. The natives speak of another species nearly as large. There are no water-snakes. A green snake and a black viper are the only ones said to be poisonous.

I have seen two kinds of Snails, one of which, the *Achatina*, is found seven or eight inches in length. Good Oysters are found on the sea-coast; in some localities they attach themselves to the roots of the mangrove trees, presenting a curious spectacle. The principal fresh water shell-fish are a *Muscle*, resembling that of the United States, and another, found in the rapids of the Ogun river, precisely similar in appearance to the oyster. The taste is very unsavory.

Insects, and especially flies, fleas, and mosquitoes, are not so numerous as might perhaps be expected. But ants of several species are in abundance. One species, which the natives call *ota*, *the stinger*, is frequently useful as an enemy of the termites, which devours every dry vegetable substance within its reach. Another species very like the *ota* is called "the driver" in Liberia, and *idzalo*, *the fighter which makes one go*, in Yoruba, because it moves in countless multitudes, and attacks every living thing in its way with the utmost fury.

There are two species of Scorpion, the black, about seven inches in length, and the yellow or brown, which is much smaller, but is said to be more dangerous. After being stung three times by yellow scorpions, and knowing others to be stung by both species, I regard them as far less poisonous than some have reported. Centipedes are seen in Yoruba, but I have never known a person to be stung by them. The natives affirm that the Spiders of that country are entirely harmless, and I have never seen one of that hideous kind, resembling a tarantula, which is so much dreaded in the Mendi country, west of Gallinas.

As the Landers passed through the Iketu country, they saw innumerable swarms of Butterflies. I have once seen the same myself in the same region, and nowhere else. On one occasion, when descending the Ogun river, we met millions of Dragonflies, about one-fourth of an inch in length, making their way up the country by following the course of the stream. In order to observe all the phases of animal life which this region exhibits, a man must reside there for several years, and visit the forests, mountains, and plains at different seasons. The same remark applies equally to the vegetation of the country. When we arrive at the highest lands between the sea and the Niger, we enter a new climate, and a new, or at least a modified, zoological and botanical region.

The climate of the different sections of Yoruba extending from Lagos to Nufe, though similar in its

main features, is quite different in some particulars. The lower countries, from Lagos to Idzáye or Oyó, are remarkable for a rather strong breeze which blows incessantly from the sea, generally from the south-west, but varying occasionally to the west or south. The course of this wind must be attributed chiefly to the shape of this part of the continent. If it were occasioned by the heat of the Great Desert, I suppose it would continue to blow in the same direction for several hundred miles into the interior of the country. In point of fact, however, the winds at Ogbomoṣo, especially in the dry season, are very variable.

In consequence of the south-western breeze, the climate of the low country is quite damp, the days very heavy, and the night air so chilly that we found it dangerous to go out after twilight. But during my stay at Ilorin, in April, 1855, the nights were so much warmer than any I had before experienced in Africa that, instead of being obliged to retire to my room immediately after sunset, I found it pleasant to walk in the yard of the house at 9 or 10 o'clock in the evening; and sometimes without a coat.

As there are no swamps in this country, it is probable that all the interior regions of Yoruba, particularly those of the northern watershed sloping towards the Niger, are as healthy as any other country within the tropics. I believe that the natives at least enjoy as good health as those of any part of the temperate zone.

Yoruba has the advantage of two rainy seasons. The "former rains" commence about the first of March, and increase till the sun has reached the Tropic of Cancer. After the middle of July there is little rain till about the first of October; then the "latter rains" commence, and continue for about two months. During December, January, and February, there is no rain except an occasional shower produced by a chilly wind from the north-east, which is called Oyé by the natives, and Harmattan by the whites. But the moisture produced by these showers is speedily evaporated by the excessive dryness of the Harmattan, which generally continues to blow for two or three days. The effects of the dry season are very decided; the grass on the prairies is withered and dried up, many kinds of trees cast their leaves, and most of the smaller streams cease to flow.

During my stay in the country, the thermometer ranged from 60° (when the Harmattan was blowing) to 97.5° on one occasion at Ogbomoṣo. The highest reading at Idzáye was 93°, and the lowest 68°. The average for the dry season, both at Idzáye and Ogbomoṣo, was about the same, viz. within a fraction of 82°. The differences indicated by the wet and dry bulbs of the hygrometer during the dry season varied from 0.2°, one morning after rain had fallen, to 25° under the influence of the Harmattan; and the averages for December, January, and February, were 5° at Idzáye, and 9° at Ogbomoṣo, fifty miles further in the interior. At the latter place, during the two rainy seasons, including the interval of delightful weather between them, the thermometer varied from 70° to 85°, and the hygrometer from 0.5° to 9°.

THE YORUBA PEOPLE.

PHYSICAL CHARACTERISTICS AND ORIGIN.

THE Yorubas are black and have woolly hair, but we occasionally meet with individuals who are fully as light-colored as American Indians. This color is hereditary in certain families; and it is a curious fact that, although it may seem to be lost, it sometimes reappears in subsequent generations. Individuals of this color are found not only among the Yorubas and other tribes of the interior, but among the Boes, and even among the Kroomen. They are called "red men" in Africa, though their color is not exactly that of Indians, nor yet of mulattoes, and is something wholly distinct from albinism. Several entire tribes of red men are found in the interior. The people of Ilorin spoke of a tribe of pastoral people called Alabawó, Hide-wearers, who are said to be decidedly light-colored. They build no towns, but live in leather tents, which they pitch in the form of a circular village, and remove from place to place for the sake of pasturage. Their language is said to be the Fulfudé or Fellatah; but they have no political connexion with the other Pulóhs of Central Africa. They are Mohammedans, acquainted with books, excellent horsemen, brave, and rapacious. Caillé mentions a tribe of Fulahs who were heathens and quite distinct from other Fulahs in language and habits. In fact they were not Fulahs, although resembling them in color. The Mandingoes, also, and others in that region, are not true negroes, either in color or features.

It seems reasonable to suppose that the red men among the Yorubas had the same origin as the red Pulóhs and other red tribes of the interior. On the other hand, it is unnecessary to refer the light color of these people to climate or to other conjectural causes, when we have good evidence that an extensive amalgamation of the black and white races has taken place in the countries where most of the mulattoes

are now found. We may admit in advance that some of the evidence of this amalgamation may be spurious or doubtful. For instance, king Bělo of Sókoto may be mistaken, when he asserts in his History of Takroor* that Bornu was peopled by an Egyptian colony. Still it is undeniable that a strong Caucasian intermixture extends from the Red Sea through Nubia and Darfur to the Shoas, south-west of lake Tsad; and it is just here, at the last named point, that we first meet with the red Pulóhs, who extend through Hausa, Bambara, &c., to the Senegal and the Atlantic Ocean.

Again, the brown men of the Desert belong to the white race. As a natural consequence of continual intercourse in peace and war, they often intermix with the blacks of Negro-land, and their half-caste offspring are as light-colored as mulattoes in America. The color, however, is different, being, as before observed, a more healthy and pleasing red, something between that of the mulatto and the North American Indian. When these African mulattoes intermarry with negroes, their children are more or less black; but their features and the texture of their skin afford unmistakable evidence that they are not pure negroes. They assume, in fact, the very appearance of the Mandingoes, whose peculiarities have been attributed to climate. Now, if there had been no amalgamation of races to the eastward of Lake Tsad, the intermixture constantly going on along the southern borders of the Desert is sufficient to account for all the types of mankind found in Sudan. The red Pulóhs, who are a numerous class, correspond exactly to the half-breed offspring of negroes and the people of the Desert, while the darker Pulóhs and the Mandingoes correspond to the descendants of such mulattoes and negroes. It is a curious fact, however, that some of the Pulóhs at Ilorin are lighter colored and more of the white man in every respect than any half-blood mulatto I have ever seen either in America or Africa. But even in these cases the hair is woolly, although it grows sufficiently long for the women to plait it and tie it under the chin.

Finally, the Saracens, who overran Sudan in the tenth century, left many descendants; and these, of course, were not pure negroes. In short, there is no want of evidence that the light color of many families and tribes in Sudan may have resulted from amalgamation. When we see that the children of a brown Moor and a black woman of Yoruba or Nufe are red, we very naturally conclude that all the red people in the country are of mixed blood. On the whole, then, the origin of the red or mulatto-colored men whom we find in Africa is more easily accounted for than the origin of the blacks.

But we return to the Yorubas, who are certainly negroes, if we except a few red men or mulattoes. They are not generally, however, such negroes as are frequently met with in the forests of Guinea and again, it seems, on the Benue river, in the heart of the continent.† Many of the Yoruba people, like those of Nufe and other countries, have handsome hands and feet, pleasing features, and well developed foreheads, and are altogether noble-looking men.

The traditions of the Yoruba people as to the origin of their tribe are obscure and contradictory. They generally affirm that mankind were created at Ifè, a considerable town in the eastern part of the Yoruba country. Sometimes they speak of Ifè as being four months' journey distant, as though the present town of that name were confounded with some other place of which the people retain an obscure traditional recollection. The word Ifè appears to be derived from fè, *to enlarge*; in which case it signifies *enlargement*.

Notwithstanding the prevailing belief that men were created at Ifè, I have been informed by some intelligent natives, that the Yoruba people once lived in Nufe beyond the Niger. They were driven from this position by war, at a time when the river was much swollen and difficult to cross. After retreating for some time, they founded the present city of Ifè, whence colonies were afterwards sent, first to Igbohó, and then to Oyo,‡ Lander's Bohoo and Katanga or Eyeo. Igbohó finally became the capital of Yoruba as a kingdom independent of Ifè. In subsequent times the seat of government was transferred to Oyo, where it remained till the city was destroyed by the Pulóhs, about the year 1835. The king then removed his residence to Ago-Odza, *the Tent-Market*, which at present is commonly called Oyo.

It would seem that Yoruba proper was once divided into three provinces, Ibakpa in the west, Iboló in the east, and Oyo (Eyeo or Ilio) in the north. At least the three principal dialects of the language are still called by these names. The Dictionary contained in the present work is chiefly in the Oyo dialect, which is considered the standard by a majority of the natives.

* See the extracts from Bělo's History in the Appendix to Denham and Clapperton's Travels in Africa, vol. ii.

† See Crowther's Journal of the Chadda Expedition in 1854.

‡ Igbo, *forest*; ihó, *shouting, clamor*; Igbohó, *the clamorous or noisy forest*, i.e. "the howling wilderness." Oyo, probably *escape, from yo, to escape*. This might indicate that Oyo was their first settlement west of the Niger.

RELIGIOUS BELIEF.

THE religion of Yoruba is a curious mixture of pure theism and idolatry. All the people believe in one universal God, the creator and preserver of all things, whom they generally call *Olorun* (6 li *orun*), the *Owner or Lord of Heaven*, and sometimes by other names, as *Olodumare, the Ever-Righteous, Oga-Ogô, Glorious High One, Oluwa, Lord, &c.* They hold the doctrines of the immortality of the soul and of future rewards and punishments; but on these points their notions are obscure. All the dead are in *orun, Hades*. *Oké-orun, the Upper Hades*, is the abode of the righteous, and *Orun-akpadi, the Crucible-Hades*, is the place of punishment.

Their idols are never confounded with God, either in name or character. They are called *oriša*, a name which appears to be derived from *asa, customs, or religious ceremonies*. Among the numerous *orišas* worshipped there are three great ones, called *Obatalá, Šangó, and Ifá*. *Obatalá* is thought to be the first made and greatest of all created things. Others, however, affirm that he was nothing more than an ancient king of Yoruba, and they profess to tell the name of his father. His name *Obatalá* appears to be a contraction of *oba ti nlá, the king who is great, or of oba ti ala, the king of whiteness, i.e. purity*. A white cloth (*ála*) is worn by his worshippers. Some of his other names are, *Oriša nlá, the great oriša; Alamore, he of the good clay*, because he made the human body of clay; and *Oriša kpkpo, the oriša of the gate*, because he is the guardian of the gates of cities. He is frequently represented as a warrior on horseback, holding a spear. His wife, *Iyangbá, the receiving mother*, is represented as nursing a child. But *Iyangbá* herself is *Obatalá*. The two are one, or in other words, *Obatalá* is an androgyne, representing the productive energy of nature as distinguished from the creative power of God. *Obatalá* forms or produces the bodies of men; but God himself imparts life and spirit, and God alone is styled *Èlédá Creator*. The second great *oriša* is *Šangó, the thunder god*, who is also called *Džakuta, the Stone-caster*. The stones or thunderbolts which *Šangó* casts down from heaven are preserved as sacred relics. In appearance they are identical with the so-called stone-hatchets picked up in the fields of America; but whether they were made originally for battle-axes, or leather dressing implements, or emblematic thunderbolts, is not easily determined.

According to one account, *Šangó* was born at *Ifè*, and reigned at *Ikoso*, a town recently destroyed, which stood thirty or forty miles south of *Išaki*. He was much addicted to predatory wars, in commemoration of which his worshippers still carry a bag, as the emblem of booty. When a house is struck by lightning, they have a right to pillage it, and also to steal as many goats and chickens as they can find at large in any part of the town. They affirm that their master was translated alive to heaven, where he reigns in great state, having a palace with gates of brass, and ten thousand horses, and amusing himself with hunting, fishing, and war.

But the abstract *Šangó* is quite a different being. He is the son of *Orungan, midday*, and the grandson of *Agardža, the desert*. His mother is *Ižemodža, the mother of fishes*, a small river in Yoruba. His elder brother is *Dadá, nature*, one of the Yoruba idols; his younger brother is the river *Ogun*, which bears the name of the god of war and smith's work. His wives are the rivers *Oya, Osun, and Oba*; his associate is *Orišako, the god of farms*; his slave is *Biri, darkness*; and his priest is *Magba, the receiver*.

The third great idol is *Ifá*, the revealer of future events, and the patron of marriage and childbirth. He is called *Banga, the god of palm-nuts*, because sixteen palm-nuts are employed in obtaining responses. The head-quarters of *Ifá* are at *Ado*, a village on the top of an immense rock near *Awáye*.

There are several other idols of note, as *Olúdná, the universe*, located at *Ifè*; *Dadá, nature*; and *Orišako, the god of farms*, whose symbol is a large iron bar. These bars are obtained at a great cost from the high priest of the idol, who dwells at *Irawo*. Many of the inferior idols are men and women who were distinguished in their day by some remarkable relation to the tribe.

The doctrine of idolatry prevalent in Yoruba appears to be derived by analogy from the form and customs of the civil government. There is but one king in the nation, and one God over the universe. Petitioners to the king approach him through the intervention of his servants, courtiers, and nobles; and the petitioner conciliates the courtier whom he employs by good words and presents. In like manner no man can directly approach God; but the Almighty himself, they say, has appointed various kinds of *orišas*, who are mediators and intercessors between himself and mankind. No sacrifices are made to God, because he needs nothing; but the *orišas*, being much like men, are pleased with offerings of sheep, pigeons, and other things. They conciliate the *oriša*, or mediator, that he may bless them, not in his own power, but in the power of God.

As the people make a clear distinction between God and idols, so an idol, which is a real spiritual being,

is not to be confounded with its symbol,* which may be an image, a tree, or a stone. A charm or amulet is thought to have much power, but it is not an orisá. It has no life and no intelligence as the orisás have. White men are generally much mistaken in regard to the religion and superstition of the negroes. They suppose that the idols are looked upon as gods; that the symbol is the idol; and that a greegree, or charm, is an object of worship—all of which is incorrect.

It is usual among Europeans to call the idols of the natives "devils." The natives themselves speak of only one devil, though they believe in the existence of various other evil spirits. In the Yoruba language the devil is called *Eṣú*, *the Ejected*, from *ṣú*, *to cast out*; and *Elegbara*, *the Mighty*, on account of his great influence over mankind. The name *Ebilisi* has been borrowed from the *Pulohs*, and by them from the Arabs. The devil is not reckoned as one of the mediatorial orisás; but the Yorubas worship him with sacrifices, to conciliate his favor and prevent his doing them injury.

Egungun, *bones*, and *Oro*, *torment*, are the executive or vindictive power of civil government deified. The latter is most usual among the *Egbas*, who term the punishment of criminals "giving them to *Oro*." On *Oro* day all women are obliged to remain closely shut up in their houses. *Egungun*, or the "*Aku Devil*," makes his appearance in the person of a tall fellow, fantastically clad and masked, and is declared to be a tenant of the grave. No one, not even the king, may dare to lay his hand on *Egungun*; and if any woman should say he is a man, she would be put to death. Even Mohammedans and Christians are obliged to conceal their knowledge of the imposture under penalty of martyrdom.

INDUSTRIAL PURSUITS.

Most of the people of interior Africa are more advanced in civilization than those on the coast. The deeper barbarism of the coast people is attributable to the dense forests in which they live, to the sparseness of the population, and to the vicious and idle habits which have naturally resulted from the slave trade. The degree of civilization which exists in the interior is probably very ancient. King *Bêlo*, already quoted, may not be correct when he affirms that the ancient Copts colonized *Bornu*; but we have independent evidence of an early, if not extensive, intercourse between Central Africa and Egypt. The *Popo* beads which are dug from the earth in the south-eastern part of Yoruba, and in countries east of the *Niger*, are identical in appearance with the beads found on the Egyptian mummies. Several of the arts and customs of Yoruba and other interior countries are Egyptian in their character; and the use of cowries for money must have been introduced from the east, since none of these shells are found in the Atlantic.

The most important industrial pursuits of the Yorubas are agriculture, blacksmithing, and the manufacture of clothing.

Unoccupied land is common property, and free for any one to cultivate. But each man has an exclusive right to his own farm, whether in actual cultivation or in fallow. When a farm is sold, the fruit-trees remain the property of the former owner, unless they are specially mentioned in the contract. Except a few hedges of *Jatropha*, *Curcans*, and *Euphorbia*, in the immediate vicinity of towns, there are no fences in the country; because there are not many cattle, and these are always under the care of keepers. Disputes concerning the boundaries of farms or fallow lands are generally settled at once by the neighbors.

Although the Yorubas are an agricultural people, their implements are few and of a very simple description. The usual tools of the farmer are, an axe, three inches in width, for felling trees; a bill-hook, or heavy pruning-knife, for cutting bushes; and an oval hoe, with a handle about two feet in length. Ploughs and carts are entirely unknown. Their oxen, though large and strong, are never employed for labor; and the horses, which are usually small, though well formed, are used exclusively for the saddle.

Yams are planted in large hills in January and February, and are matured in August and September. The first crop of maize is planted between the middle of February and the first of April, and ripens in July

* Some of these symbols, occasionally engraved on the temple doors of *Obatala*, deserve a more special notice. On several distinct panels are seen a fish, a land tortoise, and a serpent. Another has a female figure with one hand and one foot, probably a half *Obatala*, or the female principle of Nature. This figure is remarkable for having a queue of very long hair (which no negro can have) with a ball or globe at the end. Opposite to this are the male and female *partes genitales in coitu*. They are represented in the natural forms, and are never disguised by being formed into a handed cross, for instance, as they were in Egypt. Phallic worship is practised, but, I believe, without impurity.

and August; the second crop is planted chiefly in August or the latter part of July. As the heavy rains of May and June are not favorable to the growth of cotton, it is planted in July; in December the crop is cut short by the dry season. Maize and yams are generally housed in the farms where they grow, and brought into town in small quantities to supply the daily market. In case the town is large, some of the farms may be ten or even twenty miles distant; but all the produce is brought in on the heads of the owners. Pack-horses and asses, though employed east of the Niger, are never seen in Yoruba. I have travelled with a caravan of two or three thousand persons, all of whom carried their goods in packages on their heads.

Some parts of the country are rich in ore, from which the people obtain a very good quality of iron. As the smelters are not communicative, I can only state what I have seen as to their manner of working. The furnace is a pit in a house, and may be entered either by the door or by an underground passage which emerges twenty or thirty feet from the building. The broken ore is placed in the furnace with layers of charcoal; a number of well dried clay tubes, about an inch in diameter and fifteen inches in length, are inserted into the mass of ore and coal, I think at the bottom. Although no bellows are employed, the heat is so intense that the ends of these tubes are partially vitrified. The iron is sold to blacksmiths, who manufacture it into various articles, among which may be enumerated axes, adzes, hoes, sickles, bill-hooks, swords, knives, razors, scissors, needles, chains and staples, all of rude workmanship. The smiths' bellows are identical in principle with those of the ancient Egyptians and Greeks. The large anvil is a stone, the smaller one a block of iron. Copper, brass, and silver are wrought by the same smith with the same implements.

The Yoruba carpenter employs himself chiefly in the manufacture of bowls, mortars, and door shutters. His principal tools are wedges for splitting trees, an axe, and an adze. The carver who makes images of wood, or carves figures on doors and calabashes, works chiefly with knives. The ornamental engraving of calabashes appears to be a thrifty business. Considerable numbers of people are engaged in the production of clothing. Cotton is freed from the seeds by rolling it under a small iron cylinder on a smooth piece of wood. It is then whipped with a bow to prepare it for spinning, which is done with a distaff. The yarn is sold to the weavers every evening in market, and the cloth given to the tailors, who cut and make garments. Thread is warped on pins driven into the ground, and then formed into a large ball instead of being wound upon a beam. With the exception of the thread beam, the parts of an African loom are the same as those of hand-loom in our own country; but the implement is so small, that the cloth is scarcely six inches in width.

Among the other employments of the people we may mention the manufacture of earthen pots and vessels for cooking and eating; the dyeing of cloth with indigo, which grows abundantly on the farms; the dressing of black, red, yellow, and white morocco, and the making of it into shoes and saddles; the manufacture of various oils, chiefly from the palm-nut, the fruit of the shea-butter tree, and the seeds of sesame and of watermelons; the manufacture of beads from broken palm-nuts and from jasper, both beautiful articles; the making of soap; and the grinding of snuff, which is practised in every town. As the tobacco is poor, it is always ground with carbonate of soda from the desert, to give it pungency.

So far as I could ascertain, the art of making glass is confined to three towns in Nufe, one of which is west of the Niger. This art is kept a profound secret.

There is no legal or customary restraint as to the choice of occupations, except that it is not reputable for women to labor on the farms. In their favorite capacity of traders, however, they are constantly engaged in bringing the produce which they have purchased from the farms to the market. Many poor women also obtain a living by supplying the market with firewood, which they sometimes bring from a distance of six or eight miles. Others gather large leaves, which they sell by the basketful to the market women to be employed as wrapping paper. The other employments of females are housework, spinning, washing, soap-making, and the manufacture of earthenware. The cultivation of the soil, blacksmithing, wood work, weaving, tailoring, and the barber's trade, are performed by men.

All the Africans, and none more so than the people of Yoruba, are addicted to traffic. Their trade with the people nearer the coast consists in palm oil, ivory, cotton cloths, indigo, iron, horses, cattle, sheep, &c.; for which they receive cheap guns and powder, calicoes, velvet, salt, and other articles from Europe and America. Their inland trade embraces the foregoing and many other commodities, including large quantities of soda, and some fine horses, worth several hundred dollars each, from Hausa and Bornu. Hides, coffee, and a superior kind of indigo will be among the future exports.

In the present condition of the country, without roads or vehicles, the traffic gives employment to thousands of people. Sometimes a single caravan consists of hundreds and even thousands of persons of

both sexes. Their only travelling equipment is a mat to sleep on, a coarse cotton sheet for a cover, a small bag containing provisions, and a little earthen pot to warm the sauce, which, with yams and preparations of corn, is the universal diet. A carrier's burden varies in weight from forty to eighty pounds. As there are neither weights nor standard measures in the country, such articles as salt, soda, and oil are sold from town to town by the load till they reach a consumer.

Markets, for the sale of provisions and other common necessities of life, are held daily in all the towns; but the large market for the sale of general merchandise is usually held every fifth day. On these occasions we frequently see thousands of people busily engaged in traffic. At Ilorin, the greatest market in the country, which is held daily owing to the abundance of business, there are men from every part of Central Africa, and frequently from Tripoli and other countries of the North. The merchandise includes a great variety of articles, African, European, and Asiatic, from a slave to a ready-made pen and a bottle of ink.

Owing to the frequent wars which afflict the country, and partly perhaps to the gregarious disposition of the people, they invariably reside in towns. Even the farmers, who are obliged to pass many of their nights in the distant fields, never erect a better dwelling than a hut in the country. All the towns in the interior are surrounded by rather strong mud walls five or six feet in height, with a deep ditch on the outside. The gates are closed at night with heavy shutters and guarded by keepers.

African towns are never laid out in a regular manner. All the streets, except the few which lead from the gates to the market, are very narrow, and intersect each other at every possible angle. The broader streets, the markets, and other open spaces are beautifully shaded with wide-spreading trees. Architecture is wholly unknown. The houses, from the palace to the dwellings of the poorest people, are built of mud and covered with a thatch of grass. They are all of the same form, that of a large square inclosed by a series of single rooms, after the manner of a fort. The interior court, which is open to the sky, is entered by a large gate with a heavy board shutter. Most of the rooms are scarcely six feet between the dirt floor and the fire-proof ceiling of sticks and mortar overhead, and the usual dimensions are six or seven feet in width by twelve or fifteen feet in length. As there is only one low door and no windows, these rooms are always dark. During the day, the people sit in the piazza which extends in front of the rooms; when they retire to rest at night, or enter a room by day, they use an earthen lamp supplied with oil.

The Africans have no chairs, tables, or bedsteads: their furniture consists of mats, earthen pots, bags, and gourds. Their food is taken with the fingers from a deep earthen dish. A sort of sauce composed of meats and vegetables, or of vegetables and oil only, and highly seasoned with red pepper, is a universal article of diet. They never roast or boil joints of meat in Yoruba. Yams are prepared to be eaten with sauce, either by simply boiling, or by boiling and pounding with the addition of water to the consistence of wheaten dough. Indian corn is first soaked till it becomes a little sour, then pounded or ground on a flat stone with a small stone cylinder or rubber, and the starch, after being washed out in pure water, is boiled down to the consistence of thick paste. This food is much used, both diluted as a warm drink in the morning, and cold in the form of round dumplings, which are wrapped in leaves for sale. When they make bread, it is fried, never baked. Very little milk is used except at Ilorin.

Most of the laboring people take their breakfast at an early hour in the streets, around the pots of women who prepare food for sale. At noon they eat in the farms or wherever they may happen to be, and their supper is taken just before they retire to sleep. The flesh of sheep, goats, and cows is sold daily in the market; but the people use it sparingly. Fish is not plentiful in Yoruba except on the larger streams.

The dress of the men consists of trowsers or short breeches, a tunic or a kind of shirt without sleeves, and a sheet or wrapper, or else a large flowing gown. The head, which in general is smoothly shaven, is covered with a tight cloth cap, to which is sometimes added a hat or turban. A woman's dress is composed of three wrappers, two around the waist and one over the shoulders, but the last is often laid aside. Women do not shave their heads except as a mark of mourning. Their usual headdress is a fillet of cloth. Horsemen wear a sort of shoes and sometimes boots. Travellers who go on foot frequently wear sandals; but most of the people of both sexes generally go barefoot. Boys are usually provided with breeches, or at least an apron, at the age of five or six; but girls of ten or twelve years often appear in the streets, from choice, wearing nothing but their beads and bracelets. Most of the Yorubas are cleanly in their habits, and rather fond of being finely dressed.

The principal amusement of the young people is dancing to the sound of drums. The older men meet together under the shady trees to talk, and sometimes to play a sort of draughts and other games of a similar nature. Several times in a year the whole population enjoy the recreation of religious festivals, the greatest of which, called *oḍún*, or new year, occurs about the first of October. On these occasions they

offer sacrifices and make charms to promote the prosperity of the town, and have various noisy processions to the temples and sacred groves. Once a year, at the close of the dry season, they spend several days in burning off the prairies and in hunting. On the chief's hunting day, hundreds of people of both sexes attend him. The game is taken with dogs and clubs, as the use of guns would be dangerous.

The government of the country is a monarchy engrafted on the ancient patriarchal rule. Every house contains several families under the government of a *bàlẹ* or lord of the house, every town has its *bàlẹ* or lord of the land, and the whole nation is under a king. The adult males are also apportioned under rulers who stand intermediate between them and the *bàlẹ*, or governor. The king, the governor, and the head of the family has each his associate or lieutenant, and the elders under him are his counsellors. Even the king is bound by the laws of the land, of which the elders are the conservators and exponents. The laws are generally good, except in so far as they are connected with idolatry and polygamy. They are rigidly executed, and sometimes with displeasing promptness; but causes are always decided by the ruler and his council according to testimony.

INTELLECTUAL AND MORAL CHARACTERISTICS.

In regard to intellect the Yorubas occupy a low position. All their arts are rude, and the people are wholly destitute both of literature and science. But they are by no means deficient either in natural shrewdness, or in that sort of common sense which is adapted to their condition. Their language also, which is surprisingly rich in abstract terms, is a proof that they are accustomed to think. Since their acquaintance with white men they evidently begin to feel the aspirations of intellect, and their desire to improve is leading to good results. At *Abẹokuta* several hundred persons have learned to read their own language.

Like other rude people, the Yorubas are much addicted to the marvellous. In the opinion of many, the power of a white man is almost infinite. He can look around on all the passing events of the earth, he can stop the clouds in their course,* and even create cowries whenever he may need them. They seize with avidity on every extravagant story they may hear. Marvellous things have been told me of the *asorì* or *igì nlá*, a tree somewhere in the interior, to which they attribute all the properties of the deadly *upas*; even birds that fly near it fall dead. The common people, old men, and grave chiefs have repeatedly affirmed the existence of a unicorn, which they describe as a large antelope with a straight black horn in the middle of its forehead. When I visited *Ilorin* in 1855, this story was repeated; and my host, *Nasamu*, an intelligent Bornese, added others still more wonderful. He assured me that somewhere eastward of *Nufè* and *Yakobu* there was a tribe of men, called *Alabiru*, who had inflexible tails about six inches in length. The *Alabiru* were a very ingenious people, especially in working iron; and all the fine swords in *Sudau* were made of iron from their furnaces. Beyond this tribe was another called *Alabiwo*, distinguished by a small goat-like horn projecting from the top of the head just above the margin of the hair. Somewhere in the same region was a tribe called *Alakere*, the tallest of whom were scarcely three feet in height. Being a weak people, the *Alakere* surrounded their towns with walls of iron. *Nasamu* had never seen any person of these tribes; but he asserted that there was one of the horned women then in slavery at *Ọfá*, about thirty miles east of *Ilorin*. She always wore a handkerchief around her head, because she was ashamed of her horn. In reply to my question, whether any of the tailed men were in slavery in or near *Ilorin*, he replied, "Who would have a slave with a tail?" A few days after this I received a visit from an Arab trader, who confirmed all the statements of *Nasamu*, and added others of his own. Among the rest he told of a tribe of people south of *Mandara* who have four eyes. A Negro from beyond the Niger proceeded to inform me how these eyes are situated in the head, but the Arab corrected him and showed me exactly where each of them is placed. In short, it is manifest that all the floating stories of *upas* trees, unicorns, &c., have originated with the wandering Arab traders, who are equally distinguished by a vivid imagination and a small regard for truth. In the simple Negroes they find ready listeners to all their wonderful stories, and they were not at all pleased with the incredulity of an-Nasran, the Christian.

The moral character of the Yorubas exhibits strong contrasts. On the one hand we are shocked at their occasional human sacrifices, their unlimited polygamy, and their custom of allowing the heir to inherit all his father's wives except his own mother. Their universal covetousness, their deficiency in regard to conscience, and their want of manly self-respect disgust us. On the other hand we see much to admire

* At the close of the dry season I was observing the movements of a black thunder cloud, when an old farmer said to me imploringly, *Déń, dze ó ró fà ni!* Please let it rain for us!

and to mitigate our judgment even in regard to the bad features of their character. They are naturally kind and simple-hearted, remarkably courteous in their mutual intercourse, and strongly attached to their country, friends, and kindred. All the moral virtues, and especially gratitude and honesty, are inculcated in their proverbs. It is a remarkable fact, that although the missionaries have had hundreds of parcels of cowries and supplies brought by native carriers from the coast to their interior stations, there has scarcely been an instance of theft. Adultery and other crimes are much rarer than we could suppose. During my six years' residence in the country I never knew a case of an illegitimate child, although the women do not marry before they are eighteen or twenty years of age.

When the first missionary entered the Iketu country in 1850, some regarded him as a spy, and others had superstitious fears that the presence of a white man would bring misfortune on the country. For these reasons they, in many instances, refused to admit him into their towns, but they never treated him with violence. The same thing occurred subsequently when he entered the kingdom of Yoruba. They obliged him to sleep without the walls, but they supplied him with food without charge. On one occasion he encamped under a tree near the gate of Awaye. Hundreds of friendly people came to look at him, and next day the women were singing a newly made song commencing with, *Oibó guj sidi akpé*, "The white man encamped at the foot of the akpé tree." Now that the people understand the real object of the missionaries, they are not only willing but anxious to receive them.

The gospel was first preached to the Yorubas in Sierra Leone, where there are thousands of them who have been rescued from the slave ships. Most of them have embraced Christianity, and many have learned to read. Some have accumulated considerable wealth, and others have made no mean attainments in information if not in learning. The character of the Rev. Samuel Crowther, whose Yoruba name is *Adžáye*, *struggling for life*, is known to the public, and much admired both in Europe and America; and yet Mr. Crowther is only one among other Yoruba men, his equals in mind, moral character, and respectable attainments. The people are found to be equally susceptible of improvement in their native country. Although the missions have been so recently established, all the eight kingdoms of the Yoruba country have felt more or less the stimulus of truth; and if the social laws now at work among the people produce their natural results, it cannot be many generations before Yoruba will be reckoned among civilized nations.

LIST OF YORUBA PUBLICATIONS.

Within the last ten years the Church Missionary Society of London has published the following Yoruba books and tracts, nearly all of them the work of the Rev. Samuel Crowther.

- The Yoruba Primer. Iwe Ekiini on ni tu awon ara Egba ati awon ara Yoruba. *London*, 1849.
- A Vocabulary of the Yoruba Language, compiled by the Rev. S. Crowther, Native Missionary of the C. M. Society, together with Introductory Remarks by Rev. O. E. Vidal, M. A., Bp. Designate of Sierra Leone. *London*, 1852.
- A Grammar of the Yoruba Language, by the Rev. S. Crowther, Native Missionary of the C. M. Society. *London*, 1852.
- The First Book of Moses, commonly called Genesis. Translated into Yoruba, for the use of the Native Christians of that Nation, by the Rev. S. Crowther, Native Missionary. *London*, 1853.
- The Gospel according to St. Matthew. Translated into Yoruba for the use of the Native Christians of that Nation, by the Rev. S. Crowther, Native Missionary. *London*, 1853.
- The Second Book of Moses, commonly called Exodus. Translated into Yoruba for the use of the Native Christians of that Nation, by the Rev. S. Crowther, Native Missionary. *London*, 1854.
- The Psalms of David. Translated into Yoruba for the use of the Native Christians of that Nation, by the Rev. S. Crowther, Native Missionary. *London*, 1854.
- Iwe Owe ati Iwe Oniwasa. Li Ede Yoruba tu awon Kristian ti ilu nan nipa Rev. S. Crowther, Alafa ti ilu nan. (Proverbs and Ecclesiastes.) *London*, 1856.
- The Gospel according to St. Luke, The Acts of the Apostles, with the Epistles of St. James and St. Peter. Translated into Yoruba, for the use of the Native Christians of that Nation, by the Rev. S. Crowther, Native Missionary. *London*, 1856.
- Katekismu Itan, ti Dr. Watts, Testamenti Lailar on Testamenti Titun.—Watts's Catechism of the Old and New Testament. Translated into Yoruba, by the Rev. Samuel King, Native Missionary. *London*, 1857.
- Katekismu Ekezi, ti Watti.—Watts's Second Catechism. Translated into Yoruba, by the Rev. T. King, Native Missionary. *London*, 1857.
- Iwe Orin Mimo. (Yoruba Hymns.) *London*, 1857.

GRAMMAR
OF THE
YORUBA LANGUAGE.

Y O R U B A G R A M M A R .

PART FIRST.

ORTHOEPY AND ORTHOGRAPHY.

§ 1. The system of orthography adopted in this work is essentially the same that has been widely employed for African languages. In it an endeavor has been made to give a true expression of all the well distinguished sounds of the language. To each simple fundamental sound there is assigned a single character; and each compounded sound is represented by the characters which stand for the elements of such compound sound.

§ 2. The reader should be reminded that the sound of each letter, in this as in other languages, is subject to slight modifications from accent and connexion.

CHAPTER I.

THE ALPHABET.

§ 3. The characters that represent the simple sounds of the Yoruba language are, a, ą, b, d, e, ę, f, g, h, i, k, l, m, n, o, ọ, p, r, s, s̄, t, u, w, y, z.

VOWELS.

Simple Vowels.

§ 4. The simple vowels are as follows:

a is sounded long, as in the English word *father*; and short, as in *fat*.

Examples: ba, *to meet*; lati, *from*.

ą has the obscure sound of *u* in *but*, *o* in *mother*, &c. Ex.: ąni, *in the hand*.

e is sounded like *a* in *fate*, or *ey* in *grey*. Ex.: de, *to come*.

ę is sounded like *e* in *met*. Ex.: ę, *to love*.

i is sounded long, like *ee* in *fee*, or *i* in *ravine*; and short, like *i* in *fig*. Ex.: di, *to bind*; igo, *a bottle*.

o is sounded as in *go*, *tone*. Ex.: fò, *to fly*.

ọ is sounded long, like *a* in *water*, *all*; and short, like *o* in *not*. Ex.: fò, *to wash*; ọni, *a crocodile*.

u is sounded long, like *oo* in *fool*, or *u* in *rule*; and short, like *u* in *full*. Ex.: lù, *to strike*; bulu, *to lie down*.

§ 5. The vowels are either pure or nasal. Nasalization is indicated by the character η ; as, $da\eta$, *to polish*; $s\eta n$, *to sleep*.

§ 6. We may here observe:

1. That the sound of 'e' after 'kp' is more open and liquid than usual.

2. That 'a,' 'i,' and 'o,' are short before a consonant; as in *ate*, a *hat*; *ilé*, a *house*; *ofo*, an *arrow*; pronounced as if written *atte*, *illé*, *ofo*. But to this rule there is one exception, viz. when the tone is grave, these vowels are always long; as, *àbo*, a *shelter*; *imò*, *knowledge*; *òro*, a *word*.

§ 7. In the Egba and some other dialects, 'o' long, when followed by 'n,' and occasionally when preceded by 'm' or 'n,' takes the sound of 'u' long; as, *ton*, *again*; *mò*, *to drink*; *inò*, *within*; pronounced, and sometimes written, *tun*, *mu*, *inú*.

Diphthongs.

§ 8. The following are the compound vowels, or diphthongs:

ai, pronounced like *i* in *pine*, or *y* in *fly*, only it is longer and more open.

Ex.: *bai*, *thus*; *aimò*, *unknown*.

au, pronounced like *ou* in *house*, or *ow* in *now*. Ex.: *daudu*, a *prince*,

ei, **ei**, **oi**, **oi**, in all of which the second vowel, 'i,' is very short. Ex.: *ei-di*, a *wart*; *ei-ye*, a *bird*; *oi-bò*, a *white man*; *kòì-kòì*, *timidly*.

ua, **ue**, **ue**, **ui**, **uo**, **uo**, are formed only by the union of two words, the former of which ends in 'ku'; as in *akuale*, *good evening*, from *aku*, a word of salutation, and *ale*, *evening*. In all these cases the letters 'ku' have the force of *qu* in English.

Quantity of Vowels.

§ 9. The vowels are either long or short, as exemplified in the following sentence: *aláfíá kí ò wá fù gbògbò ènià rère*, *peace be unto all good men*.

§ 10. Although it is not possible to lay down rules by which to determine the quantity of vowels in all cases, yet there are several facts and general principles a knowledge of which will be useful.

1. In regard to long vowels:

a. The diphthongs 'ai' and 'au' are always long; as, *aimò*, *unknown*; *daudu*, a *prince*.

b. Vowels having the grave tone (except *ì*, *ò*, and *ò*, negative) are generally long; as, *àbo*, a *shelter*; *ère*, *gain*; *ibi*, *evil*; *òdo*, *water*; *òro*, a *word*.

c. The vowels 'o' and 'a,' when employed as auxiliary particles in conjugating the verb, are long; as, *emi ò ri*, *I shall see*, *emi li á ri*, *I am seen*. These, for the sake of distinction, are marked with a circumflex accent.

d. The final vowel of a noun is long when followed by a personal pronoun in the possessive case; as, *iwé mi*, *my book*; *asó rẹ*, *his cloth*.

e. When a letter or syllable is suppressed or elided, the vowel which immediately preceded it becomes long; as, *bálẹ*, a *governor*, contracted from *oba ilẹ*, *the lord of the land*; *sūru*, *patience*, from *še* (often pronounced *se*), *to do*, and *iru*, *the act of bearing a burden* (see § 16, 3); *abá* for *abara*, a *slap with the hand*.

2. In regard to short vowels:

a. The negatives *i*, *ò*, and *ò*, *not*, are short; as, *emi ò mò*, *I do not know*; *ete ì mò ete ni ikó oraj ba ẹrẹkẹ*, *lip not keeping to lip brings trouble to the jaws*.

b. The initial 'i' of the infinitive mood is very short and slight; as, *iwọ̀ lẹ̀ ísẹ̀*, *thou canst do*.

c. The objective pronouns *à*, *è*, &c., are so short as to be scarcely perceptible. (See § 88, 2, *b.*)

Tone of Vowels.

§ 11. There are three primary tones, the Middle, the Acute, and the Grave; as, *ba*, *to meet*; *bá*, *with*; and *bà*, *to bend*. The middle is the ordinary tone of the voice without inflexion; the acute and grave tones are simply the rising and falling inflexions of elocutionists. In the Yoruba language, however, they are employed to distinguish words which are spelled alike, but have different meanings. Thus the two words *òbẹ̀*, *sauce*, and *òbẹ́*, *a knife*, are quite different to the ear, when uttered with the proper tones. The tones, though simple in theory, are difficult for us to seize, and require close attention.

The acute and grave tones will be denoted throughout this work by the acute and grave accentual marks placed over the vowel, as in the examples just given.

Assimilation of Vowels.

§ 12. The principle of vocalic assimilation exhibited in the Yoruba language consists in changing a weak or unaccented 'o' into some other vowel, so as to assimilate it to the adjacent strongly accented vowel of a verb or preposition.

§ 13. Assimilation is either Perfect or Imperfect. In *perfect* assimilation, the unaccented 'o' becomes identical with the accented vowel of the word to which it is appended.

1. *a.* The vowel 'o,' the shortened or simplified form of the objective pronoun of the third person, is regularly exchanged for a vowel which is identical with that of the governing verb, so that this pronoun assumes all the following forms:

<i>emi wò ò</i> , <i>I looked at him.</i>	<i>emi kpè è</i> , <i>I called him.</i>
<i>emi mò ò</i> , <i>I knew him.</i>	<i>emi fẹ̀ è</i> , <i>I loved him.</i>
<i>emi lù ù</i> , <i>I struck him.</i>	<i>emi rí ì</i> , <i>I saw him.*</i>
<i>emi ba à</i> , <i>I met him.</i>	

b. The principle applies equally when the governing word is a preposition; as, *bá à*, *with him*; *sí ì*, *to him*; *fú ù*, *for him*.

In all these cases the unchanged full form 'on' may be used; as, *emi fẹ̀ on*, *I loved him*; *fú on*, *for him*; but the assimilation, if employed at all, must be perfect.

2. The preformative 'o' of nouns is perfectly assimilated, if at all, to the vowel of the root; as, *oko*, *a farm* (from *ko*, *to gather*); *òrọ̀*, *a word* (from *rọ̀*, *to utter, relate, explain*); *ata*, *pepper* (from *ta*, *to burn*); *erè*, *goodness* (from *rè*, *to be good*); *èṣẹ̀*, *sin* (from *ṣẹ̀*, *to sin*). Frequently, however, no assimilation takes place. (See § 40.)

§ 14. To understand the rule of *imperfect* assimilation, it is necessary in the first place to observe that the vowels are divided into three classes, which, in reference

* No example of 'a' is given, as no verb, nor indeed any other word in Yoruba, ends in that vowel.

to the general character of their sounds, may be called the *close* vowels, viz. e, i, o, u; the *open* or *broad* vowels, e, o; and the *neuter* vowels, a and ă. In imperfect assimilation the rule is that the vowel 'o' when occurring before a close vowel, that is, a vowel of its own class, remains unchanged; but before an open vowel, it is changed into its corresponding open form 'ô.' Before the neuter vowels, it may take either form, 'o' or 'ô.'

This rule applies to the nominative pronouns, mo, *I*; o, *thou*; ôṅ or ô, *he*; the auxiliary particle ô, *shall* or *will*; and kò or ò, *not*; in all of which the 'o' before an open vowel becomes 'ô'; as,

mô fê, *I love.*

yi ô fê, *he will love.*

ô fê, *thou lovest.*

nwôṅ kô fê, *they do not love.*

ô or ôṅ fê, *he loves.*

á ô fê, *we do not love.*

The same change takes place before the other open vowel, 'ô.' The reader, however, must be informed that the rule is one which is often disregarded in speaking.

Elision of Vowels.

§ 15. All Yoruba verbs end in a vowel either pure or nasal; as, kò, *to build*; ran, *to spin*. And most of the nouns begin with a vowel; as, ilé, *a house*; owu, *cotton*. To avoid an inconvenient hiatus, it is customary in speaking to drop either the final vowel of the verb, or the initial one of the noun which follows it; as, k' ere for ko ere, *to gather a crop*; ran 'wu, for ran owu, *to spin cotton*.

In this work, the vowels which are usually elided in speaking are designated by the inverted crescent (˘); as, kô ere, ran ôwu (pronounced ke-re, ran-wu).

§ 16. The principal rules of elision are as follows:

1. When two vowels of the same name concur, one of them is dropped; as, rà âsô, *to buy cloth*; fê èsê, *to love sin*.

2. The stronger of any two concurring vowels is retained in preference to the weaker.

The circumstances which make a vowel strong in the sense here contemplated may be shown as follows:

Strong Vowels.

Long.
Grave.
Accented.
Open.

Weak Vowels.

Short.
Acute.
Unaccented.
Close.

But these elements of strength and weakness may be variously distributed. One of the vowels may be grave, and the other accented, long, or open. To give all the combinations which may arise from the various quantities, tones, and accents of two concurring vowels, would be more tedious than profitable. It may suffice then to specify a few cases, with examples, to verify the general rule that the weaker of the two concurring vowels is elided.

a. When the first vowel is grave, and the second vowel is weak, the latter is elided; as, ó rà êwe, *she bought leaves*;* dà êsê, *to break the foot*; bò ára, *to cover the body*; kè ôṅṅ, *to be hoarse*. But if the second vowel should be long, the grave

* Leaves are sold to market-women to be used for wrapping articles in.

vowel is elided; as, ɔmɔri gbâ ɔru, *the lid receives (gbâ) the steam*; mɔ̄ ānu, *to know (mɔ̄) mercy*.

b. If the first vowel is open, and neither of the vowels is long, grave, or accented, the second is elided; as, kɔ̄ ɛbe, *to make a yam-hill*; fɔ̄ ɔru, *to break a jug*; fē ina, *to blow the fire*. Sometimes, however, the choice of the vowel to be retained is reversed, to prevent ambiguity; and frequently both vowels are sounded, for the same reason.

3. In a few cases neither vowel is dropped, but the two are exchanged for 'u'; as, wure (for wi ire), *to bless*; sïru (for se iru), *patience*; sufe (for so ife) *to whistle*; sure (for sa ire), *to run*; duro (for da iro), *to stand, &c.*

CONSONANTS.

Simple Consonants.

§ 17. The simple consonants, b, d, f, k, l, m, n, r, s, t, w, and y, are sounded as in English, and are never quiescent.

g is always hard, as in *go, get*. Ex.: igi, *wood*; gele, *a handkerchief*.

h in some dialects is silent when it occurs between two vowels; as, behe, *so*; lohun, *yonder*; pronounced be-e, lo-uh. In all other cases, 'h' has the same power as in the English word *hat*.

ŋ is the sign of nasalization. At the end of a word or syllable it is equivalent to the French *n* in *bon*. Ex.: dan, *to polish*; sun, *to sleep*. Before a consonant, that is, at the beginning of a word or syllable, it has a stronger sound, nearly equivalent to the English *ng* in *song*. Ex.: ŋso, *to proceed*.

The nasal pronoun ŋ, *I*, is pronounced as a part of the preceding word, when it follows a vowel; as, ki ŋ lɔh? *shall I go?* pron. kiŋ lɔh. But if 'ŋ' is not preceded by a vowel, it is attached in pronunciation to the following word; as, ŋ kɔ̄ mɔ̄, *I do not know*; ŋ ɔ̄ ri, *I shall see*; pronounced ŋkɔ̄ mɔ̄, ŋɔ̄ ri.

p occurs only in the compound 'kp.' (See § 18.)

š is sounded like English *sh* in *show*. Ex.: še, *to do*.

ž has the sound of English *z* in *azure*. It occurs only in the compound 'dž.' (See § 18.)

Compound Consonants.

§ 18. Three compounds, of two consonants each, are of such common occurrence as to have been frequently regarded as simple letters, viz. dž, gb, and kp.

dž is sounded like English *j*, as in *jug*, or *g* in *gem*. Ex.: dzo, *to dance*. (This sound was formerly represented by *j*.)

gb represents the sounds of *g* hard and *b*; as, gbâ, *to receive*; agba, *an old man*.

kp is equivalent to *k* and *p*, as, kpa, *to beat*; akpa, *an arm*. (Formerly represented by *p*.)

The sound of 'g' and 'k' in these compounds is very slight at the beginning of words.

§ 19. Compounds of a nasal and another consonant occur incidentally :

1. The nasal 'ŋ,' as an auxiliary particle, may be prefixed to all the consonants ; as, emi ŋbò, *I am coming* ; emi ŋdá, *I am making*, &c.

2. Before the labial consonants, 'm' is frequently employed as an auxiliary prefix, instead of 'ŋ' ; as, emi mbò, *I am coming* ; emi mfè, *I am loving*.

3. 'M,' 'n,' and 'ŋ,' are occasionally prefixed to consonants in other cases ; as in the words, mbè, *to be* ; mbi, *or* ; a-la-mgba, *a lizard* ; nde, *to arise* ; nlá, *to be large* ; ŋsó, *to proceed*.

INTERCHANGE OF LETTERS.

§ 20. In consulting the Dictionary for the meaning of words, as also in tracing out their roots, it is necessary to remember that letters are frequently interchanged ; as in the following examples :

1. Not a few words begin indifferently with 'a' or 'o' ; as, abánidže, or óbá-nidže, *an injurer*.

2. Some words begin indifferently with 'a' or 'i' ; as, afidži, or ifidži, *remission* (of sins).

3. 'E' and 'o' are interchangeable ; as, ònia for ènia, *a person* ; leni for loni, *to-day* ; eri for ori, *the head*, &c.

4. 'E' and 'o' are interchangeable, as, òni for èni, *one, any*.

5. In certain cases, previously stated (§ 7), 'n' is substituted for 'o' ; as, dùn for dòŋ, *to be sweet*.

6. 'G' for 'k' ; as, ge for ke, *to cut*.

7. 'H' for 'f' ; as, eho for efo, *a valley*.

8. 'S' and 'ś' are frequently interchanged with each other, and in some dialects with 'ts.' Thus, for še, *to do*, the Ibakpa dialect has 'tse,' and the Ibolò has 'se' ; and in other places sè, *to cook*, is pronounced 'śè.'

9. In the Egha dialect, 'w' is frequently used for 'h' ; as, wó, *to boil*, instead of hó ; and awòŋ, *the tongue*, instead of ahòŋ.

CHAPTER 11.

SYLLABLES.

§ 21. A syllable consists :

1. Of a single vowel, pure or nasal ; as, o, *thou* ; óŋ, *he*.

2. *a.* Of a consonant and a vowel ; as, dá, *to create* ; danj, *to polish*.

b. Of a consonant and a vowel, with the nasal ŋ prefixed ; as, ŋdá, *is creating* ; ndanj, *is polishing*.

3. *a.* Of two initial consonants and a vowel ; as, dže, *to eat* ; gbà, *to receive* ; kpè, *to call* ; mbè, *to be* ; nde, *to arise* ; gbòŋ, *to be wise*, &c.

b. Of two initial consonants and a vowel, with a nasal prefixed. (See § 19.)

§ 22. No word or syllable ends in a consonant, except occasionally in the nasal 'm' ; as, bam-bam, *a beetle*.

§ 23. As consonants do not occur at the end of syllables, they are not reduplicated in spelling. Thus we write *ilé*, a house, and *oḡa*, an arrow, instead of *ille* and *oḡa*. (See § 6, 2.)

ACCENT.

§ 24. By the term *accent* is here meant that emphatic pronunciation of a syllable which distinguishes it from other syllables of the same word. This, when marked, is denoted in the present work by the sign ('), commonly termed the acute accent, placed after the accented syllable; as, *i-da'*, a sword, *é-ni-a*, a person.

§ 25. In words of two or more syllables, the accent falls regularly on the penult; as, *a'ga*, a chair; *e-le'da*, a creator.

§ 26. But since the accent of derivative words follows that of their primitives, this rule has several exceptions.

1. Nouns of two syllables derived from verbs having the acute tone (§ 11) are accented on the ultimate; as, *e-dá'*, a creature, from *dá*, to create.

2. When a verb or preposition having the acute tone enters into the composition of a noun of three or more syllables, it usually takes the accent; as, *a-bá'-ni-dže*, an injurer.

3. When an accented vowel is elided or changed, as in the union of two words to form one, the accent retains its place; as, *be'-ru* (for *ba' eru*), to be afraid; *ni'-nó* (for *ni' inó*), within; *su'-re* (for *sa' ire*), to run.

§ 27. Primitive nouns, or those which cannot be referred to any root in the Yoruba language, are generally irregular in regard to accent; as, *a-da-ba*, a dove; *o'-ri-ša*, an idol; *a-lu-fá'*, a learned man.

§ 28. In polysyllables, a lighter secondary accent usually falls on the second syllable before or after the primary; as, *á'-la-taḡ'-kpo-kó'*, a grasshopper; *á'-la-ša'-ra*, a dealer in snuff. But many compounds retain the accents of their component words; as, *a-lai'-lọ'-gbon*, a foolish man; *o-ni'-ba'-ta*, a shoemaker.

§ 29. 1. It is proper to observe here, that all the Yoruba vowels (unless very short as to quantity) are sounded much more fully and distinctly than English vowels. Thus, *a-la'-ra-da'*, a healthy man, which has two full accents, is pronounced with a strong emphasis on both the accented syllables, and with a considerable although slighter stress on the unaccented ones.

2. The distinctness with which Yoruba vowels are uttered is particularly observable in the monosyllabic verbs, prepositions, and adverbs, which are generally spoken as if accented; as, *á lè' sé' é*, we can do it; *lọ́h' sọ́' ọ́ nọ́*, go, throw it away.

PART SECOND.

ETYMOLOGY AND SYNTAX.

CHAPTER I.

FORMATION OF WORDS.

§ 30. In the former part of this Grammar we described the characters employed to represent the sounds of the Yoruba language, the nature of these sounds, and the changes which they undergo. We now proceed to the consideration of sounds as the representatives of ideas; in doing which we will have to treat first of the formation of words, and then of their inflexions and the mode of combining them into sentences.

§ 31. The primitive words of the Yoruba language, amounting in all to about five hundred, consist of the following classes:

1. Personal and other pronouns.
2. About one hundred and sixty verbs, several of which are obsolete.
3. About two hundred and fifty nouns, including several which are clearly exotics.
4. A few particles, as adverbs, prepositions, conjunctions, and interjections.

The remainder of the language, amounting to at least fifteen thousand vocables, has been built up on this foundation, chiefly by prefixing personal pronouns to verbs to form nouns, and by the union of nouns with verbs and prepositions.

§ 32. 1. The primitive verbs are all monosyllables, and most of them are of the simplest possible form, consisting of a single consonant simple or compound and a vowel either pure or nasal; as, *dá*, to create; *dan*, to polish; *dze*, to eat; *kpon*, to be red.

2. A few monosyllabic verbs begin with two consonants; as, *mbè*, to be; *nlá*, to be large, &c. These, however, are secondary forms: *mbè* is simply *bè*, to be, with the auxiliary prefix 'm,' which is the sign of continuance or permanence; *nlá* is a contraction of *nilá*, to be great (lit. *ni*, to have, *ilá*, greatness).

3. The verbs of two syllables are all either derivatives or exotics. Thus, *sufe*, to whistle, is composed of *so*, to eject wind, and *ife*, a blowing (from the root *fe*, to blow). *Fe* is now pronounced *fè*; but its original form is detected not only in *sufe*, but also in *ferè*, *asthma*, *ifere*, a flute, and *ifefe*, a reed. *Tuba*, to repent, is a recent importation from the Arabic.

§ 33. The primitive nouns may be classified as follows:

1. Very few are monosyllables; as, *he*, malignant envy.

2. Most of them are dissyllables, of which the following are examples: aba, *a crib, or barn*; alè, *evening*; ana, *kindred by marriage*; ànu, *pity*; ara, *the body*; babá, *father*; botè or ibotè, *silliness*; iba, *fever*; irin, *iron*; igi, *wood*; òdo, and omi, *water*; orun, *the sun*; orun, *heaven*; omo, *a child*.

3. Some are of three syllables; as, àbata, *a marsh*; adaba, *a dove*; akara, *bread*; ahana, *a violent lawless man*.

§ 34. Among the primitive particles we have: ni, *in, on*; si, *to, against*; ti, *from*; ùgbóyì, *but*; and a number of adverbs.

§ 35. Very few of the exotic words have come to the Yoruba people through the Arabic; and it is remarkable that some words of undoubted Eastern origin are unknown among the tribes further in the interior.

Having thus stated the general principles on which the words of this language, both primitive and derivative, are formed, we will now proceed to the special rules for the formation of the several parts of speech.

DERIVATION OF VERBS.

§ 36. Verbs of more than one syllable are frequently compounded of a monosyllabic verb and a noun; as, bèru, *to be afraid* (from ba, *to meet*, and eru, *fear*); šánu, *to pity* (from še, *to make*, and ànu, *pity*); bilá, *to make room in a crowd* (from bi, *to push*, and ilá, *an opening*).

§ 37. There are three classes of transitive verbs, distinguished by the peculiarity that the objective case is placed between the component parts or members of the verb. Their formation is as follows:

1. *a.* Two verbs are used for one.* Thus, from fi, *to make*, and hàn, *to appear*, is formed fi . . . hàn, *to show*; as, ó fi wọ̀n hàn mi (*he made them appear to-me*), *he showed them to me*. From ba, *to meet*, and dze, *to eat*, is formed ba . . . dze, *to spoil*; as, mo ba iwe dze (*I met book consume*), *I spoiled the book*. From te, *to spread*, and bèrè, *to be flat*, comes te . . . bèrè, *to level*; as, te òke bèrè (*spread hill flat*), *to level a hill*.

b. Verbs of this class are often used intransitively, so as to be equivalent to a passive; as, iwe badze, *the book spoils or is spoiled*; òke tẹ̀bẹ̀rẹ̀, *the hill levels or is levelled*.

2. *a.* The second member of a compound transitive verb is sometimes composed of a preposition and a noun. Thus, bè, *to cut*, li, *in regard to*, and ori, *the head*, form the compound verb, bè . . . lori, *to behead*; as, ó bè òle lori (*he cut a-thief as-to-the-head*), *he beheaded a thief*. Ko, *to gather*, li, *in regard to*, and eru, *property, goods*, form ko . . . lẹ̀ru, *to rob*; as, nwọ̀n ko mi lẹ̀ru (*they gathered-up me as-to-goods*), *they robbed me*. When the noun in the second member of the verb has 'n' in it, 'ni' is used instead of 'li'; as, bi . . . ninó, *to vex* (from bi, *to affect or afflict*; ni, *in regard to*; inó, *the mind*).

b. An intransitive verb, composed of a verb and a noun (§ 36) may be converted into a transitive verb by inserting 'li' or 'ni' between the verb and noun. Thus,

* These so-called compound transitive verbs are, it is true, rather phrases than words; but they are considered as words, because their parts acquire a new meaning by composition, and because they are actually united into one word when used in a passive sense, and also in forming nouns; as, ibadze, *a spoiling*, from ba . . . dze, *to spoil*.

beru (ba eru), *to be afraid*, becomes ba...leru, *to frighten*; as, ó ba mi leru, *he frightened me*.

3. Sometimes the formation of compound transitive verbs is still more complicated, as may be seen in the following example. Ba...dže, as above stated, means *to spoil*; and ni inó, or ninó, means *in regard to the mind*; the entire expression, ba...ninó dže, means *to grieve*; as, ó ba mi ninó dže, *he grieves me*. The compound here consists of three members, the first and last of which are verbs, and the middle one is composed of a preposition and noun.

DERIVATION OF NOUNS.

With Vowel Prefixes.

§ 38. Nouns are formed from verbs, both primitive and derivative, by prefixing the pure or nasalized vowels, a, e, ɛ, i, o, ɔ, and oŋ.* These prefixes (excepting perhaps the vowel 'i') are simply variations of the pronoun of the third person, in accordance with the principle of vocalic assimilation already noticed (§ 13).

§ 39. The primary use of these prefixes appears to have been to form concrete nouns denoting the actor or agent; as, ofe, *a parrot* (lit. *a whistler*, from fe, *to whistle*); akpedža, *a fisherman* (from kpédža, *to kill fish*); ɛšin, *a horse* (from šin, *to run rapidly*). But at present, nouns formed by these prefixes have various meanings, being frequently employed to denote: 1, the doer of the action, or agent; 2, the receiver of the action, or patient; 3, the action or state of being; as, aba (from ba, *to meet*), *he who meets, he who is met, or, a meeting*; ɛše, *sin*; aše, *the state of sin* (from še, *to sin*).

§ 40. It is to be observed further that regularly, in accordance with the law of euphonic concord (§ 13, 2), the vowel prefixed to the verb should be identical with that of the verb itself; as, aba, *a meeting*; ɛše, *sin*; ofo, *loss*; òrò, *a word*. But if this principle had been adhered to exclusively, only one noun could be derived from each verb; whereas by prefixing different vowels, there may be several. Thus, from we, *to fold*, are derived ewe, *a leaf*; iwe, *a book*; owe, *a proverb*.

§ 41. The facts in regard to these preformatives, as the practice now stands, may be summed up as follows:

1. Concrete nouns are formed from all verbs by prefixing 'a'; as, aba, *a meter*, from ba, *to meet*. But nouns of this form have various other meanings, as shown above (§ 39).

2. Nouns denoting an action are formed from all verbs by prefixing 'i'; as, iba, *the act of meeting*; ife, *love*. But sometimes this form has a concrete signification; as, iládža, *a peace-maker*.

3. The other vowel prefixes, although of frequent occurrence, are not employed before every verb. They generally form nouns denoting either the doer, the receiver, or the result of an action; as, ofi, *a loom*, from fi, *to swing*; ɛšin, *a horse*, from šin, *to run*; ɛlá, *a creature*, from dá, *to create*; òrò, *a word*, from rò, *to utter, to relate*.

§ 42. The prefix 'oŋ' is not much used, but is met with occasionally; as, oŋgbɛ,

* The vowels ɔ and u are never employed as formative prefixes.

thirst, from gbe, *to be dry*. Before a dental consonant, the nasal 'ŋ' is changed to 'n'; as, onde, *a prisoner*, from de, *to bind*. In one case 'oŋ' becomes 'am' in the Iketa dialect, and 'oi' in Yoruba: viz. ambó, oibó, *a white man*, from bó, *to peel*.* Hence, orombo (oro ambó), *the white man's fruit*, the usual name of *the orange*; and okpaimbo (okpe ambó), *the white man's palm*, that is, *a pine-apple*.

§ 43. The prefix 'ai' (composed of 'a' and 'i,' *not*), and its equivalent 'è,' are attached to verbs to form nouns of a negative meaning; as, ainò, or èmò, *that which is unknown or unusual, a monster*; aidzè, *that which is not eaten or must not be eaten*. Roots with this prefix are also used imperatively; as, aiwi, *do not speak, keep silence!*

With Syllabic Prefixes.

§ 44. Aبا (composed of the prefix 'a' and ba, *to meet*) is prefixed to verbs to form nouns implying union; as, abata, *a market-place* (lit. aba ita, *the meeting of streets*); abaše, *a helper* (lit. aba še, *he who meets one to do something*). Aبا is sometimes changed into eبا; as, ebado, *a shore* (lit. eبا òdo, *the meeting of the water*).

§ 45. Aبي, which signifies *being in a state of, having*, is prefixed to nouns, to form nouns expressing a quality, endowment, or condition; as, abiyè (abi iyè), *that which has feathers*; abara (abi ara), *that which has a body*, e.g. agaliti abara yiyi, *the lizard which has a body of roughness*, i. e. *a rough body*.

§ 46. Abu is sometimes a derivative from bu, *to give*; as, abuso, *a falsehood* (lit. abu iso, *the giving of talk*). In other cases abu is equivalent to abi; as, aburo, *that which stands erect* (lit. abi iro, *being in a standing posture*). For the vowel change, see § 16, 3.

§ 47. 1. Ada (from dá, *to make*) is prefixed to nouns, to form others implying the cause or result of an action; as, adalu, *a mixture, adulteration* (from ada, *a making*, and ilu, *a mixing*); adakpè (ikpè, *a calling*), *contraction of words*, by elision; adado (òdo, *water*), *an island*.

2. Sometimes the final 'a' of ada is elided, thus shortening the prefix to 'ad'; as, adetè, *a leper*, from etè, *leprosy*; adògun (ògun, *war*), *that which causes war*; adotè (otè, *enmity*), *that which causes enmity*.

§ 48. 'Af' or 'af' (from fi, *to make*) is prefixed to verbs; as, afhàn, *a show, display* (lit. afi, *a making*, hàn, *to appear*). It is also prefixed to nouns when they are followed by verbs; as, afònahàn, *a guide* (lit. a, *he*, fi, *makes*, òna, *a road*, hàn, *to appear*, i. e. *one who shows the road*).

§ 49. Am, a contraction of amò, *a knowing, he who knows*, is prefixed to nouns; as, amero (ero, *consideration*), *a discreet person, discretion*; amoye (oye, *intelligence*), *an intelligent man*.

§ 50. Aتي (probably composed of 'a' and 'ti,' *from*) is prefixed to verbs to form nouns expressing the abstract idea of the verb; as, atiri, *seeing*.

§ 51. Bu and ibu are formed from ibi, *a place*; the final 'i' being changed into 'u' (§ 16, 3). They are prefixed to nouns; as, budo, or ibudo, *a camp* (lit. ibi ido, *the place of camping*); budzoko or ibudzoko, *a seat* (ibi idzoko, *the place of sitting*).

* When the skin of a negro peels off, especially after a burn, the surface becomes white like the skin of a white man. Ambó or oibó means, literally, *who is peeled*.

§ 52. 1. The vowels, a, e, &c., prefixed to *li* or *ni*, *to have*, form the prefixes *al*, *el*, *ol*, *ol*, &c., which form nouns of possession from other nouns; as, *alaṣo*, *the owner of cloth, a dealer in cloth* (from *aṣo*, *cloth*); *elṣin*, *the owner of a horse, a horseman* (from *ṣin*, *a horse*); *olotí*, *the owner of ale, a dealer in ale* (from *otí*, *ale*).

2. Since the performer of an action may be regarded as its possessor, nouns of this form frequently denote the actor or agent; as, *alábo*, *a defender* (from *ábo*, *defence*); *elegbe*, *a helper* (from *egbe*, *help*); *elṣe*, *a sinner* (from *ṣe*, *sin*); *olòre*, *a benefactor* (from *òre*, *a favor*); *olòre*, *a giver* (from *òre*, *a gift*).

3. Occasionally we have the form *olu*, by § 16,3; as, *oluwa* (*oli iwà*, *he who has life*), *a lord*; *oluṣe* (*iṣe*, *work*), *a laborer*.

4. *a.* The vowel prefixed to 'l' must be the same as the initial vowel of the noun which takes the prefix, according to the principle of euphonic concord (§ 13, 2), as seen in the examples given above. But the prefix 'il' is never used; and hence, when a prefix is required for a noun beginning with 'i,' it is customary to employ 'on'; as, *onibu*, *that which has breadth, which is broad* (from *ibu*, *breadth*); *onigbàgbò*, *a believer* (from *igbàgbò*, *belief*).

b. Sometimes it is more agreeable to the ear to substitute 'ol' for 'on'; as, *olifa*, *that which is profitable* (from *ifa*, *profit*). But in such cases it is usual for the final 'i' of *oli*, and the initial 'i' of the noun to be changed into 'u.' (See § 52, 3.)

5. *a.* By exchanging the initial vowel of these prefixes for 'ai,' they become negative. Thus, *elṣe*, *a sinner*, becomes *ailṣe*, *one who is sinless*; *olomo*, *one who has a child*, *ailomo*, *who is childless*; *alágbára*, *who is strong*, *ailágbára*, *who is not strong*.

b. Frequently the prefix 'al' is employed before negative nouns; as, *aikò*, *the state of being unlearned* (from *kò*, *to learn*), *aláikò*, *one who is unlearned*; *aisè*, *sinlessness*, *alaisè*, *he who is sinless*; *aidá*, *uncreatedness*, *alaidá*, *which is not created, which has no existence*.

Nouns formed by Reduplication.

§ 53. Nouns are formed from verbs by reduplicating the first syllable of the verb; as, *didara*, *goodness* (from *dara*, *to be good*); *kpìkpé*, *duration* (from *kpé*, *to stay, to continue*). The vowel of the reduplicated syllable is changed into 'i,' as in the above examples, except that occasionally 'u' is not changed; as, *gìgùn* or *ngùn*, *length* (from *gùn*, *to be long*).

§ 54. Nouns formed by reduplication from active transitive verbs have both an active and a passive signification; as, *tità*, *a selling, also, that which is sold or to be sold* (from *tà*, *to sell*): e. g. *tità kì iṣe bibu*, *selling is not giving*; *aṣò tità*, *cloth to sell*.

§ 55. A few inelegant nouns are formed by reduplicating the entire verb; as, *kpedžakpedža*, *a fisherman* (from *kpedža*, *to kill fish*). Either *akpedža* or *onikpedža* is preferable to the reduplicated form.

§ 56. Nouns are formed by reduplicating a noun and inserting *ki*, *li*, *ri*, *de*, or *iyi*, usually with an elision of the final vowel of the particle, as follows:

1. *a.* *Ki* has the sense of *any* or *whatever*: as, *eyekekiye*, *any bird whatever* (from *eye*): e. g. *á ò rì eyekekiye*, *we saw no birds whatever*; *eyekekiye á tó*, *any bird will do* (*a tó*, *will suffice*).

b. Nouns of this form are sometimes employed to express contempt; as, *èniakènia li iwò*, *thou art a contemptible person*; *òbirikòbiri*, *a trifling woman*.

c. When the reduplicated noun begins with 'i,' it is converted after the particle into 'u' (§ 16, 3); thus, from *isín*, *service*, we have *isínkúsiñ*, *superstition*.

d. Observe that the vowel following 'k' invariably has a strong accent, as, *èniakè'nia*.

2. *Li*, *to have*, when inserted in a reduplicated noun, implies ownership in reference to a third person; as, *òmólómó*, *another person's child*: e. g. *ainà òmólómó*, *we must not whip another person's child* (lit. *òmó òlómó*, *the child of the child-owner*).

3. *Ri*, *ever, only*; as, *àyeràye*, *ever living* (from *àye*, *the state of being alive*); *medžiredži*, *only two* (from *medži* and *edži*, *two*).

4. *De*, *to*; as, *òwòdòwò*, *tradition* (lit. *òwó de òwó*, *hand to hand*). *Àtí*, *from*, is sometimes prefixed to nouns of this form; as, *atiranđiran*, *genealogy* (lit. *atí iranđe iranđ*, *from generation to generation*).

5. *Iyí* (perhaps i. q. *eyí*, *this*) makes a noun emphatic; as, *ekuru-iyekuru*, *the dust, this dust*, i. e. *the very dust*.

Nouns formed by Composition.

§ 57. Two nouns are occasionally compounded together, the qualifying term or possessor being placed last, which is the reverse of the English order; as, *òmó òhíj*, *a follower, a disciple* (from *òmó*, *a child or servant*, and *òhíj*, *the back*); *òdží ọna* (*eye road*), *a gate*; *òlušó águtan* (*watcher sheep*), *a shepherd*; *ilé tubu* (*house prison*), *a jail*.

§ 58. A whole phrase is frequently united to form a noun; as, *afibikpòre*, *an ungrateful person* (from *a*, *he*, *fi*, *put*, *ibi*, *evil*, *kpè*, *to call*, *òre*, *good*); *agabagòbe*, *a double-dealer, a hypocrite* (from *a*, *he*, *gun*, *climbs*, *aba*, *the crib or barn*, *gun*, *climbs*, *òbe*, *the yan-hill*).

§ 59. Many nouns in 'a' are compounded with verbs to form new abstract nouns; as, *asàlá*, *escape* (from *asá*, *a running*, and *là*, *to be safe*); *afétán*, *perfect love* (from *afé* *love*, and *tán*, *to be completed*); *ašedžù*, *excess*, as to conduct (from *aše* *a doing, an action*, and *džù*, *to surpass*).

§ 60. Adverbs also are attached to this class of nouns in the same manner; as, *akpèdžò*, *a congregation* (from *akpè*, *a calling*, and *džò*, *together*); *agbesòke*, *a lifting up* (from *agbe*, *a lifting*, and *sòke*, *up*): e. g. *gbe ê lí agbesòke*, *lift it as to a lifting up*, for *gbe ê sòke*, *lift it up*.

§ 61. To exhibit the various regular methods of forming nouns and verbs from a verbal root, we subjoin the following list of words regularly derived from *gàn*, *to despise*:

1. Nouns formed by attaching a single prefix to the root or by reduplicating it:
agàn, *one who despises or who is despised; the state of being despised, contempt; the act of despising*.

igàn, *the act of despising; a despiser*.

ongàn, *a despiser*.

atigàn, *a despising; as an infinitive, to despise, to be despised*.

gigàn, *a despising, that which is despised; as an infinitive, to despise or be despised*.

gàngàṅ, a *despiser*.

aigàṅ, the state of not being despised.

2. Verbs formed from agàṅ, igàṅ, and aigàṅ, by prefixing the verb dá, to make; dze, to be; li, to have; mò, to know or experience; or še, to do, to act:

dagàṅ, to cause contempt or hatred.

džagàṅ, to be despised.

lagàṅ, } to be despised.

ligàṅ, }

magàṅ, to be despised; to experience hatred or contempt.

šagàṅ, to be despised; to despise.

laigàṅ, to be not despised.

saigàṅ, to be not despised, to despise not.

3. Nouns formed from these verbs by the prefixes 'a,' 'i,' and 'ati.' It seems unnecessary to write these nouns; but observe that instead of aligàṅ, a *despiser, one who is despised*, we frequently hear oligàṅ, olugàṅ, and onigàṅ. Adagàṅ, *one who causes contempt*, may be changed into onidagàṅ; and in like manner 'oni' may be prefixed to džagàṅ, šagàṅ, and saigàṅ, instead of 'a'

DERIVATION OF ADVERBS.

§ 62. In the Yoruba language many abstract relations, as those of time and place, are expressed by nouns; as, oni, *this day*; ana, *the day before to-day, yesterday*; oḷa, *the day after to-day, to-morrow*; ibi, *this place*; ibe, *that place*. These nouns are formed into adverbs by prefixing li or ni, *in*; as, li oni or loni, *to-day*; li oḷa or loḷa, *to-morrow*; ni ibe or niḷe, *there*, &c.

§ 63. Adverbs of time expressing the idea of recurrence or repetition are formed by reduplicating the first syllable of a noun expressing time, and then prefixing li or ni, *in*; as, oḷḷo, *a day*; oḷḷoḷḷo, *day after day*; loḷḷoḷḷo, *daily*. So from oṣu, *a month*, we have oṣoṣu and loṣoṣu, *monthly*, &c.

§ 64. A few adverbs are formed by combining several words; as, nígbagbogbo, *always* (from ni, *in*, igba, *time*, gbogbo, *all or every*); nitorikini? *wherefore?* (from niti, *in, as to*; ori, *reason or cause*; kini, *what*); boyà, *perhaps* (from bi, *if, ó, ù, yà, is*).

§ 65. Many adverbs consist of a reduplicated syllable or word; as, gege, *alike*; gidigidi, *very*; goigoi, *sluggishly*; kankan, *quickly*; fiofio, *very (high)*. It is probable that all such adverbs were originally nouns, formed by reduplicating the entire verbal root.

§ 66. Although the adverbs are quite numerous, there are some relations which none of them definitely express; and hence both verbs and nouns are frequently used adverbially, as in the following cases:

1. For want of an adverb to express the idea of *more*, the verb džù, to surpass, is employed in that sense; as, dara džù (*good surpassing*), *more good or better*; iwò síše džù mi, *you work more than I*. Sometimes lḷh, to go, is added; as, iwò síše džù mi lḷh; but it makes no perceptible addition to the sense.

2. The adverb sọkan, *together*, expresses the idea of unison or congruity, rather than that of being or acting in common; and hence to denote the latter idea, the

verbs *dzó*, to assemble, and *kpò*, to be common, are employed; as, *kó dzó*, to collect together; *sòrò kpò*, to talk together.

3. The adverbs of place with the idea of motion, as, *loke*, up, and *nisalé*, down, correspond very nearly to the English words *upwards* and *downwards*; and hence to express the precise idea of *up* and *down*, the Yorubas employ the verbs, *dide*, to rise, and *šubu*, to fall; as, *fà dide*, to raise (one) up; *bi šubu*, to push (one) down.

4. Finally, to mention one more example among many, the Yoruba adverbs meaning *much* refer to number and quantity rather than to degree; and hence to express this last idea, the noun *kpikpò*, abundance, is used; as, *fẹ kpikpò*, to love much or greatly.

§ 67. Many Yoruba adverbs are restricted in their use to a single word, or at most to a single idea; as, *fiofo*, very or much, which is applied to nothing except the idea of height; *šẹṣẹṣẹ*, (standing) upright; *buruburu*, (hiding) closely; *biribiri*, intensely (dark). Ex: *igi ga fiofo*, the tree is very tall; *á duro šẹṣẹṣẹ*, we stand erect; *òle kpanó buruburu*, the thief hid closely; *ilẹ́ sù biribiri* (the-ground is-dark intensely), it is very dark.

DERIVATION OF PREPOSITIONS.

§ 68. A few of the prepositions are verbs; as, *ba*, with, along with (prop. to meet); *fi*, with, by means of (prop. to make); *de*, for (prop. to be ready, prepared). But most of the Yoruba prepositions are composed of a noun and one of the primitive particles *ni*, in; *sí*, to; or *ti*, from; as, *nińó*, in, within (from *ni* and *inó*, the inside). (See Prepositions.)

DERIVATION OF CONJUNCTIONS.

§ 69. A few of the conjunctions may be primitive words; but it is not difficult to refer them to verbal roots; as, *bi*, if; probably from the obsolete verb *bi*, to be, which is still retained in composition, e. g. *abi*, the state of existence.

§ 70. Most of the remaining conjunctions are compound words; as, *ndze*, then (from *ón*, it, and *dze*, to be); *nitori*, because (from *niti*, in, and *ori*, reason).

§ 71. The origin of others is more doubtful. Thus, *adi*, notwithstanding, may be derived from *dí*, to subtract; *on*, and, appears to be the pronoun *ón*, he; *ki*, that, is a primitive. (See Conjunctions.)

CHAPTER II.

INFLEXION AND CONSTRUCTION OF WORDS.

§ 72. When words are combined together to form propositions, the relations which they bear to each other are indicated partly by their position with regard to each other, or collocation, partly by certain subordinate words or particles employed for this purpose, and partly by changes in the form of words, called inflexions. In the Yoruba language the first and second of these methods are

mostly employed. Of inflexion, properly so called, the language exhibits but faint traces.

§ 73. The verb is the most important part of speech, and that from which most, if not all, the other words in Yoruba may be considered as derived. It would therefore be proper to commence this division of the Grammar with the verb. But the verb cannot be conjugated except by means of the personal pronouns; and hence it is most convenient to begin with the pronouns.

PRONOUNS.

Personal Pronouns.

NOMINATIVES.

§ 74. The primary forms of the personal pronouns are: *emi, I; iwọ, thou; óṅ, he, she, or it.* Each of these pronouns is inflected, or varied in form, to distinguish the plural from the singular number; as, *emi, I; awa, we;* but there is no variation of form to express gender.

§ 75. Besides the primary forms just mentioned, each of the singular personal pronouns, when employed as the subject of a proposition, has two contracted or secondary forms, the use of which depends on the principle of euphonic concord laid down in a previous section (§ 13); and the pronouns of the first and third persons have each two additional contracted forms, founded on other considerations, which will presently be explained. The plurals are likewise subject to contraction.

§ 76. The contracted or secondary forms of these pronouns may be classified as follows:

1. The *euphonic* forms, which are divided into,
 - a.* The close form ending in 'o,' which is used before the close vowels.
 - b.* The open form, ending in 'o,' which is used before the open vowels.
2. The *citative* form, the pronouns of which, *mi, I, and i, he, she, it,* appear to be contractions of 'emi' and 'yi.'
3. The *future* form, so called because employed chiefly in the future tense.
4. All the plural nominatives are sometimes abridged in form by the suppression of the entire second syllable, to allow of their being more closely connected with the following verb.

§ 77. The various forms of the personal pronouns, in what may be called the nominative case, are then as follows:

SINGULAR.					PLURAL.	
<i>Primary Forms.</i>		<i>Contracted Forms.</i>			<i>Primary.</i>	<i>Contr'd.</i>
		Euphonic.		Citative.	Future.	
		<i>Open.</i>	<i>Close.</i>			
1, <i>I,</i>	<i>emi</i>	<i>mo</i>	<i>mọ</i>	<i>mi</i>	<i>ṅ</i>	<i>á</i>
2, <i>thou,</i>	<i>iwọ</i>	<i>o</i>	<i>ọ</i>			<i>é</i>
3, <i>he, she, it, óṅ, óṅ</i>		<i>ó</i>	<i>ọ</i>	<i>i</i>	<i>yi, á</i>	<i>á</i>
					<i>we, awa</i>	
					<i>ye, eṅyiṅ</i>	
					<i>they, awọṅ, nwọṅ</i>	

Remarks on the Nominatives.

§ 78. The primary forms of these pronouns may be employed on all occasions, the use of the contracted forms being optional.

§ 79. The close and open forms are employed instead of the primary forms merely for the sake of euphony.

1. The rules to be observed in their use are as follows:

a. When the first vowel of the following verb is a close vowel, viz. *e, i, o,* or *u,* the close form of the pronoun must be employed; as, *mo še, I did; o ri, thou seest.*

b. When the first vowel of the verb is an open vowel, viz. *e* or *o,* the open form of the nominative pronoun is employed; as, *mọ fe, I love; ọ mọ, he knows.* This rule, however, is often neglected in practice.

c. Before the neuter vowel 'a,' the open or close form of the pronoun is used indifferently; as, *mo tà* or *mọ tà, I sell.*

2. There are two peculiarities to be noted in reference to the use of the close and open forms.

a. None of them can be employed as nominatives to verbs in the future tense. For instance, it is correct to say either, *emi ọ ri,* or *ọ ri, I shall see;* but *mo ọ ri* is inadmissible.

b. Before the particle *kò* or *kọ,* *not, ọ* or *ọ, he,* is uniformly omitted: as, *kò ri, he does not see; kọ mọ, he does not know.* But *ọri* or *ọri* is used with that particle; as, *ọri kọ mọ, he does not know.*

§ 80. 1. The citative forms, *mi, I,* and *i, he,* are rarely used; but they are sometimes employed in repeating what has been said, with the suppression of the verb of saying, asking, or replying; as, *mi, nibo, I (enquired) where? i, lọhun, he (replied) yonder; mi, họ, I (answered) ọ; this word 'ọ' being the usual reply to a salutation, which is aspirated in the above example for the sake of euphony.*

2. The pronouns of this form are never employed in negative or interrogative sentences; neither is there any analogous contracted form for the second person singular or for the plural.

§ 81. The personal pronoun 'ọ' appears to be a modification of 'emi.' The manner in which it is formed is seen in the subjunctive phrase, *ki emi ri, that I see,* which is frequently contracted to *kí em' ri,* and *ki 'm' ri;* and is still more frequently pronounced *ki ọ ri.* Although we have classed 'ọ' along with 'yi' in the future form, its use is not confined to the future tense. It is employed as follows:

1. In the future tense, instead of 'emi'; as, *ọ ọ ri, I shall see.*

2. In negative propositions, before *kò* or *kọ, not;* as, *ọ kò ri (I not see), I do not see; ọ kọ lọh (I not go), I do or will not go.* It is especially employed to express refusal; as, *ọ kọ še ẹ, I will not do it; emi kọ še ẹ, suggests the idea of denial, I did not do it.*

§ 82. The use of the demonstrative *yi, this* or *that,* as a pronoun of the third person, is confined to the future tense.

1. It is employed instead of *ọri, he, she, it;* as, *yi ọ de, he will come.*

2. It is often used pleonastically after other nominatives, either singular or plural.

a. In affirmative sentences it is generally preceded by *ni, to be;* as, *babá ni yi ọ ri (father it-is that will see), father will see; awa ni yi ọ mọ (we it-is that will know), we will know.*

In these examples we have probably the full original construction of 'yi' in the future, from which the briefer modes of expression—*awa ô ri*, and *awa ô m̀*—are formed by ellipsis.

b. In negative future propositions, 'yi' is always placed between *kì*, *not*, and the auxiliary *ô* or *ô*; as, *emi kì yi ô ri* (*I not that shall see*), *I shall not see*; *nwõn kì yi ô m̀*, *they will not know*.

§ 83. The pronoun 'á' is employed before verbs in the future tense, as a substitute both for *yi*, *he*, and *ô* or *ô*, *will*; as, *á lù mi*, *he will strike me*; *á f̀ ô*, *he will break it*.

§ 84. *Awõn*, *they*, is not employed as the direct subject of a proposition, except occasionally in the Egba dialect. Its use is restricted to two cases, in both of which *nwõn* is inadmissible:

1. Before *ti*, *who* or *which*, it is employed as the subject of a proposition; as, *awõn ti o de* (*they who he came*), *they who came*; *awõn ti ẹba òua*, *they which* (fell by) *the road side* (Luke 8. 12).

2. Before nouns, to indicate plurality; as, *awõn agba kpèd̀zõ* (*they elder met*), *the elders were assembled*; *òna awõn ẹ̀l̀s̀e*, *the way of sinners*.

§ 85. The use of the contracted plural forms, *á, ẹ, á*, is optional, and differs in no respect from that of the full forms, except that *á*, *they*, is used impersonally to form a substitute for passive verbs. (§ 147.)

OBJECTIVES.

§ 86. The personal pronouns when employed as the object of a proposition, whether governed by verbs or prepositions, take the following forms:

SINGULAR.			PLURAL.		
Primary Forms.		Contracted Forms.	Primary.		Contracted.
1. <i>me,</i>	<i>emi</i>	<i>mì</i>	<i>us,</i>	<i>awa</i>	<i>wa</i>
2. <i>thee,</i>	<i>iwo</i>	<i>o</i>	<i>you,</i>	<i>enyin</i>	<i>nyin</i>
3. <i>him, her, it,</i>	<i>on on</i>	<i>ò, ô, ù, á, ẹ, ê, í</i>	<i>them,</i>	<i>awõn, nwõn</i>	<i>wõn</i>

Remarks on the Objectives.

§ 87. The primary forms, which are the same as in the nominative, are used in the following cases:

1. When two objective pronouns are connected by a conjunction; as, *ó dá iwõ ati emi*, *he made thee and me*; *á m̀ on ati awõn*, *we know him and them*. In this case *awõn* is preferable to *nwõn*.

2. When an objective pronoun is connected with 'ná,' having the sense of *self*; as, *nwõn kò ri on ná*, *they did not see himself*; *ó kpè awõn ná*, *he called themselves*. Here again *awõn* is preferable to *nwõn*.

3. When an objective pronoun begins a sentence; as, *iwo ni mo ri* (*thee it-is I saw*), *I saw thee*; *awõn or nwõn ni á kpè*, *we called them*.

4. When the objective pronoun is followed by the relative *tî*, *who* or *which*; as, *mo ri oŋ ti o de* (*I saw him who he came*), *I saw him who came*; *mọ fẹ awọŋ ti ọ fẹ emi*, *I love them who love me*. *Nwọŋ* is not used in this case.

5. The full form is frequently employed because it is more agreeable to the ear; as, *mọ fẹ awọŋ ti ọ fẹ emi*, *I love them who love me*.

§ 88. As the objective pronouns are generally governed by a preceding word to which they are closely attached in pronunciation, the contracted forms are, for the most part, made by eliding the initial vowel of the pronoun, so that it may be more closely joined to the governing word. On these forms the following observations are to be made:

1. We occasionally hear *ẹ* for *ọ*, *thee*; as, *mo ri ẹ*, *I see you*. This is a contraction of the pronoun of the second person plural, which, as with us, is often used instead of the singular by way of politeness.

2. *a*. Reasoning from analogy, we may assume that the original contracted form of the third person singular, was 'o,' like the nominative; but as this vowel becomes perfectly assimilated to the final vowel of the governing verb or preposition, it assumes in turn all the forms of these vowels; as, *mo rà â*, *I bought it*; *mo še ê*, *I did it*; *mo ri î*, *I saw it*; *fu û*, *to it, &c.*

b. The objectives, *â*, *ê*, *î*, *ô*, *û*, and *ũ*, have no accent, and scarcely any perceptible quantity, especially when they follow a sharp vowel. The practised ear can discover, however, that they slightly sharpen the preceding vowel. Thus, *mo ri î*, *I see it*, is pronounced *mo rí*; and *mọ mọ ô*, *I know him*, is pronounced, as nearly as signs can represent it, *mọ mọ'*.

POSSESSIVES.

§ 89. As the pronouns when used to indicate possession are closely attached to a preceding noun, they assume the same contracted forms as the objectives; the only difference is that 'rẹ' is employed as the possessive of the second and third persons singular.

SINGULAR.		PLURAL.		
Primary Forms.	Contracted Forms.	Primary.		Contracted.
1. <i>my</i> , emi	mi	<i>our</i> , awa		wa
2. <i>thy</i> , iwọ	rẹ	<i>your</i> , ọnyin		nyin
3. <i>his, her, its</i> , oŋ	rẹ	<i>their</i> , awọŋ, nwọŋ		wọŋ

§ 90. The full or primary forms are employed as possessives only when the relation of possession is expressed by the preposition *tî*, *of* (see § 131, 2); as, *iwe tî emi* (*book of me*), *my book*; *iwe ni tî emi* (*book it-is of me*), *it is my book*.

§ 91. 1. Frequently, however, the relation of possession is indicated simply by placing the pronoun immediately after the noun (see § 131, 1), and then the contracted form is employed; as, *iwe mi* (*book of me*), *my book*; *iwe rẹ* (*book of thee or him*), *thy book* or *his book*.

2. The same forms are used after a so-called compound verb, consisting of a verb and a noun (§ 36), when, although the pronoun is rendered into English as an objective, it really stands in the relation of possessor to the noun; as, *mọ bẹru rẹ*, *I fear him*; lit. *mo ba ẹru rẹ*, *I meet the fear of him or his fear*.

EMPHATIC AND REFLEXIVE PRONOUNS.

§ 92. The personal pronouns are augmented by the addition of several words equivalent to the English word *self*, *selves*, &c., as follows:

1. *Ná*, *that*, added to a pronoun makes it emphatic; as, *emi ná*, *I myself*; *iwe tí emi ná*, *my own book*.

2. *Ara*, *body* or *self*, is used only before possessives, and performs two offices:

a. Before a singular possessive it makes the pronoun reflexive; as, *ọ fẹ ara rẹ*, *he loves himself*.

b. Before a plural, it often makes the pronoun reciprocal; as, *nwojọ fẹ ara wọjọ*, *they love each other*.

3. *Tikara* (composed of *ati*, *and*, *eki*, *only*, and *ara*, *self*), sometimes pronounced *tikala*, is employed before possessives, and forms emphatic pronouns; as, *emi tikara mi mọ* (*I and-only-self my know*), *I myself know*; *ẹnyin tikara nyin ri*, *ye yourselves see*.

4. *Kpákpa*, *self*, is added either to a nominative or objective pronoun, and renders it emphatic; as, *iwo kpákpa*, *thee thyself*. *Kpákpa* is more definite than *ná*, being equivalent to *very self*. Sometimes *tikara* with its possessive pronoun is followed by *kpákpa*; as, *iwo tikara rẹ kpákpa*, *thee thyself or thy very self*. But the expression '*iwo kpákpa*' appears to be equally strong without the addition of '*tikara rẹ*.'

§ 93. Each of the foregoing expressions may be used in conjunction with nouns, as follows: *babá ná ri*—*babá ara rẹ ri*—*babá tikara rẹ ri*—*babá kpákpa ri*—*babá tikara rẹ kpákpa ri*; each of which sentences signifies, *father himself sees*.

PLEONASTIC USE OF PRONOUNS.

§ 94. Personal pronouns which would be superfluous in English are frequently employed in Yoruba, as in the following cases:

§ 95. 1. When a verb is separated from its nominative by intervening words; as, *ọkọri kan ọlọọ ó ni iridzú kan* (*man one rich he had steward one*), *a rich man had a steward*.

2. When the objective noun is separated from the governing word by a relative clause, an objective pronoun is supplied after the governing word, whether it be a verb or a preposition; as, *ọmọ, tí ọ lẹh oko, ẹkun mu ù* (*the child, who he went to-the-farm, a leopard caught him*), *a leopard caught the child who went to the farm*; *alagbe, tí ọ kọrinj li ode ni, mo fi ì fu* (*the beggar, who he sang at the door it-is, I gave it to*), *I gave it to the beggar who sang at the door*.

§ 96. Pleonastic *ó* or *ọ*, *he*, *she*, *it*, frequently occurs before verbs:

1. When *ti*, *who*, *which*, is the subject of a relative clause; as, *enia ti o de* (*the person who he came*), *the person who came*; *ẹnyin ti ọ mọ*, *ye who know*.

2. After *ni* or *li*, *this one*, *that one*, when employed as a substitute for the relative *ti*; as, *enia li o sina*, *a people who err*.

3. After *ni* or *li*, when this word is used pleonastically in the sense of *to be*; as, *iwo li o še ê* (*thou it-is that did it*), *thou didst it*; *iya li o kpé o*, *mother called thee*.

§ 97. A pleonastic pronoun of the third person singular follows verbs of saying, writing, &c., in connexion with *kpé*, *that, to wit*; as, *ô tɛnumò ô kpé ôj kò še ê* (*he affirmed it that he not did it*), *he affirmed that he did not do it*; *mò kowe rè kpé emi mbò* (*I built-book of-it that I was-coming*), *I wrote that I was coming*.

§ 98. *Yi*, *he, she, it*, is frequently employed pleonastically before verbs in the future tense; as, *ôba yi ô kpa â*, *the king he will kill him*.

OMISSION OF PRONOUNS.

§ 99. The personal pronoun *ó* or *ô*, *he, she, it*, is always omitted before *kò*, *kò*, or *kì*, *not*; as, *kò ri*, *he does not see*; *kò m̀*, *he does not know*; *kì ísè ènia rèrè* (*not is person goodness*), *he is not a good man*. But the full form *ôj* or *ôj*, *he*, is not omitted; and hence, instead of the above expressions, we may use their precise equivalents, *ôj kò ri*, *he does not see*; *ôj kò m̀*, *he does not know*; *ôj kì ísè ènia rèrè*, *he is not a good man*.

§ 100. Possessives are sometimes omitted for the sake of brevity; as, *lòh b̀ odzu*, *go wash (your) face*; *iya de*, (*my*) *mother has come*.

Demonstrative Pronouns.

§ 101. The demonstrative pronouns are *yi*, *this*; *ná*, *that*; *nì*, *this one, that one*; with their plurals *wònyi*, *these*, *wòni*, *those*, formed by prefixing *awòj*, *they*, to 'yi' and 'ni'.

§ 102. The demonstratives are placed immediately after the nouns which they define; as, *ilé yi*, *this house*; *ilé wòni*, *those houses*. When the noun is followed by a descriptive word, the demonstrative is placed after both; as, *ènia rèrè ná* (*person of goodness that*), *that good person*.

§ 103. Both 'yi' and 'ná' may be attached to plural nouns; as, *awòj ènia yi*, *these people*; *gbogbo ilé ná*, *all those houses*.

§ 104. The pronoun 'ni' appears to be, as regards its origin, the near demonstrative *this*. At present, however, this word and its corresponding substantive 'eni' have the following uses and acceptations.

1. It is employed as an indefinite pronoun, which may be variously rendered according to circumstances; as, *wi fu ni or eni* (*speak to one or a person*), *speak to me or us*; *bá ni sise*, *help one, or us, to work*; *eni ti mbò* (*one who is coming*), *he who is coming*; *eni kò ri eni kan* (*I not see some one*), *I see no one*.

2. 'Ni' is frequently employed as a definite article (§ 108).

3. It is combined with other pronouns in composition; as, *eyini* (*eyi ni*), *that*; *awòni* (*awòj ni*), *those*; *tani?* (*ta? ni*), *who?* *kini?* (*ki? ni*), *what?*

§ 105. When the demonstratives are employed substantively, they are augmented by the addition of the usual preformatives; as, *eyi*, *alayi*, *eleyi*, *this*; *ònná*, *that*; of which the plurals are *awònyi*, *iwònyi*, *nwònyi*, *these*; *awòni*, *awònná*, *those*. Sometimes 'eyi' reduplicates the second syllable; as, *eyiyi*, *this*; and frequently it is compounded with *nì*, forming the compound substantive pronoun *eyini*, meaning *that*.

1. The substantive demonstratives are construed like nouns; as, *eyi li o še ê*

(*this it-is he did it*), *this person did it*; *ojná lí o wi í* (*that it-is he said it*), *that person said it*; *iwọ̀nyi mọ̀*, *these know*.

2. 'Ojńá' and 'awọ̀ńá' are emphatic; as, *awọ̀ńá ní mo rí* (*those it-is I saw*), *I saw those very persons, or themselves*.

DEFINITE ARTICLE.

§ 106. The demonstratives ná and ní, *that*, and the substantive pronoun eyi, *this*, frequently have the force of the definite article.

§ 107. Ná is always equivalent to the English demonstrative *that*, although in some cases it may be rendered by the article *the*; as, *ọ̀kọ̀rri ná tí o de lana*, *the man who came yesterday*.

§ 108. Ní is scarcely used as a demonstrative, and is more nearly equivalent to the article; as, *á rí ò̀do nlá ní*, *we saw the great river*; *ọ̀ba ní lí o wi í* (*king the it-is that said it*), *the king said it*. In the use of ní we observe two peculiarities.

1. It is employed in connexion with *kan*, *one*, which is used to indicate singularity; as, *ọ̀mọ̀de kan ní lí o ̀́e ̀́e*, *the child did it*.

2. It frequently qualifies a phrase or sentence; as, *ilé ńdzo ní*, *there is a house on fire*; *balogun ńnedzi, tí o lóh ogun ná ní, kò huwa rẹ̀*, *two generals, who went to that war, did not behave well*. In these and all similar examples 'ní' may be rendered by *it is*.

§ 109. Eyi, *this*, is employed as a definite article, before the noun, in speaking of one among a plurality of things previously mentioned. Thus in Luke 15. 12, after mentioning the two sons, we have the phrase '*eyi abúro*,' *the younger*.

The Relative Pronoun.

§ 110. The relative *ti*, *who* or *which*, is applied to both persons and things, and is not varied to indicate gender, number, or case. Hence, as is the case, for instance, with the uninflected Hebrew relative, a personal pronoun is often employed in connexion with it to indicate the number and person which the relative would have if inflected.

§ 111. 1. *a*. When employed as the subject of a relative clause, or in what may be called the nominative case, *ti* is usually followed by *o* or *ọ̀*, *he, she, it*, which is used in a general way for all numbers and persons; as, *awa tí o rí*, *we who see*; *iwọ̀ tí ọ̀ kọ̀*, *thou who learnest*.

b. When the verb of the relative clause begins with 'm,' 'n,' or 'ń,' either as an auxiliary particle or as a component part of the verb, the 'o' or 'ọ̀' is usually omitted; as, *iwọ̀ tí ńsọ̀rọ̀*, *thou who art speaking*; *awa tí mbẹ̀*, *we who are*.

2. Frequently, however, instead of 'o' or 'ọ̀,' a pronoun is used, agreeing in person and number with the antecedent; as, *èńia tí awọ̀ń ̀́e ̀́e* (*person who they did it*), *the people who did it*; *emi tí mọ̀ mọ̀* (*I who I know*), *I who know*.

3. It being regarded as sufficient if the plurality of the antecedent is once expressed, the same thing may be said in several different ways. Thus the sentence, *he slew his sons who rebelled*, may be expressed in Yoruba either by, *ó kpa awọ̀ń ọ̀mọ̀ rẹ̀ tí ọ̀ sọ̀tẹ̀* (lit. *he slew them son of him who he rebelled*); or by, *ó kpa ọ̀mọ̀ rẹ̀ awọ̀ń tí ọ̀ sọ̀tẹ̀* (*he slew son of him they who he rebelled*); or else by, *ó kpa ọ̀mọ̀ rẹ̀ tí awọ̀ń sọ̀tẹ̀* (*he slew son of him who they rebelled*).

§ 112. 1. In what may be called the objective case, 'ti' is not followed by 'o' or any other pleonastic pronoun; as, *ilé ti ọba kọ*, *the house which the king built*.

2. The relative cannot be governed directly by a preposition, but only through a noun or pronoun; hence when the preposition has no other word for its object, the pronoun *eni*, *one*, is introduced before the relative; as, *si eni ti* (*to one who*), *to whom*; *fu eni ti* (*for one who*), *for whom*.

§ 113. The possessive case is expressed:

1. By employing a personal pronoun, which must follow the name of the thing possessed; as, *ọkọnrí ti ilé rẹ dọ* (*man who house of him burned*), *the man whose house was burned*.

2. By employing the pronoun *eni*, *one*, before *ti*; as, *bata eni ti emi kò tó gbé* (*shoes of one which I not am-sufficient to-bear*), *whose shoes I am not worthy to bear*. *Eni* is sometimes introduced to make a phrase definite; as, *gbogbo nyin eni ti ngbó* (*all you one who are-hearing*), *all you who hear*.

§ 114. When its antecedent is a noun signifying time or place, 'ti' may be rendered by *when* or *where*; as, *igba ti mo de*, *the time when I came*; *ibi ti ó wà*, *the place where he is*.

§ 115. The compound relative *what* is expressed:

1. By a noun and 'ti,' *which*; as, *emi kọ fẹ nkan ti ó še*, *I do not like what* (*lit. thing which*) *he did*.

2. By *eyi ti*, *this which*; as, *awa kọ mọ eyi ti ó ri*, *we do not know what he saw*.

3. By *bi . . . ti*, *as . . . which*; as, *mọ gbó bi o ti wi*, *I heard what thou saidst*.

§ 116. We occasionally meet with *ni* or *li*, *that*, employed as a relative instead of *ti*; as, *ènia lí o šina lí eyi*, *this is a people that err*.

OMISSION OF THE RELATIVE.

§ 117. The relative is omitted in the following cases:

1. Before an adverb composed of a preposition, a noun, and the relative; as, *enyin li awọn nigbati enyin gbó* (*ye are they in-time-which ye hear*), *ye are they who when ye hear*.

2. Before *máh*, *not*; as, *alagbara máh mọ èro* (*strong-man not knows consideration*), *a strong man who does not consider*; *abanise máh ba ni še mọ* (*helper not with one acts more*), *a helper who helps no more*.

3. Sometimes, instead of making use of a relative clause in dependence on the main proposition, two separate propositions are employed; as, *amọran mọ owe, i ládza orán* (*wise-man knows proverbs, he reconciles difficulties*), *a wise man who knows proverbs reconciles difficulties*.

Interrogative and Indefinite Pronouns.

§ 118. *Ta?* *who?* is generally, if not invariably, compounded with *ni* or *li*, *that*. It is employed as follows:

1. As an interrogative pronoun; as, *tani?* *who?* *tani ni?* *who is it?* *iwọ tani?* (*thou who*), *who art thou?* *tani še ẹ?* *who did it?* or, *tali o še ẹ?* (*who he did it*), *who did it?* *ó lù tani?* *he struck whom?* *tani ó wi fu?* *whom did he speak to?* or *ó wi fu tani?* *he spoke to whom?*

2. As an indefinite pronoun; as, emi m̀ò tani ó li, *I know whom he struck.*

In the Egba dialect, before the auxiliary particle 'n,' 'ta' is sometimes omitted, and 'li' only is employed; as, li ñkpè mi? *who is calling me?*

3. Tani is equivalent to a possessive in various constructions:

a. After the name of the thing possessed; as, ilé tani ñd̀zo? (*house of whom is-burning?*) *whose house is burning?* At the option of the speaker, ti, *of*, may be inserted before tani; as, ilé ti tani ñd̀zo?

b. The same thing may be expressed by tani? *who?* and ní, *to have or own*, with ti, *which*, following the name of the thing possessed; as, tani ní ilé ti ñd̀zo? (*who house which is-burning*), *whose house is-burning?*

§ 119. The relative 'ti' is employed as an interrogative in the sense of *what?*

1. Ti alone is used; as, emi ó ti še? (*I shall what do*), *what shall I do?* ɛnyin ó ti še m̀ò? (*ye will what do to-know*), *how will ye know?*

2. Very often bi, *as*, is employed as a complement to 'ti'; in which case 'bi' precedes the subject of the verb; as, bi emi ti ñsé? (*as I what am-doing*), *what am I doing?* bi iwò ti še m̀ò? (*as thou what dost to-know*), *how dost thou know?*

§ 120. The particle or pronoun 'è,' which the natives regard as a contraction of eyi, *this*, is used for *what* in the expression, è še? (*what is it*), *what is the matter?* why? or, è ti še, which has the same meaning.

§ 121. Ki? *what? which?* is also combined with nì or li, *that*, and is used as follows:

1. As an interrogative pronoun; as, kini? or kini ni? *what is it?* kilí ó ñsé? *what is he doing?* nitori kini iwò ñkigbe? (*for what thou art-bawling*), *why art thou bawling?* lati kini ó de? (*from what it came*), *from what did it arise?*

2. It is also employed as an indefinite pronoun; as, emi m̀ò kilí ó še, *I know what he did.*

3. When inserted between the parts of a reduplicated noun 'ki' has the force of *whatever*; as, ilé ki ilé, or ilekile, *any house whatever* (§ 56, 1, a).

§ 122. 1. Wo? *which? what?* is an adjective pronoun, attached interrogatively to nouns; as, ilé wo li ó rà? (*house which is-it he bought*), *which house did he buy?* ènia wo lí ó fẹ ọta rẹ? (*person what is-it he loves enemy his*), *what man loves his enemy?*

2. a. Ewo? formed by prefixing 'è' to 'wo,' is a substantive pronoun; as, ewo tí o dara? (*which that it is-good*), *which, or which one, is good?* emi ò m̀ò ewo! *I do not know which!*

b. Ewo is employed as an indefinite pronoun; as, bère ewo li ó fẹ (*ask which it-is he wants*), *inquire which he wants.*

In the Egba dialect 'si' and 'yisi' are sometimes employed as substitutes for 'wo' and 'ewo'; as, ni id̀lò sí ó de? *on what day did he come?* yisi ó gbà? *which did he take?*

VERBS.

Principles of Conjugation.

§ 123. Through all the variations of person, number, mode, and tense, the Yoruba verbal root remains unchanged.

§ 124. Person and number are denoted by the form of the personal pronoun that represents the subject, as follows:

emi ri, <i>I see or saw.</i>	awa ri, <i>we see or saw.</i>
iwo ri, <i>thou seest or sawest.</i>	enjin ri, <i>ye see or saw.</i>
on ri, <i>he sees or saw.</i>	nwon ri, <i>they see or saw.</i>

§ 125. The modes and tenses are indicated by auxiliary particles placed before the verb. The whole difficulty of the Yoruba verb lies in the position and meaning of these particles; and thus the intricacies usually found in the inflexions of the verb are here transferred, as it were, to the department of syntax.

§ 126. There is but one conjugation, and no irregular verbs, in Yoruba; all verbs being varied in the same manner. We will here give a synoptical view of the various forms of the verb.

INDICATIVE FORMS.

Simple.

AORIST.	{	<i>Perf.</i>	emi ri, <i>I see or saw.</i>
		<i>Impf.</i>	emi nri, <i>I am or was seeing.</i>
PAST.	{	<i>Perf.</i>	emi ti ri, <i>I have or had seen.</i>
		<i>Impf.</i>	emi ti nri or nti nri, <i>I have or had been seeing.</i>
FUTURE.	{	<i>First.</i>	emi o ri or a ri, <i>I shall or will see.</i>
		<i>Sec.</i>	emi o ti ri,* <i>I shall or will have seen.</i>

with ni or li o.

AORIST.	{	<i>Perf.</i>	{ emi ni ri, <i>I see or saw.</i>	}	<i>I shall or will see.</i>
			{ emi li o ri, <i>I saw or see.</i>		
PAST.	{	<i>Impf.</i>	emi ni nri, <i>I am or was seeing.</i>	}	<i>I shall or will see.</i>
			emi li o ti ri, <i>I have seen.</i>		
FUTURE.	{	<i>First.</i>	{ emi ni o ri,	}	<i>I shall or will see.</i>
			{ emi ni yi o ri,		
	{	<i>Sec.</i>	emi ni yi o ti ri, <i>I shall or will have seen.</i>	}	

OPTATIVE OR POTENTIAL FORMS.

AORIST. emi ma ri, *I may or would see, or am seeing.*

PAST. emi ma ti ri, *I might or would have seen.*

FUTURE. emi o ma ri, *I may see or shall be seeing.*

* This form is scarcely recognised by the Natives.

SUBJUNCTIVE FORMS.

Simple.

AORIST.	{ <i>Perf.</i> bi emi ba ri, <i>if I see or saw.</i>
	{ <i>Impf.</i> bi emi ɲba ri, <i>if I am or was seeing.</i>
PAST.	{ <i>Perf.</i> bi emi ba ti ri, <i>if I have or had seen.</i>
	{ <i>Impf.</i> bi emi ɲba ti ri, <i>if I have or had been seeing.</i>
FUTURE.	{ <i>First.</i> bi emi ó ba ri, <i>if I shall or will see.</i>
	{ <i>Sec.</i> bi emi ó ba ti ri, <i>if I shall have seen.</i>

with ki.

PRESENT.	ki ɲ ri or ki em' ri, <i>that I see.</i>
FUTURE.	ki emi ki ó ri, <i>that I shall or will see.</i>

Auxiliary Particles.

§ 127. Before exhibiting in detail the forms of expression in Yoruba which correspond to our ideas of mode and tense, we will first examine into the nature and uses of each of the particles by the help of which these various accidents are denoted.

INDICATIVE PARTICLES.

Particle of Continuance.

ɲ or m.

§ 128. 1. The particle 'ɲ,' sometimes exchanged for 'm' before 'b' or 'f,' is probably a contraction of ní, *to be*. We have analogous formations in several words; as, nlá, *to be great*, which is composed of ní, *to have*, and ilá, *greatness*; mbè (colloquial), *there*, from ni, *in*, and ibè, *that place*.

2. When 'ɲ' is attached to a verb, it may be prefixed to the accompanying particles also; as, emi ɲsi ɲsòrò, *and I was speaking*.

§ 129. 1. The use of 'ɲ' or 'm' in conjugation is to denote a continuing or unfinished action, or one which was unfinished at the time referred to; as, omọ ɲsùṅ, *the child is sleeping or is asleep*; nígbatí awa mbò lana, *when we were coming yesterday*.

2. Although it is not customary to prefix 'ɲ' to verbs in the future tense, no reason is apparent why this should not be done; as, yi ó ɲsíṣe, *he will be working*.

3. This prefix is very appropriately employed in making general propositions, that is, in asserting that which always holds good; as, keferi ɲbò òkpe, *the heathens worship the palm-tree*; emi ti ɲke omọ ni ɲba omọ dze, *he who indulges a child spoils a child*.

Past Particle.

ti.

§ 130. This particle denotes that an action is, was, or will be finished at or before

some point of time expressed or implied in the sentence. It is variously employed as follows:

1. To express anything that is past at the time of speaking; as, mo* ti še ê lana (*I have done it yesterday*), *I did it yesterday*; ó ti kú, *he is dead*; ó ñti ñbò lana, *he was coming yesterday*; arágbàni ti ñsína, *the ancients erred*.

2. To express what is past in relation to some point of past time; as, mo ti lóh, ki ó tó dé, *I had gone, before he arrived* (ki...tó, *before*).

3. To express what will be past before some future point of time; as, emi ó ti lóh, ki ó tó dé, *I shall have gone, before he arrives*.

4. It is employed indefinitely like the English auxiliary *have*; as, mo ti ri í nígbakúgba, *I have seen him often*.

§ 131. 1. The origin of the particle 'ti' is doubtful. It is not improbably, however, a modification of tó, *to be sufficient, to attain to*, which is sometimes employed as a sort of auxiliary particle; as, bi ọmọ dagba á tó lí ọgbọ (if child is-grown, it-will attain to-have wisdom), *when the child is grown, it will get wisdom*; nígbaná ni nwọj tó kína (then it-is they attained-to erring), *then they erred*.

2. The use of 'ti' as a pleonastic particle seems to favor the suspicion that its original is 'tó.'

a. It is sometimes employed pleonastically after prepositions expressing instrumentality; as in the general proposition, níkpa íṣẹ owó ti wáh, *by labor money comes*, lit. *attains to*, or *reaches the point of, coming*.

b. Again, 'ti' is often thus employed after máh, kì, kò, or kò, *not*; as, máh ti lóh! (*not arrive-at going*), *do not go yet!* ọj kò lè ti so eso (*it not is-able to-attain to bearing fruit*), *it cannot bear fruit*.

3. The auxiliary particle 'ti' coincides with 'tó' in accent, but not with any other particle 'ti' in the language.

Future Particles.

ó or ô.

§ 132. This particle is the sign of the future tense, and is generally equivalent to *shall* or *will*. The difference between 'ó' and 'ô' is simply euphonic, 'ó' being employed before close, and 'ô' before open vowels (§ 14).

§ 133. It is probable that 'ó' or 'ô' was originally the personal pronoun *ó* or *ô*, *he, she, it*. If so, the expression emi ó ri, *I shall see*, means literally, *I am he to-see*, or *that is to see*.

§ 134. The particle 'ó' or 'ô' is frequently preceded in all persons and numbers by the pleonastic pronoun *yi*, *he, she, it*; as, iwọ yi ó še ê, *thou wilt do it*; awa yi ó ri, *we shall see*; ọrọ ti yi ô ṣẹ (word which it will come-to-pass), *a word which will be fulfilled*. (Luke, 1. 20.)

a.

§ 135. This particle may be regarded as an emphatic substitute for ó or ô. It is used as follows:

* The secondary forms of the pronouns, as, mo or mọ, *I*, are more frequently used than the longer primary forms.

1. *a.* To give emphasis to an assertion, it being used in connexion with a nominative, before any vowel whether close or open; as, emi á ri, *I shall see*; emi á m̀, *I shall know*.

b. Or without a nominative, when the subject of the verb is of the third person, either singular or plural; as, á ri mi, *he or they will see me*; á kpa mi, *he or they will kill me*.

2. Before a verb used subjunctively, after ki, *that*, without a nominative, and frequently with a preceding clause understood; as in the evening salutation, k̀ á s̀ǹ r̀ è! *may you sleep well!* lit. *I wish that you will sleep well*. Servants frequently ask such questions as, k̀ á s̀ è c̀ỳi? *shall I do this?* lit. *do you wish that I shall do this?* But the clause preceding 'ki' is often expressed; as, ó ní, k̀ á l̀h, *he said, let us go*, lit. *he said that we will go*.

Emphatic Particle.

ni or li.

§ 136. The demonstrative 'ni' or 'li,' which assumes the nature of a substantive verb (see § 181), is sometimes employed in the latter sense along with verbs for the sake of emphasis; as, babá ni ǹri, *father is or was seeing*; babá lí o ri, *father saw or sees*.

OPTATIVE PARTICLE.

ma.

§ 137. This particle is used as follows:

1. In affirmative propositions with a nominative of the first or third person, and in interrogative sentences with a nominative of the second person, it expresses *will or desire*; as, emi ma l̀h, *I desire to go*; nẁǹ ó ma l̀h, *they will go, or will desire to go*; èỳỳi ma l̀h? *do ye wish to go?*

2. In affirmative propositions, with a nominative of the second person, it expresses *permission*; as, ma l̀h, or iẁ ó ma l̀h, *thou mayst go*; é ma g̀b̀e é, *ye may take it*.

This form of expression is much employed instead of the imperative, as being more courteous; as, ma kuro, *thou mayest get out of my way*; é ma yara, *ye may make haste*.

3. In connexion with words denoting the continuance or repetition of an action, it expresses what is *customary or habitual*; as, á ma l̀h ǹgbakúg̀ba, *we go often*; óy ma ná mi lod̀ód̀z̀um̀ó, *he flogs me daily*; iẁ ó ma s̀d̀r̀ó kp̀od̀z̀u, *thou talkest too much*; ó ma s̀euǹ! (*he is always kind*), *he is very kind!* é ma kp̀e! (*ye always stay*), *how long ye stayed!*

§ 138. When the particle 'ti' is employed, 'ma' precedes it; as, iẁ ó ma tí s̀e buburu, *thou hast done evil (habitually)*. But when l̀e, *to be able, can, or may*, is employed with the verb, it may either precede or follow 'ma'; as, k̀ á l̀e ma m̀, *that we may know*; boya ỳi ó ma l̀e dz̀oba, *perhaps he may or can reign*. In these cases also 'ma' denotes the continuance of the action.

SUBJUNCTIVE PARTICLES.

ba.

§ 139. The verb 'ba' signifies to *arrive at, attain to, meet, find, &c.* It is employed as an auxiliary particle, chiefly in what may be termed the subjunctive mode, with something of the sense of *reaching, arriving at, or attaining to*, the action expressed by the verb before which it is placed; as, *bi iwò ba ri î, kpa â, if thou seest it, kill it*, lit. *if thou attain to seeing it or chance to see it.*

§ 140. It is also employed as an emphatic or definite particle in the indicative mode; as, *ilé ti mo ba kọ ni, o wó (house which I built it-is, it fell down), the house which I built has fallen down; óhun ti Ọlórún ba ti wẹ̀nò, máh fi kpè li aimó (thing which God has cleansed not make to-call to-be uncleanness), the thing which God has cleansed call not unclean.*

§ 141. It is customary also to use 'ba' after *nígbatí, when*; as, *nígbatí mo ba de, when I arrive.*

aba and iba.

§ 142. These particles, which appear to be derivatives of 'ba,' imply duty or obligation; as, *emi aba še è, or iba še è, I ought to do it; eynin ki iba ti lóh, ye should not go or have gone.* (For the use of *ti* after *ki*, *not*, see § 131, 2, 6.)

§ 143. In subjunctive sentences 'iba' is equivalent to *if*; as, *iba še wólí, i ba mọ, if he were a prophet, he would know; iba še mo ni íye (if it-were I had wings), if I had wings*; a form of expression employed for *oh! that I had, &c.*

ki.

§ 144. Another subjunctive form arises from the use of the conjunction *ki, that*:

1. If the nominative to the verb is *ń, I*, or a monosyllabic pronoun (except 'óń'), only one 'ki' is used; as,

ki ń ri, } that I see.

kí emi ri, }

kí o ri, that thou see.

kí ó ri, that he see.

kí á ri, that we see.

kí é ri, that ye see.

2. If the nominative begins with a consonant or consists of two or more syllables, it is usually followed by a second 'ki,' with the pronoun *ó* or *ó, he, she, or it*; as,

ki iwò kí ó ri, that thou see.

ki awa kí ó ri, that we see.

ki nwọ́n kí ó ri, that they see.

ki babá kí ó ri, that father see.

3. The pronoun *ón, he, she, it*, is used with one 'ki' or with two; as, *ki óń ri, or ki óń kí ó ri, that he see.*

§ 145. These forms are employed as follows:

1. Subjunctively; as, *ki ń ri, kí emi ri, or kí emi kí ó ri*, which may be rendered, according to the context, *that I see, that I shall see, that I may see.*

2. Imperatively; as,

ki ɲ ri,	}	<i>let me see.</i>
kī emi rī,		
ki emi kī ó ri,		
kī o ri,	}	<i>see thou.</i>
ki iwọ kī ó ri,		
kī ó ri,		
ki óɲ ri,	}	<i>let him see.</i>
ki óɲ kī ó ri,		

3. *a.* When the verb with 'ki' is preceded by an objective, it may often be rendered by an infinitive; as, mo kpè ọ ki o še ê, *I called thee that thou do it or to do it*; mo kpè nyin kī ẹ wò ô, *I called you to look at it*; ọ bẹbẹ wa kī á wí, *he begged us to tell*; ọ bẹbẹ wa kī á máh wí, *he begged us not to tell.*

b. In this construction an objective of the third person plural is sometimes followed by kī ó, *that he*; as, á kpè wọn kī ó še ê, *we called them to do it.*

OCCASIONAL PREFIX.

i.

§ 146. The inseparable prefix 'i' (which is not to be confounded with *i*, *he*, and *i*, *not*) is attached to verbs for the following purposes:

1. To denote what is permanently true or customary; as, li ọkpọlọkpọ ọkan li emu iso, *in the abundance of the heart the mouth speaketh.*

2. It is frequently emphatic after kò, *not*; as, nwọn kò ide, *they have not come.* It would seem that, since 'kò' is immutably unaccented, the 'i' is introduced to supply the place of an emphatic accent on the negative.

3. It appears to be sometimes merely euphonic.

a. After 'ki' employed instead of kò, *not*; as, ki íše awodi, *it is not a hawk*; emi kī ilóh ibe, *I never go there.*

b. When the 'o' which usually follows the relative 'ti' (§ 96, 1) is omitted; as, emi ti ilóh, *he who went.*

Forms for the Passive Voice.

§ 147. In Yoruba, as in many other African languages, there is, properly speaking, no passive voice. Various forms of speech, however, supply its place.

§ 148. 1. The most frequent form is the plural impersonal, employing the contracted nominative á, *they*; as, á ri mi, *they see me*, for *I am seen*; á ti ri mi, *they have seen me*, for *I have been seen*; á ò ri mi, *they will see me*, for *I shall be seen.*

2. Frequently, retaining this construction, the noun or pronoun denoting the object is placed first; thus, emi li á ri (*I it-is they see*), *I am seen.*

§ 149. Although the above substitute for the passive is applicable in all cases, there are several other forms which may be used occasionally with good effect:

1. All the compound active transitive verbs, as ba...dže, *to spoil*, kpa...mọ, *to conceal* (§ 37, 1), and a few other transitive verbs, may be used instead of passives; as, nwọn badže, *they are spoiled*; awa kpamọ, *we are hid*; ó še li odzu mi, *it was done before me*, lit. *in my eye*; ọke bọ mọle, *the hills were covered over*; níkpá ọpọ Oluwa aije ti dá, *by the word of the Lord the world was made.*

2. Occasionally an abstract noun with a substantive verb is employed instead of a passive verb; as, *mo še igbagbe* (*I am a-forggetting*), *I am forgotten*; *ilé di áhoro*, *the house is a desolation, or is desolated*.

3. All nouns formed from transitive verbs by reduplicating the first syllable have a passive signification; as, *riri*, *which is seen*; *kpikpa*, *which is slain*; *śiśe*, *which is done*. And any of these nouns may be employed before *ni*, *to be*, to form a substitute for the passive of the perfect aorist tense; as, *riri li emi*, *I am seen*; *gbighà ni nwoj*, *they are received*; *kpikpa ni babá*, *father is killed*. In the past and future tenses of the passives just mentioned, the word which represents the subject is followed by *še* or *dže*, *to do, to be, to get*; as, *kpikpa ni iwo ó še* or *dže*, *you will be killed, or get killed*.

Modes and Tenses.

§ 150. The various forms of the verb, including verbal nouns, may be arranged in five modes, viz. the Indicative, the Optative or Potential, the Subjunctive (formed from the two preceding), the Imperative, and the Infinitive.

§ 151. The tenses may be divided into three classes or groups, the Aorist or Indefinite, the Past, and the Future. In the Indicative mode, and in the Subjunctive formed from it, the Aorist and the Past tenses have a perfect and an imperfect form, while the Future exhibits a first and second future form. Those of the Indicative, for example, are as follows:

Aorist Tenses.

Perfect, emi ri, *I see or saw.*

Imperfect, emi ɲri, *I am or was seeing.*

Past Tenses.

Perfect, emi ti ri, *I have or had seen.*

Imperfect, emi ti ɲri, *I have or had been seeing.*

Future Tenses.

First, emi ó ri, *I shall or will see.*

Second, emi ó ti ri, *I shall or will have seen.*

§ 152. The foregoing synopses and remarks present the general principles of the Yoruba verb; but the importance and intricacy of this part of speech seem to require a more detailed exhibition of particulars. We will therefore give the various usual and occasional forms of each tense, and describe the peculiarities of each form.

INDICATIVE MODE.

Aorist Perfect.

ACTIVE.

Affirmative.

emi ri,	}	<i>I see or saw.</i>
emi ni ri,		
emi lí o ri,		
emi iri,		<i>I see or saw continuously.</i>

Negative.

emi ò (or kò) ri, *I do or did not see.*
emi kì ìrì, *I do not see.*

Interrogative.

emi ri bì? }
emi ni ri bì? } *do or did I see?*
emi lí o ri bì? }

Negative Interrogative.

emi kò ri or ò (ri) bì? }
emi ri kò? } *do or did I not see?*
emi kì ìrì bì, *do I not see?*

PASSIVE.

Affirmative.

á ri mi, }
emi lí á ri, } *they see or saw me—I am or was seen.*
emi še riri, }
riri lí emi, } *I am or was seen.*

Negative.

á kò (or ò) ri mi, *they do or did not see me—I am or was not seen.*
emi kò (or ò) še riri, *I am or was not seen.*

Interrogative.

á ri mi bì? }
emi lí á ri bì? } *am or was I seen?*
emi še riri bì? }
riri lí emi bì? }

Negative Interrogative.

á kò (or ò) ri mi bì? }
emi kò (or ò) še riri bì? } *am or was I not seen?*
riri kò lí emi bì? }

Remarks.

§ 153. On the various forms of the aorist perfect we may observe:

1. That the simple form, as, emi ri, *I see or saw*, is wholly ambiguous as regards time, it being used either in a present or past sense.

2. The form with 'ni' may be used with a past signification; but it naturally suggests the idea of present time, and will probably become a definite present tense.

3. The form with 'lí o' seems to have more of the past signification; but it can-

not be set down as a definite past tense, because it is still frequently employed in the present.

4. The prefix 'i,' in the form 'emi iri,' denotes continuous or habitual action. It is not a usual form, except in the cases already stated (§ 146).

§ 154. As to the negative and interrogative forms, observe:

1. The particles 'kò' and 'ò' are exact equivalents. Before open vowels they become 'kò' and 'ò.'

2. Kì, *not*, is employed before verbs beginning in 'i,' as shown in the example. As the prefix 'i' denotes continuation, 'kì' generally has the sense of *never*; as, emi kì ilóh ibè, *I never go there*. This form is to be rendered by the present tense.

3. The particle 'hì,' or its equivalents abi, tabi, is merely a sign of interrogation, and is often omitted; as, emi ri? *dùl I see?*

4. Kó, *not*, is used only in interrogations; as, emi ri kó? *do I not see?* and in negations where the verb is not expressed; as, óh kó, it is *not he*.

Aorist Imperfect.

ACTIVE.

emi ñri, } *I am or was seeing.*
emi ni ñri, }

PASSIVE.

á ñri mi, } *I am or was seen.*
emi li á ñri, }

Remarks.

§ 155. This tense needs but little elucidation; still we may observe:

1. That the first form is employed either in a present or past sense; whereas the second form more frequently refers to present time.

2. This tense has no negative forms, and the interrogative forms differ from the affirmative only in the use of 'hì' or its equivalents (§ 154, 3) immediately after the verb.

Past Perfect.

ACTIVE.

emi wà ri, *I saw.*
emi tí ri, } *I have or had seen.*
emi lí o tí ri, }

Remarks.

§ 156. The verb wà, *to be*, is used in all tenses; but there is a tendency to restrict it to the past. When it is used as an auxiliary particle, it invariably forms an indefinite past tense; as, emi wà ri, *I saw*; wọwọ wà li ẹ̀ẹ̀sẹ̀, *they were sinners*.

§ 157. A perfect tense is occasionally formed by other particles besides tí; as, emi gbe ẹ̀ de (*I brought it come*), *I have brought it*; emi ẹ̀e tán (*I dùl done*), *I have finished*.

§ 158. *Lî o ti ri* is rather more definite than *ti ri*.

The negative, interrogative, and passive of this tense, as also of the past imperfect, are formed in accordance with the principles laid down in treating of the aorist tenses.

First Future.

ACTIVE.

Affirmative.

emî ô ri,	}	<i>I shall see.</i>
ŋ ô ri,		
emî á ri,		
emî ní ô ri,		
emî ní yí ô ri,		

Negative

emî kî yí ô ri,	}	<i>I shall not see.</i>
emî ní kî yí ô ri,		

Interrogative.

emî ô ri bí?	}	<i>shall I see?</i>
emî á ri bí?		
emî ní ô ri bí?		
emî ní yí ô ri bí?		

Negative Interrogative

emî kî yí ô ri bí?	}	<i>shall I not see?</i>
emî ní kî yí ô ri bí?		

PASSIVE.

Affirmative.

á ô ri mí,	}	<i>I shall be seen.</i>
emî lí á ô ri,		

Negative.

á kî yí ô ri mí, *I shall not be seen.*

Interrogative.

á ô ri mí bí?	}	<i>shall I be seen?</i>
emî lí á ô ri bí?		

Negative Interrogative.

á kî yí ô ri mí bí? *shall I not be seen?*

Remarks.

§ 159. It is to be observed here:

1. That the forms 'emi ô ri' and 'ŋ ô ri' have the same force; and that the three other forms of the active affirmative are emphatic.

2. That ki, *not*, is the only negative employed in the future; and that yi, *he*, always follows it. This arrangement is designed, partly to distinguish the future from other similar combinations of words, and partly to avoid unenphonious expressions. Thus; if kò, *not*, were employed, kò ô, pronounced as two syllables, would be disagreeable to the ear; and if pronounced as one, it would be confounded with kî ô, *that he*.

3. Here, as elsewhere, the affirmative active exhibits a greater number of forms than the negative, &c.

OPTATIVE AND SUBJUNCTIVE MODES.

§ 160. As these modes are but variations of the Indicative, it is thought that what has been said of them, together with the detailed treatment of the Indicative, will suffice to explain their construction.

IMPERATIVE MODE.

§ 161. The following are the forms of the Imperative mode:

Imperative Active.

Affirmative.

ri, or iwọ ri,	}	<i>see, or see thou.</i>
ma ri, or iwọ ma ri,		
kî o ri, or ki iwọ kî ó ri,		
kî o ma ri, or ki iwọ kî ó ma ri,		

Negative.

máh ri, or iwọ máh ri,	}	<i>see not, or see thou not.</i>
máh še ri, or iwọ máh še ri,		
kî o máh ri, or ki iwọ kî ó máh ri,		
kî o máh še ri, or ki iwọ kî ó máh še ri,		

Passive.

Affirmative.

kî á ri ọ, or iwọ ni kî á ri,	}	<i>be thou seen.</i>
kî á ma ri ọ, or iwọ ni kî á ma ri,		

Negative.

kî á máh ri ọ,	}	<i>be thou not seen.</i>
kî á máh še ri ọ,		

Remarks.

§ 162. Here, as elsewhere in the conjugation of the verb, the multiplicity of

forms arises from two causes: first, from the use of synonymous words, as 'o' and 'iwò'; and, secondly, from redundant words, as 'ki o' and 'sé.'

§ 163. On the use of the above forms observe:

1. That 'ma' denotes continuance (§ 137, 3).
2. 'Ki' denotes *that*, and *ki ó*, *that he* (§ 144, 2); so that the forms with 'ki' are analogous to the French construction, *qu'il voie, qu'il ne voie pas*.
3. 'Máh' means *not*, and is employed instead of 'kò' in the Imperative and in some other connexions.
4. The verb *sé*, *to do*, is frequently employed pleonastically after *máh*, *not*; as, *máh sé lóh*, *do not go*, instead of *máh lóh*.

INFINITIVE MODE.

§ 164. The Infinitive Active is regularly and usually expressed by the simple verb or root; as, *emi fẹ ri*, *I desire to see*; *ó ngbèro lóh*, *he is thinking to go*; *ó dọ̀mọ̀ wọ̀n sé ẹ̀*, *it pleased them to do it*. Frequently, however, a substitute for the infinitive is formed by the verbal nouns treated of in the following sections.

Verbal Nouns.

§ 165. The following are the forms of the verbal nouns which correspond to our infinitives and gerunds or participles.

- iri*, *to see*; *a seeing*.
- ari*, *to be seen*; *that which is seen*.
- atiri*, *to see or to be seen*; *a seeing*.
- riri*, *to see or to be seen*; *a seeing*.
- atima ri*, *to be seeing*; *a continued seeing*.

§ 166. The form in 'i' is employed as a gerund:

1. In the nominative; as, *isọ̀dẹ̀ kọ̀ yẹ̀ fu oloko*, *hunting is not suitable for a farmer*.
2. In the objective; as, *nwọ̀n kọ̀ fẹ̀ isọ̀dẹ̀*, *they are not fond of hunting, or they do not love to hunt*.

§ 167. The form with 'ati' prefixed is employed as a gerund or infinitive:

1. In the nominative; as, *atigbọ̀ kò itó*, *to hear or hearing is not enough*.
2. In the objective, in which case it is frequently equivalent to a simple infinitive; as, *ó kórirra atíşíşẹ̀*, *he hated working or to work*; *á ma dẹ̀ç atiyè*, *we eat to live*.

§ 168. The preposition *li*, *in, in regard to*, is frequently inserted between the gerund or infinitive in 'ati' and the verb on which it depends; as, *ọ̀ kọ̀ lí atíşíşẹ̀*, *he refused to work*, instead of *ọ̀ kọ̀ atíşíşẹ̀*. The insertion or omission of 'li' is not always optional:

1. When the governing verb is composed of a verb and noun, as *bẹ̀ru* (*ba ẹ̀ru*), *to be afraid*, 'li' is omitted, because the gerund in 'ati' sustains the relation of a genitive to the noun contained in the verb; as, *ọ̀ bẹ̀ru atíşẹ̀ ẹ̀* (*he met-the-fear of doing it*), *he was afraid to do it*; *ó mura* (*mu ara*) *atísù̀n* (*he took-himself to-sleep or sleeping*), *he prepared to sleep*; *nwọ̀n wọ̀na* (*wá ọ̀na*) *atiwọ̀ ilẹ̀* (*they sought-a-road of-entering or to-enter the-house*), *they endeavored to enter the house*.

2. A simple verb, on the contrary, may govern the infinitive by means of 'li'; as, *ó sá lí atíṣe ê* (*he feared in-regard-to doing it*), *he feared to do it*, instead of *ó sá atíṣe ê*.

a. It should be observed that, although the use of 'li' in such cases is not indispensable, yet the people generally prefer it. Hence we constantly hear such expressions as, *nwọ́n rò lí atíkpa â*, *they thought to kill him*; *awa kpèd̀zọ́ lí atíkọ́lẹ*, *we assembled to build a house*.

b. In many cases the form with 'li ati,' and the simple form of the verb, may be employed indifferently and interchangeably; but when the infinitive is gerundive in its nature, the form with 'li ati' is preferable. Thus it is perfectly correct to say, *awa kpèd̀zọ́ ọ́lẹ* (instead of *lí atíkọ́lẹ*), *we assembled to build a house*; but it would not be proper to say, *nwọ́n rò kpa â* (instead of *lí atíkpa*), *they thought to kill him*, because the precise meaning of the expression is, *they thought of killing him*.

§ 169. Nouns formed by reduplication have much the same sense when employed actively as those in 'i' and 'ati.' Thus, *igb́ọ́ kò itó*, *atigb́ọ́ kò itó*, *gbigb́ọ́ kò itó*, *hearing is not enough*, are equivalent and equally proper forms of expression.

§ 170. In the form *atima ri*, *to be seeing*, the auxiliary particle takes the formative prefix like a principal verb. A gerund or infinitive of this form denotes continued or customary action; as, *atima ṣ́ê ẹ́ru ní ísoro*, *to be a slave is hard*; *emi ńrònú lí atima gb́ọ́ ọ́rọ́ Ọ́lọ́run*, *I am thinking to hear the word of God*, i. e. *to become a hearer, or to make a custom of hearing*.

§ 171. The infinitive passive is expressed:

1. By the form in 'a'; as, *óhun ari*, *a thing to be seen*; *nwọ́n ṣ́e agbara rẹ́ akparun* (*they made power his a-destruction**), *they caused his power to be destroyed*.

2. By nouns in 'ati' preceded by 'li'; as, *ó kpè wọ́n dzade lí atíkpa*, *he called them out to be killed, or to kill them*.

3. a. By reduplicated forms preceded by *di*, *ni* or *li*, or *ṣ́e*, in the sense of *to be*; as, *ó mu wọ́n dí kpíkpa*, *he caused them to be slain*; *ó fi wọ́n lẹ́ ṣ́e tità*, *he delivered them up (fi...lẹ) to be sold*; *ó fu wọ́n lí ẹ́ran ní dzídžẹ́* (*he gave them to have meat to be eaten*), *he gave them meat to eat*.

b. But the verb *di*, *ni*, or *ṣ́e* is sometimes omitted; as, Yoruba *ṣ́oro fifò*, *Yoruba is difficult to speak or be spoken*; *mo rà águtan kpíkpa*, *I thought sheep to kill or be killed*.

Participles.

§ 172. The Yoruba language has no participial words except the verbal nouns just noticed. The substitutes to be employed for participles depend on the nature of the sentence.

§ 173. Our Present Participle is represented,

1. By a simple verb; as, *ṣ́e gbogbo rẹ́ bèrẹ́ nihinyi*, *do all of it beginning here*.

2. By a verb with the prefix 'ń'; as, *á ri ẹ́nia ńdzọ́ko lẹ́bá ọ́na*, *we saw people sitting by the road*.

3. By *nígbatí*, *when*, with a verb and nominative; as, *nígbatí ó sì yanu rẹ́*, *ó kọ́*

* Akparun, *which is destroyed, which is to be destroyed*; ari, *which is seen or to be seen*. A noun in 'a,' when it denotes the object or recipient of an action, has no exact equivalent in English. See 'a' in the Dictionary.

wọṅ (*when he also opened-mouth his, he taught them*), and opening his mouth, he taught them.

4. By a noun beginning with 'a'; as, ó sẹ́ aga arun ñ tán, *he broke the chair ruining it entirely*.

§ 174. The Perfect Participle is represented much in the same manner as the present :

1. By a verb with the prefix 'ṅ'; as, ifefe ṅmi fu afẹ́fẹ́, *a reed shaken by the wind*.

2. By a verb used impersonally; as, igi tí á gbìṅ leti òdò (*tree which they planted by river*), *a tree planted by the river*.

3. By a verb used passively with a nominative; as, á ba ilé-tubu ó se (*we found jail-house, it was-shut*), *we found the prison shut*.

4. By *ki*, *that*, and a verb; as, mo fẹ́ rí ṅkaṅ kí ó towọ́ rẹ́ sẹ́ (*I wish to see something that it by thee is-done*), *I wish to see something done by thee*.

5. By a noun, or preposition and noun; as, nwoṅ ba ñ oku, *they found him dead (oku, a corpse)*; ó sọkálẹ́ sí ilé rẹ́ ní idalàrẹ́, *he descended to his house justified*, lit. *in justification*.

Substantive Verbs.

§ 175. No language, perhaps, can claim so many verbs expressing existence, either absolutely or in different relations and capacities. The whole number of these verbs *to be*, including those which have other meanings, is ten, to wit: mbẹ́, wà, yà, gbe, si, ni, rí, sẹ́, dze, di. Most of them have peculiarities which prevent them from being interchangeable.

mbẹ́.

§ 176. This verb denotes existence *absolutely*, as Olorun mbẹ́, *God exists*, or *God is*, an expression often employed by the Yorubas as a solemn asseveration. Mbẹ́ is used in all modes and tenses; but in the imperative its place is usually supplied by *gbe* or *wà*.

wà.

§ 177. Wà is also a verb absolute, but is not entirely equivalent to mbẹ́.

1. It is occasionally employed as an auxiliary particle, and in this capacity forms an indefinite past tense, the only one in Yoruba corresponding to the English imperfect; as, ó wà rí, *he saw*.

2. In some dialects it is preferred to mbẹ́ in the preterite; as, ó wà, *he was*.

3. Wà is preferred to mbẹ́ in the future, and in the imperative; as, yi ó wà, *he will be*; é wà ibẹ́, *be ye there*.

4. In the Egha dialect, wà is preferred to mbẹ́, to express existence in a place; as, ó wà ilé, *he is in the house*; lit. *he is house*, the preposition *ni*, *in*, being omitted after the substantive verb.

5. In speaking of the duration of existence, wà (but not mbẹ́) is employed in the sense of *to live*; as, ó wà li ogorun odun, *he lived a hundred years*, lit. *he was for a hundred years*.

yà.

§ 178. This verb, which denotes existence *in a state or condition*, is nearly obsolete except in composition; as, ó yàdí, *he is dumb*, lit. yà odi, *is a dumb person*.

sí.

§ 179. This verb, denoting existence *in a place*, is chiefly used in negative sentences; as, kò sí owó, *or owó kò sí, there is no money*.

2. The only instance in which 'sí' is used without a negative, is in the phrase ó sí ñkan (*it is a thing*), *there is something the matter*, said in reply to the question kà sí ñkan? (*not is a thing*), *is not something the matter?*

rí.

§ 180. Rí denotes a *mode* of existence, and is always employed in connexion with such words as beḥe, *so, thus*; bi, *as*; bi . . . ti, *how*, &c.; as, beḥe lí ó rí (*so it-is it is*), *so it is*; bi ó ti rí, *how is it?*

§ 181. The original of 'rí' is doubtful; but it may be rí, *to see*, employed in the sense of *to appear, to seem*.

ní or lí.

§ 182. 'Ní,' whether employed as a verb, pronoun, or preposition, usually becomes 'lí' before a vowel; as, lí orí, *on the top*. But this change does not generally take place before the combinations idz, igb, ilb, ik, ikp, il, and in; as, ní idze, *for food*; ní igba, *at the time*; ní ika, *to have cruelty, to be cruel*; ní ikpa, *in the path*; ní ilé, *in the house*; ní inó, *in the inside*.

§ 183. The substantive verb 'ní' or 'lí' appears to be the demonstrative 'ní' employed as a copula, in like manner with the personal pronouns of the third person in the Aramaic languages. The pronominal origin of the word is shown by the fact that in many cases it is equivalent to *it is*; as, tani ní? *who is it?* emi ní, *it is I*; awa lí o še ê, *we it is that did it*. In other cases it may be rendered simply by the verb *to be*; as, tani ní babá rẹ? *who is thy father?* ọba lí iwọ, *thou art a king*.

§ 184. 'Ní' or 'lí' is frequently employed pleonastically:

1. For the purpose of making a proposition emphatic or definite; as, emi ní rí (*I it-is see*), *I see*; emi lí o rí (*I am that saw*), *I saw*. (See § 185, 1.)

2. Before nouns following verbs of naming, calling, &c.; as, nwon ọ oruko rẹ lí Alaidžu, *they called his name Alaidžu* (lit. *to be Alaidžu*); á kpè wọn lí ọle, *we called them thieves*.

3. After an objective placed emphatically at the beginning of a sentence; as, malí lí á kpa (*cow it-is we killed*), *we killed a cow*. And in like manner after adverbs and adverbial phrases; as, beḥe lí ó wi (*so it-is he said*), *he said so*.

§ 185. When 'ní' is used pleonastically, it is frequently followed by a personal pronoun of the third person singular employed relatively:

1. In the perfect aorist, *ó* or *ó*, *he, she, it, or that*, often follows 'ni'; as, *emi lí ó ri* (*I it-is that saw*), *I saw*; *enjin lí ó mò* (*ye it-is that knew*), *ye knew*. But when this tense refers to present time, the relative pronoun is generally omitted; as, *emi ni ri* (*I it-is see*), *I see*; *enjin ni mò* (*ye it-is know*), *ye know*.

2. In the future tense 'ni' is followed by *yi, he, she, it, or that*; as, *emi ni yi ó ri* (*I it-is that will see*), *I shall see*; *enjin ni yi ó mò* (*ye it-is that will know*), *ye will know*.

gbe.

§ 186. *Gbe, to dwell, abide*, takes the place of *mbè* in the imperative and subjunctive; as, *gbe ibè*, *be there*; *džé kí ó gbe* (*make that he be*), *let him be, or let him alone*.

§ 187. This verb is often pleonastic after adverbs of place; as, *ni ilé tí ó gbe wà*, *in the house where he was*; *nihinyi nwoj gbe kí*, *here they died*.

di.

§ 188. *Di, to become*, may be rendered by the verb *to be*, when change of state is implied; as, *iwo ó di omò buburu*, *thou wilt be a bad child*; *ó di arughó*, *he is getting old*; *dì atónbi*, *to be born again*; *ó di eni egàn* (*he became one of contempt*), *he was despised*.

še.

§ 189. The verb *še, to do, to act*, may be rendered as a substantive verb in several cases, as follows:

1. When it has for its object a noun which denotes one who acts in some capacity or fills a station; as, *nwoj še woli*, *they were prophets*, i. e. they acted as prophets or performed the work of prophets; *iwo ni nše babá mi*, *thou art my father*; *eni ti ise akóbí*, *he who is first-born*; *okpó li ój še*, *she is a widow*; *yi ó še àmi fu nyin*, *it will be a sign to you*.

2. The verb 'še' (and sometimes 'džé') is used with a negative instead of 'ni'; as, *oba li ój*, *he is a king*; *kí ise oba*, *he is not a king*.

3. It is also frequently employed to express the relation of ownership; as, *yi ó še ti rẹ*, *it shall be thine*.

§ 190. In the imperative with the negative *máh, not*, 'sé' is frequently used pleonastically, like the English *do*: as, *máli še lóh*, *do not go*. It is sometimes used in the same manner in connexion with other negatives to express a refusal; as, *emi ó še lóh*, *I will not go*.

džé.

§ 191. *Džé* appears to be another form for 'še'; at least the use of the two verbs is very similar. *Džé* is employed as follows:

1. To express being or acting in the capacity of an officer; as, *ó džé bálẹ* (*he acts governor*), *he is governor*; *tali o fi mi džé onidadžé*? *who made me to be judge?* i. e. *who made me a judge?*

2. *Džé* is the only word employed in the sense of *to be* in connexion with numbers; as, *ó džé ogota* (*it makes sixty*), *it is sixty*.

3. Sometimes 'dže,' like 'še,' appears to mean simply *to be*; as, emi ò mò ẹni ti i dže or i še (*I not know him who he is*), *I do not know who he is*.

§ 192. In expressing refusal, 'dže' is more frequently used pleonastically than 'še' (§ 190); as, emi ò dže lẹh, *I will not go*.

Pleonastic Use of Verbs.

§ 193. In addition to the pleonastic uses of verbs which have already been spoken of, the following are worthy of notice:

Verbs of *going* and *coming* are much employed pleonastically after verbs of motion to or from a place, and this gives peculiar definiteness to the language; as, ó gbe ê lati oko lẹh, *he took it from the farm*—to some place at a distance from the speaker (which fact is indicated by lẹh, *to go or going*); ó gbe ê lati oko wáh, *he took it from the farm*—and brought it hither (which is indicated by wáh, *to come or coming*). So, ó kpada lẹh (*he returned going*), *he went back*; ó kpada de (*he returned coming*), *he came back*. And so, lati isisiyi lẹh (*from now going*), *henceforth*.

§ 194. After verbs of giving, ní or lí, *to have*, is always added; as, bù mi lí omi, *give me water*; Olọrunj lí ó fú wọj lí aghara, *God gave them power*.

NOUNS.

§ 195. Yoruba nouns are not varied in form to express gender, number, or case; or in other words, they exhibit no traces of inflexion.

Gender.

§ 196. Gender is distinguished only where there is an actual difference of sex, as follows:

1. By using different words; as, ako, *a he-animal, a male*, abò, *a she-animal, a female*; akuko, *a cock*, aghebò, *a hen*; òko, *a he-goat*, ake, *a she-goat*; ọkọri, *a man*, ọbiri, *a woman*; babá, *a father*, iya, *a mother*; and a few others.

2. By adding to a common term one of the above general expressions in apposition.

a. In the case of animals, by prefixing ako, *male*, and abò, *female*; as, ako malù, *a bull*, abò malù, *a cow*; ako ẹ́sín, *a horse*, abò ẹ́sín, *a mare*.

b. In the case of persons, by appending the words ọkọri, *man*, and ọbiri, *woman*; as, ọmọ ọkọri (ọmọ ọkọri, *child man*), *a man-child, a boy*, ọmọ ọbiri (ọmọ ọbiri), *a woman-child, a girl*; iwofa ọkọri, *a bond-man*, iwofa ọbiri, *a bond-woman*; ẹgbón ọkọri, *an elder brother*, ẹgbón ọbiri, *an elder sister*; aburo ọkọri, *a younger brother*, aburo ọbiri, *a younger sister*.

3. By compounding two or more words in construction; as, bálé (ọba ilé, *lord of house*), *the master of a house, or father of a family*; iyalé (iya, *mother, mistress*, ilé, *house*), *the mistress of a house, or mother of a family*; balogun (ọba, *lord*, li, *as to*, ogun, *war*), *a general*; iyalase (iya, *mistress*, li, *as to*, ase, *cooking*), *a female cook*.

Number.

§ 197. There are two methods of indicating that a noun is plural:

1. By employing the personal pronoun *awọ́*, *they*, before the noun; as, *awọ́ imale fẹ ogun*, *the Mohammedans love war*; *á ò rí awọ́ ẹ́sín*, *we did not see the horses*; *budžoko awọ́ ẹ́legàn*, *the seat of the scornful*.

When two or more plural nouns in this construction are connected by a conjunction, 'awọ́' is repeated before each of them; as, *awọ́ adagbára, awọ́ ologboj, ati awọ́ olódódo*, *the powerful, the wise, and the righteous*. But 'awọ́' is not employed unless it is really necessary to indicate plurality. Thus in the general proposition, *aragbáni logboj*, *the ancients were wise*, it is dispensed with, because we naturally infer that the noun is used collectively.

2. When the idea of reciprocity or of repetition is connected with that of plurality, the two ideas are indicated by reduplication.

a. The ideas of reciprocity and plurality are occasionally expressed by reduplication and a copulative conjunction; as, *ọ́rẹ ọ́j ọ́rẹ kí iba ará wọ́n dzà* (*friend and friend not with self their fight*), *friends do not fight with each other*.

b. Repetition and plurality are indicated by simple reduplication; as, *bù ikọ́j-wọ́ ikọ́j-wọ́ eru* (*take handful after handful of ashes*), *take handfuls of ashes*; *ẹ̀yẹ ẹ̀yẹ nibẹ̀ nibẹ̀* (*bird bird is there*), *birds are there*, i. e. in flocks.

c. In the numerals plurality is indicated by reduplicating the first portion; as, *ẹ̀gbẹ̀gẹ̀bẹ̀run*, *thousands*, or *thousands on thousands*; *ogogorun*, *hundreds*, *many hundreds*.

Case.

§ 198. There is no inflexion of the Yoruba noun to indicate case. The relations, however, in which a noun may stand to the other words in a sentence are denoted in various ways.

§ 199. The subject of the proposition, or *nominative*, is always placed before the verb; as, *ẹ́sín sare*, *the horse runs*. To this rule there is no exception.

§ 200. The usage in regard to the *vocative* is various:

1. In calling to a person at a distance, the particle 'o' is often employed after the noun; as, *omode o!* *O child!*

2. If the person addressed is not far off, the speaker uses *ná*, *that*; as, *okojiri ná wá*, *man, come*.

3. In addressing one who is quite near to the speaker, the demonstrative *yi*, *this*, is frequently employed; as, *omode yi, kuro!* *child, get out of the way!*

4. Usually, however, the name of the person addressed receives no addition; as, *omode, tọ̀ mi wá*, *child, come to me*; *eyin Yoruba, gbó tı eni* (*ye Yorubas, hear the words of me*), *ye Yorubas, hear me*.

§ 201. The position of the *objective* depends on the character of the sentence:

1. It usually follows the governing word; as, *mo ri ọ́ba*, *I saw the king*; *diu akara fu babá*, *bake bread for father*.

2. In cases of emphasis, however, the objective precedes the governing word; as, *eran kí á dı!* (*meat that we fry*), *shall I fry meat?* *ọ́bọ ri!* *see the baboon!* *ọ́j li á wi fu* (*him it-is we spoke to*), *we told him*.

3. When the governing verb is an infinitive, depending on another verb, the objective is placed between the two verbs; as, *yè mi kpè* (*cease me call*), *cease calling me*; *ó mò iwe kà* (*he knows book read*), *he knows how to read*; *emi fẹ babá rí* (*I want father see*), *I want to see my father*.

§ 202. The *possessive* relation is expressed in the following ways:

1. By placing the two nouns in juxtaposition, the name of the possessor always following that of the thing possessed; as, *iwe omọ* (*book of child*), *the child's book*; *ilé babá*, *father's house*; *ilé ẹyẹ*, *a bird's nest*; *ẹbado okun*, *the shore of the sea*, or *the sea-shore*; *ọkpa irin*, *a staff of iron*, or *an iron staff*.

2. Less frequently, the relation between the two nouns is expressed, in the Aramaic manner, by the relative pronoun *ti*, *who*, *which*, placed between them, which thus becomes equivalent to the preposition *of*; as, *ilé ti babá* (*house of father*), *father's house*; *Kristi ti Oluwa*, *the Christ of the Lord*, or *the Lord's Christ*.

§ 203. The pronoun or particle 'ti' is necessarily used in the following cases:

1. When the first noun is omitted.

a. In propositions where the relation of possession is predicated; as, *ti babá mi ni* (*of father my it-is*), *it is my father's*; *agbara ti idze ti Ọlorun* (*power which is of God*), *the power which is God's*.

b. In propositions where the possessive relation is simply indicated and not predicated, but where the name of the thing possessed is not expressed; as, *nwoj ẹ ti ọriṣa* (*they do of idols*), *they do the work of idols*, i. e. *they serve idols*; *awọj Nasıra fẹ ti Ọlorun* (*they Christian love of God*), *Christians love the doctrine or service of God*. When a laborer was looking for a suitable stone, another said to him in my hearing, *gbe ti ẹsẹ rẹ* (*take of foot thy*), *take the one at thy foot*. The following instance comes under the same category: *ki یشه Ọlorun okú bikóşe ti aye*, *he is not the God of the dead, but of the living*.

2. When the names of the possessor and possessed might be mistaken for names or epithets of the same person in apposition, the relation of possession must be indicated by 'ti'; as, *Kristi ti Oluwa*, *the Lord's Christ*; *Atiba ti ọba*, *Atiba the servant of the king*. *Atiba ọba*, means *Atiba the King*—the present King of Yoruba being named *Atiba*.

Apposition.

§ 204. 1. When nouns are in apposition, the principal word comes first; as, *Atiba ọba*, *Atiba the king*, or *King Atiba*; *Kumi balẹ*, *Kumi the governor*.

2. When a pronoun is in apposition with a noun, the pronoun comes first; as, *iwo omọ*, *thou child*; *enjin enia*, *ye people*.

3. If words in apposition be connected by a copula, the predicate usually comes first; as, *emi li Ọlorun* (*spirit is God*), *God is a spirit*; *ọlọgbọj li iwo* (*wise-man art thou*), *thou art wise*.

ADJECTIVES.

§ 205. The office of *predicative* adjectives, i. e. of those which affirm or predicate a quality, is performed:

1. By simple verbs; as, *Aina dara*, *Aina is good*; *ó ti dara*, *he has been good*;

yi ó dara, *he will be good*; oyin dòn, *honey is sweet*; igi ná, *the tree is large*. Like other verbs, they sometimes take the auxiliary particle 'ni'; as, Aina ni dara, *Aina is good*; Aina ni yi ó dara, *Aina will be good*.

2. By compound verbs, formed by prefixing ní or lí, *to have*, or *še*, *to be*, to nouns; as, Aina lagbara (lí agbara, *has strength*), *Aina is strong*; iwò *šènia* (*še ènia*, *art a person*), *thou art kind*; ó *šòlè* (*še òlè*, *is a lazy one*), *he is lazy*.

§ 206. The office of *qualificative* adjectives, i. e. of adjectives which are attached to a noun to indicate quality, is performed:

1. By abstract nouns placed after the nouns which they qualify. These are either:

a. Abstract nouns formed by reduplication from the simple neuter verbs which are employed as predicative adjectives; as, ohun didara (*thing of goodness*), *a good thing*; oyin didòn (*honey of sweetness*), *sweet honey*; igi nkàla (*tree of largeness*), *a large tree*.

b. Primitive abstract nouns; as, banga òke (*room of upperness*), *an upper room*; ènia agbara, *a person of strength*, or *a strong man*; iše wahala (*work of trouble*), *a troublesome work*.

2. By concrete nouns placed in apposition before the noun they qualify; as, alagbara ènia (*strong-one person*), *a strong man*; otošì óbiri (*miserable-one woman*), *a miserable or wretched woman*; okpó óbiri (*widow woman*), *a widow*.

3. By the relative pronoun *tí*, *who*, *which*, and a verb; as, oyin *tí* ó dòn (*honey which it is-sweet*), *sweet honey*; ida *tí* o mu (*sword which it is-sharp*), *a sharp sword*; igi *tí* ó *šé* (*stick which it is-broken*), *a broken stick*.

4. In a very few instances, by a simple neuter verb; as, mo ri òbò ná, *I saw a large baboon*; ènia rè lí o *še è* (*person is-good it-is that did it*), *a good person did it*.

Comparison.

§ 207. Higher degrees of quality, answering somewhat to our *comparative*, are indicated by the addition of words which perform the office of adverbs.

1. The word most commonly employed for this purpose is *dzù*, *surpassing*, *exceeding*, *very*; as, ó dara *dzù* (*it is-good exceeding*), *it is very good*, *it is better*. *Lòh*, *to go*, is frequently employed pleonastically after *dzù*; as, ó dara *dzù lòh*; but this adds nothing to the sense.

2. A form of expression equivalent to a comparative is made, when only one term of the comparison is given, by adding *si ì*, *to it*, i. e. *in addition*, *more*; as, ó dara *si ì* (*it is-good more*), *it is better*.

3. *More than* is expressed simply by *dzù*, or *dzù lòh*; as, ísibu rorò *dzù idide*, or *dzù idide lòh*, *falling is easier than rising*; ó *yè fú ni kî á šíšé dzù kî á še otošì*, *it is proper for us that we labor rather than that we be poor*.

§ 208. The highest degree, or *superlative*, may be expressed:

1. By *dzù gbogbo*, or *dzù gbogbo lòh*, *surpassing all*; as, eyi dara *dzù gbogbo lòh* (*this is-good surpassing all away*), *this is the best*.

2. By *tán*, *completed*, *perfected*, placed after the adjective; as, ó dara *tán* (*it is-good perfectly*), *it is best*.

NUMERALS.

Cardinals.

§ 209. The following list exhibits the Yoruba cardinal numerals and their construction :

1. eni, oḡaṅ.		101. oḡaṅleḡoḡoṛuṅ	(100+1).
2. edži.		105. áruṅdíládófa	(110—5).
3. ẹta.		110. ádófa	(120—10).
4. ẹriṅ.		120. oḡoḡa, oḡa	(20×6).
5. aruṅ.		130. ádodže	(140—10).
6. ẹfa.		140. oḡodže, odže	(20×7).
7. edže.		150. ádodžo	(160—10).
8. ẹdžo.		160. oḡodžo, odžo	(20×8).
9. ẹsanṅ.		170. ádósanṅ	(180—10).
10. ẹwa.		180. oḡoḡsanṅ, oḡsanṅ	(20×9).
11. oḡaṅlá	(great 1).	190. ẹwadílúḡba	(200—10).
12. edžilá	(" 2).	200. íḡba, <i>or</i> íḡbéo.	
13. ẹtalá	(" 3).	210. ẹwalelúḡba	(200+10).
14. ẹriṅlá	(" 4).	220. oḡúnlelúḡba	(200+20).
15. ẹdóḡuṅ	(20—5).	230. oḡbóṅlelúḡba	(200+30).
16. ẹriṅdílóḡuṅ	(20—4).	240. ódžilelúḡba	(200+40).
17. ẹtadílóḡuṅ	(20—3).	250. adótaelúḡba	(200+50).
18. ẹdžidílóḡuṅ	(20—2).	300. odúrúṅ	(400—100).
19. oḡaṅdílóḡuṅ	(20—1).	400. iriṅwo, <i>or</i> iriṅ'ò.	
20. oḡún.		500. odéḡbéta	(600—100).
21. oḡaṅlelóḡuṅ	(20+1).	600. eḡbéta	(200×3).
22. ẹdžilelóḡuṅ	(20+2).	700. odéḡbẹriṅ	(800—100).
23. ẹtalelóḡuṅ	(20+3).	800. eḡbériṅ	(200×4).
24. ẹriṅlelóḡuṅ	(20+4).	900. odéḡbẹruṅ	(1000—100).
25. ẹedóḡbọṅ	(30—5).	1000. eḡbẹruṅ	(200×5).
26. ẹriṅdílóḡbọṅ	(30—4).	1100. odéḡbẹfa	(1200—100).
27. ẹtadílóḡbọṅ	(30—3).	1200. eḡbéfa	(200×6).
28. ẹdžidílóḡbọṅ	(30—2).	1300. odéḡbedže	(1400—100).
29. oḡaṅdílóḡbọṅ	(30—1).	1400. eḡbédže	(200×7).
30. oḡbọṅ.		1600. eḡbédžo	(200×8).
31. oḡaṅlelóḡbọṅ	(30+1).	1800. eḡbésanṅ	(200×9).
35. áruṅdilogódži	(40—5).	2000. eḡbá	(200×10).
39. oḡaṅdilogdóži	(40—1).	2100. eḡbá ó lé oḡoṛuṅ	(2000+100).
40. oḡodži, odži	(20×2).	2200. eḡbóḡaṅla	(200×11).
45. áruṅdíládóta	(50—5).	2300. eḡbóḡaṅla ó lé	
50. ádota	(60—10).	oḡoṛuṅ	(2200+100).
60. oḡoḡa, oḡa	(20×3).	2400. eḡbédžila	(200×12).
70. ádoriṅ	(80—10).	2600. eḡbétala	(200×13).
80. oḡoṛiṅ, oṛiṅ	(20×4).	2800. eḡbẹriṅla	(200×14).
90. ádoriṅ	(100—10).	3000. eḡbẹdóḡuṅ	(200×15).
100. oḡoṛuṅ, oṛuṅ	(20×5).	4000. eḡbádži	(2000×2).

5,000. egbēdógbōn (200×25).	16,000. egbādzo (2000×8).
6,000. egbāta (2000×3).	18,000. egbāsun (2000×9).
7,000. edégbarinj (8000—1000).	20,000. egbāwa (2000×10),
8,000. egbārinj (2000×4).	or oké kán (<i>one bag</i>).
9,000. edégbaranj (10,000—1000).	100,000. oké marun (5 <i>bags</i>).
10,000. egbārunj (2000×5).	1,000,000. adota oké (50 <i>bags</i>).
12,000. egbāfa (2000×6).	2,000,000. ogorun oké (100 <i>bags</i>).
14,000. egbādze (2000×7).	

FORMATION OF CARDINALS.

§ 210. The primitive numerals are the units from *one* to *ten*, and the numbers *twenty*, *thirty*, and *two hundred*. Most or all of these might be referred to existing Yoruba roots; but it would be difficult to establish any plausible connexion between the meaning of the root and that of the numeral. The only exception is *igba* (from *gbá*, *to sweep, to collect into a heap*, as by sweeping), *a collection* or *heap*, and hence *two hundred*: so called from the fact that, in counting cowries, the Yorubas sweep each two hundred into a separate heap. This number is also called *igbéo* (*igba owó*), *a heap of money*.

The number *edzé*, *seven*, appears to be 5+2; which makes it not improbable that the latter units are founded on the first five, as is the case in so many African languages. A more extensive and accurate acquaintance, however, with the cognates of this language than is now possessed, would be necessary to establish the fact.

§ 211. The derivative numbers, which are by far the more numerous class, are formed as follows:

1. By appending the term *ulá*, *large*, to the four first units; as, *okanlá* (*great one*), *eleven*, &c.

2. By subtracting smaller numbers from larger round numbers; as, *édógun* (*arun di ogún*, *five from twenty*), *fifteen*; *erindilógun* (*erin di li ogún*, *four from ten*), *sixteen*; *adota* (*ewa di ota*, *ten from sixty*), *fifty*; *odunrun* (*orun di irinwo*, *one hundred from four hundred*), *three hundred*; *odégbeta* (*orun di egbeta*, *one hundred from six hundred*), *five hundred*.

3. By addition; as, *okanjelógun* (*okan lé li ogún*, *one laid on twenty*), *twenty-one*; *ewalehigba* (*ewa le li igba*, *ten laid on two hundred*), *two hundred and ten*.

4. By multiplication; as, *ogodži*, sometimes contracted to *odži* (*ogún edži*, *twenty two or twenty twice*), *forty*; *ogorun* or *orun* (*ogún arun*, *twenty five times*), *one hundred*; *egbeta* (*igba eta*, *two hundred three times*), *six hundred*; *egba* (*igba ewa*, *two-hundred ten times*), *two thousand*; *egbokanla* (*igba okanlá*, *two hundred eleven times*), *two thousand two hundred*.

§ 212. The fact that *two hundred*, *two thousand*, and *twenty thousand* are round numbers, is to be accounted for by their method of counting cowries as shown in the following table.

Cowry Table.

40 cowries=1 string,	.	.	called <i>ogodži</i> ,	worth \$0.02
5 strings=1 bunch,	.	.	" <i>igbéo</i> ,	" 0.10
10 bunches=1 head,	.	.	" <i>egbā</i> ,	" 1.00
10 heads=1 bag or sack,	.	.	" <i>oké</i> ,	" 10.00

§ 213. This custom of counting by cowries also gives rise to the following,

Cardinals of Price.			
òkáj (owó káj)	.	1 cowry.	èwa 10 cowries.
édzì	.	2 "	òkówo 20 "
èta	.	3 "	ògbóṣwo 30 "
èrìṣ	.	4 "	ogodzì (1 <i>string</i>) 40 "
árun	.	5 "	ogorin (2 ") 80 "
èfa	.	6 "	ogofa (3 ") 120 "
édzè	.	7 "	ogòdzo (4 ") 160 "
èdzo	.	8 "	ìgbéò (5 ") 200 "
èsan	.	9 "	irinwo (10 ") 400 "

It will be observed that up to *ogodzì*, *forty*, the first vowel of each numeral is long. The reason of this is that *òkan*, *édzì*, &c., are contractions of *owó káj*, *owó edzì*, *one cowry*, *two cowries*, &c.

Construction of Cardinals.

§ 214. The cardinal units, from *two* to *ten* inclusive, have 'm' prefixed to them when they belong to nouns expressed or understood, as, *ènia mēwa*, *ten men*. *Eni*, *one*, is used only in counting. The word 'káj' is employed when the noun is expressed; as, *ènia káj*, *one man*; and 'òkan' when the noun is not expressed; as, *òkan de*, *one came*.

The 'm' prefixed to the numerals is probably a contraction of *má*, *to catch*, used in the sense of *amounting to*. When an African speaks in English, he generally says, *he catch ten*, *he catch twenty*, for *there were ten*, &c.

§ 215. The round numbers, as *ogún*, *ogbón*, *ogodzì*, &c., are generally placed before the nouns to which they belong; as, *ogún ènia*, *twenty men*. The other numerals follow the noun; as, *ènia medzì*, *two men*; *ènia mètalelógbon*, *thirty-three men*.

ORDINALS.

§ 216. The ordinals, from *one* to *nineteen*, are formed by prefixing 'ek' or 'èk' (the choice being determined by the law of euphonic concord) to the cardinals; as, *ekini*, *first*; *ekedzì*, *second*; *èkèta*, *third*, &c. But the vowel of the prefix is often omitted; as, *kini*, *kedzì*, *kèta*. These ordinals follow the noun; as, *òdzo ekedzì* or *kedzì*, *the second day*.

DISTRIBUTIVES.

§ 217. The distributive numerals are of two kinds.

1. Distributives of number or quantity, formed as follows:

a. By doubling the cardinals which commence with 'm'; as, *medzimedzì*, *two by two*; *mètamèta*, *three by three*.

b. By reduplicating the two first letters of such cardinals as do not commence with 'm'; as, *òkòkan*, *one by one*; *ogogun*, *twenty by twenty*.

2. Distributives of price, formed by reduplicating the two first letters of the cardinals of price; as, *òkòkan*, *one cowry each*; *èdzèdzì*, *two cowries each*.

NUMERAL ADVERBS.

§ 218. Numeral adverbs are of two kinds, viz. cardinal and ordinal adverbs.

1. *a.* The *cardinal* adverbs, signifying the number of times an event takes place, are formed by prefixing '1' (li, *in*) and 'e' (a contraction of erij or arij, *time*) to the adjectival forms of the cardinals; as, lẹkáj, *once*; lẹmedzi, *twice*. Very often erij or arij is pronounced in full; as, lẹrij káj, or lẹrij káj.

b. For the round numbers, igba, *time*, is employed; and in this case 'n' (ni, *in*) is preferred to '1,' as being more euphonious; as, nĩ igba ogún, *twenty times*; nĩ igba ogodži, *forty times*.

2. *Ordinal* adverbs, which denote the order in which events occur, are formed by prefixing 'le' to the ordinals; as, lẹkini, *first*; lẹkedži, *secondly*.

ADVERBS.

Formation of Adverbs.

§ 219. In regard to their origin, adverbs may be divided into four classes: 1, primitive adverbs; 2, nouns used adverbially; 3, words compounded of nouns and other accompanying words, as prepositions, &c.; and 4, verbs used adverbially.

§ 220. There are but few primitive adverbs, that is words which are adverbial in their primary acceptation; as, lai, *ever*; ewe, *again*; en, *yes*; ndau, *no*.

§ 221. Nouns employed as adverbs are of two classes:

1. Primitive abstract nouns; as, die, *a little*, e. g. ó sùn die, *he slept a little*; òke, *the parts above, on high, up*, e. g. ó gori òke, *he rose up*; isale, *the parts below, down*, e. g. o lóh isale, *he went down*.

2. Derivative abstract nouns, especially those formed by reduplication; as, nwọj gbero kpikpò, *they consulted much*; ó huwa buburu, *he behaved badly*.

§ 222. 1. Many adverbial expressions are composed of ni or li, *in*, and an abstract noun (§ 62); as, loni (li oni, *in this-day*), *to-day*; nigbanì (ni igbanì), *long ago*; lótó (li ótó), *truly*, &c.

2. Sometimes, however, several words are combined into one; as, disisiyi (di isisi yi, *till time this*), *hitherto*; nigbagbogbo (ni igba gbogbo, *in time every*), *always*.

§ 223. Verbs are frequently converted into adverbs:

a. tó, *to be enough*, is used in the sense of *sufficiently*; as, ó sọrọ tó, *he spoke enough*.

b. tón, or tún, *to be new, fresh, young*, is used for *again*; as, ó tón de, *he came again*.

c. kpò, *to be common*, for *in common*, or *together*; as, nwọj gbero kpò, *they consulted together*.

d. dži, *to surpass, excel*, for *more, much*; as, baru dži, *more wicked*; ó síšẹ dži, *he labored much or excessively*.

Classification of Adverbs.

§ 224. There is no deficiency of adverbs to express the various relations of time, place, &c. A few of each class will be given, and the others may be found in the Dictionary.

1. *Of Time*: loni (li oni), *to-day*; lana (li ana), *yesterday*; lola (li oła), *to-morrow*; lodzodzò (li odzò-odzò, § 63), *daily*; lošòšn (li ošu ošu), *monthly*; lekaj, *once*; lemédzi, *twice*; nigbatí, *when*; nigbana, *then*; ki . . . to, *before*, e. g. ki emi to de, *before I come*.

2. *Of Place*: nihinyi (ni ihin yi), *here*; nibẹ (ni ibẹ), *there*; lòke (li òke), *upwards*; lẹhin (li ehin), *backwards*.

3. *Of Manner or Quality*: dzedzẹ, *softly*; li ọkpọlọkọ (*in abundance*), *abundantly*; fi ọgbọn (*with wisdom*), *wisely*; fi ika, *cruelly*; fi agbara, *powerfully*, *violently*.

4. *Of Quantity*: kpò, ọkpọ, *much*; diẹ, *little*; tó, *enough*; bi . . . ti . . . kpò tó, *how much*, e. g. bi mo ti fẹ lóh kpò tó (*as I how wish to-go much enough*), *how much I wish to go!* bi . . . ti, *how*, e. g. bi emi ó ti še mọ? (*as I shall how do to-know*), *how shall I know?*

5. *Of Comparison*: dzù, *more*, *exceedingly*; gidigidi, dzòdzò, *much*, *very*; tún, kpé, *most*, *perfectly*, *completely*; rère, *well*; bẹcẹ, bayi, *so*, *thus*; fere, *almost*.

6. *Of Affirmation*: ẹn, *yes*; bẹhẹni, *so*, *so it is*, *yes*; ò, *yes*.

7. *Of Negation*: ndan, n, *no*; bẹhẹkẹ, *not so*, *no*; kì, kò, kò, kó, *not*; to which it may be added that any grave unaccented vowel, except 'a' and 'e,' is a negative.

8. *Of Doubt*: boya (bi ó yà, *if it be*), *perhaps*; bolése, bolésekpé (bi ó lè se kpé, *if it can be that*), *if possible*; košekpé (ki ó še kpé, *that it be that*), *if that*, *suppose that*.

9. *Of Interrogation*: bawo? (bi ewo, *if what*), *how?* eše? (eyi še, *this is*), *why?* nitorikini? (niti ori kini, *as to reason what*), *wherefore?* *why?*

Construction of Adverbs.

§ 225. As a general rule, adverbs follow the words which they qualify; as, mo ri i loni, *I saw him to-day*. We may state, however, three exceptions to this rule:

1. The adverb is sometimes placed first for the sake of emphasis; as, loni ni mo ri i, *to-day I saw him*. But although this construction is emphatic, emphasis does not always seem intended when it is employed.

2. Adverbs of doubt, negation, and some others, generally precede the word which they qualify; as, boya yi ó lóh, *perhaps he will go*; emi kò ri i, *I did not see him*.

3. Adverbial phrases composed of fi, *with*, and a noun, precede the verb; as, ó fi ọgbọn še ẹ (*he with wisdom did it*), *he did it wisely*.

PREPOSITIONS.

Formation of Prepositions.

§ 226. *Primitives.* Three of the prepositions, *ni, in*; *si, to*; and *ti, from*, are regarded as primitives. It is not improbable, however, that 'ti' is the verb *ti, to push, to prop*. Retaining a trace of this meaning, it becomes a preposition, *ti, by*; as, *ó dzoko ti mi, he sat by me, i. e. touching me*. But at present the most usual meaning of 'ti' is *from*.

§ 227. *Verbs employed for Prepositions.* Many verbs are employed as prepositions, although they still continue to be construed as verbs. A few examples will be given here; the remainder will be found in the Dictionary.

a. *ba, to meet*, becomes *bá, with, for, from*; as, *ó bá mi lóh, he went with me*; *ó bá mi rà ádié, he bought a fowl from me*; *bá mi wá aṣo, seek cloth for me, i. e. help me to procure some cloth*. If this word were construed as a preposition, it would follow the verb; as, *ó lóh bá mi*; but the phrase would be unintelligible to a native of Yoruba.

b. *fi, to make*, becomes *fi, with*; as, *ó fi ida sán, he smote with a sword*.

c. *fu, to give*, becomes *fu, to, for*; as, *wi fu ù, speak to him*; *mo rà â fu, I bought it for him*. But 'fu,' unlike 'bá' and 'fi,' is construed as a preposition. The reason is that 'fu' wherever used is in the infinitive mode; whereas 'bá' and 'fi' belong to the preceding nominative, and the verb which follows is an infinitive.

d. *mó, to adhere*, and *tô, to approach, to follow*, are used for *to*; as, *kan â mó ígi, nail it to the wood*; *tô mi wáh, come to me*.

e. *kà, to place, set*, and *lù, to strike*, are employed for *on*; as, *gbe ê kà ina, set it on the fire*; *ó sùbu lù mi, it falls on me*.

§ 228. *Compound Prepositions.* We have already noticed the fact that the Yoruba language has names for purely abstract relations, which in many other languages are expressed by adverbs and prepositions. These abstract nouns are frequently employed as adverbs; but to make them available as prepositions, they must be compounded with *ni, in*; *si, to*; or *ti, from*; as, *nino, in, within*, from *inó, the inside*.

§ 229. This account of prepositions leads us to notice the manner in which the mind of the people contemplates relations. First, they regard the relations of *up, down, within, without, &c.*, as actual things, and give them names. Secondly, they view these relations as fixed or permanent; and to form adverbs of permanent relation, they prefix 'ni' or 'li' to the abstract noun. This word 'ni' denotes fixedness of relation, and is always employed after the substantive verb, whence it may be called the substantive preposition. Finally, the Yorubas contemplate the relations as in a state of motion or emanation *from* the subject to the object. Motion *from* is invariably expressed by 'ti,' and motion *to* by 'si.' Thus from each noun of relation are formed three prepositions, to point out the mode in which the relation exists between the subject and the object; as, *lòdo (li òdo), down*, employed after verbs of rest or fixedness; *sòdo (si òdo), down*, employed after verbs of motion *to*

or towards the object; tòdò* (tì òdò), *down*, employed after verbs expressing motion from the object to the subject; e. g. ó wà lòdò mí, *it is below me*; lóh sòdò mí, *go below me*; ó mbò tòdò mí, *it is coming below me*, i. e. it is approaching from below towards me.

§ 230. Of the three fundamental prepositions, 'ti' only takes the substantive form by receiving the prefix 'a'; as, ati, *the fromness*. For obvious reasons this noun does not take the prefixes 'si' and 'ti,' but it is often compounded with 'li'; as, lati ilé de oko, *from the house to the farm*.

Construction of Prepositions.

§ 231. Usually the preposition is placed immediately before the objective, and the verb precedes both; as, ó mbè ninó ilé, *he is in the house*. But to this rule we note two exceptions:

1. A finite verb employed as a preposition (§ 227. c.) precedes the verb; as, ó ba mí rà, *he bought from me*.

2. The relative 'ti' precedes the preposition by which it is governed in the objective, as is sometimes the case in English; as, emi ri ibi tí ó dzoko sí, *I saw the place which he sat in*; 'si' in this construction being substituted for 'ni.'

CONJUNCTIONS.

§ 232. We will here state the peculiarities of the principal conjunctions, arranging them under the English words to which they correspond.

§ 233. *And* is represented by various particles.

1. By 'ti' in two cases only:

a. To connect personal pronouns; as, iwọ tí emi ri í, *thou and I saw it*; yi ó kpa emi tí iwọ, *he will kill me and thee*. The pronouns, whether singular or plural, which are connected by 'ti,' must be of the primary forms, except that 'rè' may be employed after 'ti' instead of iwọ, *thou*, or óh, *he*; as, emi tí rè á ô lóh, *I and thou will go*; emi tí rè še è, *I and he did it*.

b. In connecting verbs or clauses of sentences, 'ti' is frequently employed with 'si,' *and, also*; as, á ri í, tí á sí mu ù (*we saw him, and we also caught him*), *we saw him and caught him*; bí ó ba de, tí ó sí kpè mí (*if he should come, and he also call me*), *if he should come and call me*.

2. By 'ati,' the substantive form of 'ti.'

a. 'Ati' is employed to connect nouns, pronouns, adverbs, and prepositions; as, óbirí ati ómọ lóh, *the woman and the child went*; ó kpè iwọ ati emi, *he called thee and me*; á ri wọy lẹba ati ninó òdò, *we saw them by and in the river*; ó sọrọ lásaṣi ati lailogbọy, *he spoke vainly and foolishly*.

b. 'Ati' cannot be employed to connect verbs, because it would make the verb which might follow it equivalent in sound to a verbal noun with the prefix 'ati.' Thus, ó dide ati lóh, *he arose and went*, would always be taken by the hearer for ó dide atilóh, *he arose to go*.

* This form is little used.

3. 'On' is equivalent to 'ati' in all respects, only it is sometimes preferable to connect nouns; as, mo ri Dadá on Adešina, *I saw Dada and Adeshina*.

4. Kpèlu, *with*, is frequently employed in the sense of *and* to connect nouns and occasionally pronouns; as, óbiri kpèlu omọ lí o de, *the woman and the child came*.

5. 'Si' (sí ÷hiy, *to back, go backwards*) is employed to connect verbs only; as, dide si lóh, *arise and go*.

Very often a nominative pronoun, agreeing in number and person with the nominative of the first verb, is employed pleonastically before the conjunction; as, emi dide, mo si lóh, *I arose and went*; iwọ ati emi ri á si mò, *thou and I see and know*.

§ 234. 1. *Because, for*, is represented by 'nitori' (ni itori), *in or by reason*, or 'nitori ti,' *by reason of*,' either of which may be employed at the option of the speaker; as, á ni lóh nitori oba mbò, *we must go for the king is coming*.

2. Before 'ati,' *and*, the initial 'n' (or preposition 'ni') is dropped; as, nitori mọ beru rẹ, ati itori ti iwọ nše onroro enia, *because I feared thee, and because thou art an austere man*.

§ 235. *But*, ÷ngbón, bikòse, biòse; as, mo kpè è, ÷ngbón kò dze wáh, *I called him, but he would not come*; ki íse asiwere bikòse ologbon, *he is not a fool but a wise man*.

§ 236. *If*, bi, košekpe, iba; as, bi ó ba mò, *if he knew or knows*; košekpe enyin lóh, *if you go*; iba mò eyi, yi ó kpada, *if he knew this, he would return*.

§ 237. *Lest*, ki...máh, sometimes with 'nitori' immediately preceding 'ki'; as, á síse kí á máh (sag)e (or nitori ki máh, &c.), *we work lest we should beg*.

§ 238. *Neither...nor*, kò or ki...bẹhẹ; as, kọ lóh bẹhẹ ni kò dzoko, *he neither goes nor stays*. Sometimes kò...kò; as, kò ní babá kò ní ÷ya ná, *he has neither father nor mother*.

§ 239. *Or*, tabi, mbi: iwọ tabi emi, *thou or I*; akọ mbi àbo? *a male or a female?*

§ 240. *Whether...or*, iba...iba: iba še Ọkọri iba še óbiri ni, yi ó kpa wọn, *whether they be men or women, he will kill them*.

§ 241. *Since*, nigbati: nigbati enyin ti de, á gbọ Ọrọ Ọlorun, *since you have come, we hear the word of God*.

§ 242. *That*, is represented by several particles:

1. By ki, ki...ki ó; as, mo ní ki ó lóh, *I say that he must go*; or if the nominative following 'ki' has two or more letters, 'ki ó' follows it; as, mo ni ki ón ki ó lóh, *I say that he must go*.

2. By ti; as, ki li emi ó še ti emi ó dzogun iye? *what shall I do that I may inherit life?*

3. By kpé; as, ó ri í kpé ó dara, *he saw that it was good*; kpé is used pleonastically after verbs of saying, writing, perceiving, &c.; as, á ti kọwe rẹ kpé, sawò! ó mbò, *it is written, behold! he cometh*; emi mò kpé iwọ šeun, *I know thou art good*; ó bi wọn lere kpé, li oruko ta ni nwọn sọrọ, *he asked them in whose name they spoke*; nwọn bẹ ẹ kpé kí ẹ lóh, *they begged him to go*.

§ 243. *Then*, ndze; as, ndze á ó sùn li odan, *then we must sleep in the prairie*.

§ 244. *Though*, bi, frequently followed by tilẹ, *even*; as, bi á tilẹ sọte si í, *although we have rebelled against him*.

INTERJECTIONS.

§ 245. The principal interjections are the following:

Alas! oh! ah! yē! aa!

Behold! wò! sawò! kíyesi! sá kíyesi!

Fudge! huṅ! kai!

Pshaw! šíó!

Silence! dake! simi!

Wonderful! kpa! ẹkpa! arí!

Get out of the way! ágo! kuro!

SPECIMENS OF COMPOSITION.

YORUBA PROVERBS.

The Yorubas have no songs, and, I believe, but few popular stories; but the language abounds in proverbs, which are at once the poetry and the moral science of the nation. Many of them are sententious observations on the nature of things; others are designed to inculcate the various relative duties of men; and a few are simply an ingenious play upon words.

We subjoin some specimens of these proverbs, not only to exhibit the idioms of the language, but also to illustrate the character of the Yoruba mind. They are taken chiefly from Crowther's Vocabulary.

1. Ènì nba kò tó bí ènì ore: ènì nba kò ǵe ika; rirun nì ì run
Mat of grass not lasts as mat of bulrush: mat of grass not does bend; breaking it is it breaks
wúrwon.
to pieces.
A grass mat does not last like a bulrush mat: a grass mat will not bend; it breaks to pieces.
2. Abafedže kò ǵe ìfí ìdí òran hàn.
Tattler not does to make root of matter appear.
It will not do to reveal one's secrets to a tattler.
3. Abá kò ǵe ikún mọ̀ nì ì ǵe, bíkòǵe ènì tí ǵǵe buburu.
Staple not does drive to adhere to one on foot, except one who is doing evil.
The stocks are not fastened on the foot of one, except of him who does evil.
4. Àbata tíkete, bíenìkpé kò hí òdo tan.
Marsh stands aloof, as if not with stream be akin.
The marsh stands aloof, as if it were not akin to the stream.—Sad of people who are proud and reserved.

1. Kò ǵe, *does not*; —'ika,' infinitive after ǵe, the preformative 'ì' being very slightly sounded. Observe the Hebraism, rirun nì ì run, *breaking it breaks*, instead of ó run, *it breaks*. This form is poetical.

2. Abafedže (á, *he*; ba . . . dže, *spoils*; niye, *the world*), *a world-spoiler*. 'Kò ǵe' here means *it will not do, it is not proper*, which is quite an English idiom; 'ì . . . hàn' (*to make . . . appear*) is a compound transitive verb, meaning *to show, reveal*; —ìdí òran, *the root of the matter, a secret*.

3. In various and widely separated countries of Africa, prisoners are sometimes confined by placing a large iron staple around the ankle and driving the ends into a log, thus forming a rude kind of stocks.

4. Bí enì kpé, *as if one should say*.

11. Akukò gágara ni idadzó fu ni li arin ọgandzó.
Cock of bulkiness it-is decides for us in midst of depth-of-night.
A large cock decides for us in the midst of the night. Persons are supposed to be disputing about the time of night, when the crowing of the cock shows that it is very late. The proverb may be quoted whenever a dispute is suddenly decided by unexpected evidence.
12. Akohi ni ti ẹleran.
First-born is of shepherd.
 When a woman takes a ewe or she-goat, both of which are termed ẹran, *cattle*, to feed for the owner, she claims the first-born lamb or kid for her own. Hence the proverb, *The first-born is the shepherd's.*
13. Ibaluwẹ gbe ilé, ẹ́e bi akurò.
Bath-room abides-in house, is like water-side garden.
Although the bath-room is in the house, it is as wet as a garden by the water-side.
14. Ọlọgbón ọgbón li á rọ idzanu; ọkọkan li á mọ iwa ẹ́nia: á
 With wisdom wisdom it-is they forge bridle-bits; one-by-one it-is we know character of persons: we
 ba mọ iwa ẹ́nia, á ba bu ọ, kọ fẹ; á dọn ni bi abadzó.
attain-to-know character of person, they attain to-give thee, not desire; it is-painful to one as calamity.
On various plans bridle-bits are made; one by one we learn the characters of men: the character of a man being known (to be bad), if it were given thee as a present, thou wouldst not desire it; it is painful to one as a calamity.
15. Ti idzo ti ayò ni ísẹ idin, wuyẹ wuyẹ ni ísẹ igongo: á
Both dancing and rejoicing it-is acts the skipper, wriggling wriggling it-is acts the worm: they
 ọdzo, á nyò; ọmọ banabana nre oko igi.
dance, they rejoice; child of banabana is-going-to farm of wood.
With dancing and joy moves the skipper, wriggling about moves the worm: they dance, they rejoice; but the child of banabana is going to the wood-farm.—According to Mr. Crowther, this proverb means, "others may amuse themselves, but the poor man has no holiday."
16. A ki iwá alaşọ ála ni iso elekpo.
We not search him-of-cloth white-cloth in quarters of him-of-palm-oil.
We do not look for a man clad in white cloth in the quarters of the palm-oil maker.—We should not expect any result from incongruous or inadequate means.
17. Okéte ní, ọdzó gbogbo li ọ mọ; ọn kọ mọ ọdzó miran.
Rat says, day every it-is he knows; he not knows day another.
The rat says he knows every day; but he does not know another day; i. e. he lays up nothing for the future, in which he is imitated by the improvident.

12. For the mode of predicating possession in Yoruba, see Gram. § 203, 1, a.

13. Gbe, *to live or be in* a place, is always used without a preposition;—akurò, *a garden by a stream*, which is cultivated in the dry season only.

14. Ọlọgbón, *that which has wisdom*; ọgbón, *wisdom*; ọlọgbón ọgbón, *various wisdom or skill*; so oniru iru, or oniruru, means *kinds*, this reduplication always implying variety;—á rọ, *they forge*, is equivalent to *is or are forged* (Gram. § 148, 1);—á ba, like 'iba,' implies a condition (Gram. § 143);—kọ fẹ, the subject, 'iwọ,' omitted, a common practice in Yoruba.

15. Ti...ti (see Prov. 5); wuyẹ wuyẹ, *wriggling about*; so taka taka, *staggering to and fro*, repetition of the act being implied by the repetition of the word; wriggling is thought to indicate pleasure;—banabana, said to be an insect which carries a bit of wood in its mouth, which is thus an emblem of the poor, many of whom, both men and women, gain a livelihood by bringing firewood from the farms on their heads;—ọmọ banabana is equivalent to banabana simply; comp. the biblical expression, *son of man*, i. q. *man*.

18. Odźúkòkoro babá òkandźua.
Covetousness is the father of unsatisfied desires.
19. Ológbò babá aròkij.
The ológbò is the father of traditionists.
20. Alagbara máh mọ̀ èro babá olẹ̀.
Strong man not knows consideration is father of laziness.
A strong man who is destitute of forethought is the father (or prince) of laziness.
21. Eni tí kọ̀ gbọ̀ tí ega, á li ega ñkpátoto ẹnu.
One who not hears of oriole, he says oriole is-noisy of mouth.
One who does not understand the oriole says the oriole is noisy, i. e. is merely chattering. But the orioles are supposed to understand each other.—The meaning of the proverb is that men are prone to despise what they do not understand.
22. Eleda eda li Olorun dá ni.
With nature nature it-is God made us.
God has created us with different natures or dispositions; hence we should not expect to find the same qualities in every one.
23. Bi alagbára dze o ni iya, ki o fi erij si i.
If great man does thee in wrong, that thou make smile to him.
If a great man should wrong you, smile upon him. Because resistance would bring upon you a still greater misfortune.
24. Alakpatà kọ̀ mọ̀ iru ẹran.
Butcher not knows breed of sheep.
The butcher has no regard for the breed of the sheep (which he kills). He attends to his own business, and does not meddle with matters which do not concern him.
25. Igbo bíribiri, òkunḡun bíribiri; òkunḡun ni yi ô sete igbo.
Forest is-dark, night is-dark; night it-is that will conquer forest.
The forest is dark, and the night is dark; but the darkness of the night will soon conquer that of the forest.
26. Bi kò še oboḡ ònia, tani iba dži li oũrọ̀ ki ó máh bọ̀ òdžu rẹ̀ mọ̀
If not is sloven person, who useth to-wake in morning that he not wash face his clean
śaśa?
very?
Except a sloven, who is wont to rise in the morning without washing his face nicely?

19. The Ológbò is the chief of the Aròkij, whose business it is to remember the history of the country.

20. Before máh, *not*, the relative is always omitted.

21. Gbọ̀ tí, *to hear the meaning of, to understand.*

22. Eleda eda (see Prov. 14);—ni, same as 'eni,' an indefinite pronoun, signifying *one, some one, a person*, and frequently employed instead of *wa, us*.

23. Dze, *to do, to act*; ni, *in, in regard to*; iya, *affliction, wrong*; dze... niya, *to afflict, oppress, wrong* (Gram. § 37, 2, a);—ki, with a nominative, is much used imperatively; as, *ki o fi, make thou, ki ó fi, let him make* (Gram. § 161).

24. Eran, *cattle*, a term including horned cattle, sheep, goats, &c.

26. Bikóše (usually written as one word), *except*.

27. Èmu bālẹ̀ agbẹ̀dẹ̀.
Tongs are governor of smithshop.
The tongs are at the head of the blacksmith's shop ; because they control the hot iron which otherwise would be unmanageable.
28. Ọ̀sọ̀ oníbudẓé kò kpẹ̀ isan, ọ̀sọ̀ onínabi kò dzù ọ̀dun
Ornaments of budẓé-woman not remain nine-days, ornaments of inabi-woman not exceed year
 lẹ́h.
going.
The marks made by the budẓé-woman do not last nine days ; the marks made by the inabi-woman do not last more than a year.—No advantage or possession is permanent.
29. Bi adza ba li eni lẹhin, á kpa ọ̀bọ.
*If dog * has person behind, he-will kill baboon.*
If a dog has his master behind him, he will kill a baboon.—This proverb is designed to show the advantage of sustaining and encouraging people in their efforts.
30. Adza ti kò li eti kò še idẹgbẹ̀.
Dog which not has ears not do for hunting.
A heedless dog will not do for the chase.—If a person will not take advice, no one will employ or trust him.
31. Gagaló ńbu, ọ̀wọ̀ tẹ̀ akpako.
Stilts fall, hand seizes palm-stalk.
If a man let fall his stilts, a hand will be stretched out to seize them.—That is, so soon as one man loses an office or position, another is ready to occupy his place.
32. A kì dá ọ̀wọ̀ lé ohun ti á kò lè igbẹ̀.
We not give hand to thing which we not can perform.
We should not undertake a thing which we cannot accomplish.
33. Onilé ndẓe eso gbìngbindò; aledzo ní ki á še on li ọ̀wọ̀ kán
Housekeeper is-eating fruit of wild-beans ; guest says that we do him as-to hand one
 ẹ̀wa.
boiled-maize.
Although the host may be living on wild beans, the guest expects a handful of boiled corn.

28. Ọ̀sọ̀, an ornament. In this place it means the deep black stripes with which maidens ornament their faces and arms.—'Budẓé' is the fruit of a small tree of the same name, which when green makes a jet black stain on the skin. 'Oníbudẓé' is the woman who makes a trade of marking the faces and arms of girls for a few cowries each. There is a fable of a jet black and exquisitely beautiful girl who was sought in marriage by all the nobles and rich men of the country ; but she treated every suitor with disdain. At last a worthless fellow laid a plan by which she was enticed into his house and detained all night. Although she escaped uninjured, the community at first thought otherwise ; and the disgrace afflicted her so much, that she fled into the woods, where the violence of her grief changed her into the bush that still bears her name. 'Inabi' is a plant the acrid root of which burns a durable black mark on the skin. It is seldom used for marking.—'Lẹ́h,' pleonastic after dzù (Gram. § 207, 1).

29. Ba, an auxiliary particle (Gram. § 139);—á, he will (Gram. § 135, 1, b).

31. Stilts are made of the foot-stalks of the akpako, or wine-palm, called bamboo by the whites on the western coast.

33. Ndẓe (Gram. § 129, 3);—še . . . li, to do . . . in regard to, i. e. to supply with.

34. Máh gbiyelé ogún; ti ọwọ ẹnì nì itó nì.
Not trust-in inheritance; of hand of one is sufficient-for one.
Trust not to an inheritance; the product of one's hands is sufficient for one.—Said to those who neglect industry because they expect to inherit property.
35. Akóşeba, eyi ti idžę ọdún.
Chance, this which amounts-to year.
He who waits for chance may wait a year.—Said to those who are “waiting for something to turn up.”
36. Ènì tí ọ ran nì nì íşę lí á ibęru; á kì ibęru ẹnì tí á ran nì sí.
One who he sends one on message it-is we fear; we not fear one whom they send one to.
We should fear him who sends us with a message, not him to whom we are sent.—Applied to messengers sent from one king or chief to another.
37. Èrọ kpęşękpęşę; kọ mọ bi ará ńkan igbín.
Light very; not know as body is-paining snail.
You say it is a very light blow, but do not reflect that it would hurt a snail.—Said to those who would excuse their bad conduct to others on the ground that it does them no great harm.
38. Èşín ri ogun, dzo; ọkọ ri ogun, ọ yọ.
Spear sees battle, it dances; lance sees battle, it rejoices.
When the spear sees the battle, it dances; when the lance sees the battle, it rejoices.
39. Ohun tí á fi ęşo mú kì badžę; ohun tí á fi agbara mú nì
Thing which we with gentleness handle not is spoiled; thing which we with violence handle it-is
inú nì lí ará.
has one as-to body.
An affair which we conduct with gentleness is not marred; an affair which we conduct with violence causes us vexation.—Said to men who are irritable and impetuous.
40. Bì ęyá ba ðì ẹkún, ęran nì ikpa džę.
*If wild-cat * becomes leopard, beasts it-is it will kill eat.*
When the wild cat becomes a leopard, it will devour beasts.
41. Afedžu toto kọ mọ ọkọri.
Gesticulation much not knows a man.
Much gesticulation does not prove manliness.—“A barking dog does not bite.”

34. Tí ọwọ (Gram. § 203, 1, b);—ẹnì and nì (Prov. 22, and Gram. § 104).

35. An elliptical proverb. Comp. Prov. 9 and 10.

36. Ibęru; for the initial ‘i,’ see Gram. § 146, 1;—á ran nì, *they send us*, for the passive, *we are sent*, Gram. § 148, 1. Sí and other prepositions frequently close a sentence, as in English.

37. Observe the ellipses;—ará kan, *it hurts*; so, inó dđn, *it is pleasant* (Prov. 56).

39. Ní . . . lará (ní . . . lí ará, *to have as to the body*), *to annoy, to cause vexation*;—nì, *one*, often equivalent to *wa, us*.

40. Eýá, a beast resembling a leopard, but rather smaller, *the leopard cat*;—ikpa; for the initial ‘i,’ see Gram. § 146, 1; kpa džę, *to devour, destroy*, e. g. ęfọn kpa oń džę, *the buffalo killed him totally, violently*.

41. Afedžu, *frowning* and other airs put on under pretence of courage;—mọ, *to prove, to be evidence of*.

42. Oko nlá še alamgba kpeṅṣan; ó ní, bẹhẹ li ẹnì tí o dzù nì lóh
Stone large did lizard crush; he said, so it-is one who he surpasses one going
 íše nì.
does to one.
A large stone (being thrown) crushed a lizard. It said, "So he who is stronger than one
treats one."—Said in allusion to the fact that the strong oppress the weak.
43. Alantakun bi yi ó ba ọ dzà, á ta ka ọ li ará.
Spider if it will meet thee to-fight, it extends to-enfold thee as-to body.
When the spider would attack thee, it extends its web to entangle thee.—Applied to the intrigues
 of men who endeavor to effect the ruin of others.
44. Alasédzù kpeṅ ni itẹ.
A self-willed man soon has disgrace.
 "Pride goes before destruction."
45. Eṣu yi ọ dze, eṣu yi ọ mó, eṣu yi ọ lóh; nibo li
Locust he will eat, locust he will drink, locust he will go; where is-it
 alatankpoko yi ọ wò?
grasshopper he shall enter?
The locust will eat, the locust will drink, the locust will go; where shall the grasshopper hide?—
 Probably intended to describe the effects of war.
46. Kò sí alására ti ità igboku; gbogbo wọn ni ità oyin.
Not is snuff-dealer who sells stale; all of them it-is sell honey.
No snuff-dealer sells stale tobacco; they all sell the best.
47. Alárádze kọ mọ ọdún; abí ísú ita bí igi.
Buyer not knows year; perhaps yams grow like logs.
The buyer does not consider the seasons; he thinks perhaps yams grow as big as logs.
48. A še alakpa li ọsọ, kọ gbọ; á še ohun gbogbo fu igi, ọ ye
We do old wall as-to ornament, it not hears; we do things all for wood, it suite
 igi.
wood.
If we ornament an old wall, it is not improved; if we do anything for wood (as painting or
carving), it is adapted to the wood, i. e. our design is accomplished by making the wood as
we desire it to be.—Some persons cannot be improved by any means that we can employ.
49. Awigbó ti ifi ọwọ adžae mó omi.
Disobedience which with hand of neck-cord drinks water.
Disobedience which drinks water with the hand tied to the neck.—Meaning that a person who
 is determined to disobey will have his own way in spite of all obstacles.

42. Se . . . kpeṅṣan, to crush.

43. Ba . . . dzà, to fight with, to attack;—ta, to stretch a rope;—ka . . . lará, to enfold, entangle, as a net.

46. Igboku, anything stale; as, igboku taba, stale tobacco; igboku ákara, stale bread;—oyin, honey, applied to that which is excellent; the girls in the street cry, oyin ọtí! honey beer! that is, beer of the best quality.

47. Mọ, often employed in the sense of consider;—ọdún, a year, a season, in reference to its quality.

48. Še . . . li ọsọ, to ornament, adorn;—gbọ, to receive an impression or benefit.

50. Afomó kò li egbò; igi gbogbo ni ibatay.
Parasite not has root; tree every is its kindred.
Δ parasite has no root; every tree is its kindred.—Δ parasite does not care on whom he sponges for a living.
51. Erú kò še omọ igi: erú kú, iyā kò gbó: omọ kú, igbe ta; erú
Slave not is child of wood; slave dies, his mother not hears: child dies, cry arises; slave
was child in house of mother his once.
A slave is not a block of wood: if a slave dies, his mother does not hear of it; if a child dies, lamentation is made: the slave was once a child in his mother's house.—This fine sentiment exhibits something of the heart of the people who use it as a proverb; and it explains the reason why the Yorubas usually treat their slaves with a degree of kindness worthy of a Christian people.
52. Ada sún igbo, kò ri ère igbo; ó ro òna, kò ri ère òna; ada
Bill-hook cuts bush, not secs profit of bush; it clears road, not secs profit of road; bill-hook
dá idakúda, ada dà idakúda; ada dá, ó fi áruj
breaks a-bad-breaking, bill-hook bends a-bad-bending; bill-hook breaks, it with five-cowries
gbadi, ó di oko olowo; ada li eka li oron, ó gbadza girigiri.
girds-its-hill, it reaches farm of owner; bill-hook has ring on neck, it is girded tightly.
The bill-hook clears the farm, but receives no profit from the farm; the bill-hook clears the road, but receives no profit from the road; the bill-hook is badly broken, the bill-hook is badly bent; the bill-hook breaks, it pays five cowries to gird its handle with a ring; it reaches its owner's farm; the bill-hook has a ring on its neck (handle), it is girded tightly (for new labors).—Has reference to the severe and unrequited labor of slaves.
53. Ibí kì idžù ibí; bi á ti bi erú li á bi omọ.
*Birth not surpasses birth; as they * bore slave so it-is they bore child.*
One birth does not excel another; as the slave was born, so was the free-born child.
54. Bi o ti wù kī ó rì, á kì rerij abiròj; boya ohuj ti o še é
*As thou * please that it be, we not laugh-at invalid; perhaps thing which it ails him*
loni á še iwọ lólá.
to-day will ail thee to-morrow.
One should never laugh at an infirm person; perhaps the same evil that afflicts him to-day may afflict thee to-morrow.
55. Iwọ ni nše abodžuwò lehin babá; todžu ilé rere.
Thou it-is art superintendent behind master; look-to house well.
Thou art the superintendent in the master's absence; look well to the house.
56. Ni igba ti ágbẹ ba ɲdi abò okà, inọ rẹ á dọj; níkpá abò
*In time when farmer * is-binding bundles of corn, mind his it is-sweet; by bundles*
okà ni yangidi owó iti wáh.
of corn it-is bundles of money also come.
When the farmer is tying up bundles of corn, he rejoices; by bundles of corn bundles of money are obtained.

52. Sún igbo, to clear land for a farm;—ri ère dze, to receive profit.

53. Bi . . . ti, as;—á bi, they bore, in the sense of was born (Gram. § 148, 1).

54. Bi o ti wù kī ó še, followed by a negative, is the usual expression for *by no means, not in any wise*.

56. Nigbàti, spoken and written as one word, *when*;—ba, the subjunctive particle (§ 139), follows nigbàti;—inọ dọj, to be pleased, to rejoice; as, inọ mi dọj, I am glad; inọ rẹ dọj, he is glad;—iti, the conjunction *ti, and, also*, with 'i' prefixed (§ 146).

57. Ohun ti ísẹ ohun abukùṅ kí á máh ẹ́ sì ọmọ-ẹniké(ḍí) ẹnì.
Thing which is thing of contempt that we not do to fellow-man of one.
A contemptuous action should not be done to one's fellow-man.
58. Abuló nì mu aṣọ ilò tọ; ẹnì tí kò ba ẹ́ tọḍzu abulé, yì ò ẹ́
*Patch it-is makes cloth last long; one who not * does look-to patch, he will make*
ará rẹ́ lí òfò aṣọ.
self his in want of clothing.
Patching makes a garment last long; one who does not attend to patching will come to want
clothes.—A man who neglects the little affairs of his business will fail, or come to want.
59. Bì á tí ran nì nì ísẹ, lí á dẹ́; bí iwọ́ ba ẹ́ni sí ì, adabọwọ
*As they * send one on message, it-is we deliver it; if thou * add to it, responsibility*
ará rẹ́.
of self thy.
As one is sent on a message, so he should deliver it; if thou add anything to it, it is on thy
own responsibility.
60. Adán dorikòdo ó ọwò ísẹ ẹiyẹ gbogbo.
Bat hangs-head-down it is-watching work of birds all.
The bat hangs suspended with its head down watching the actions of all birds.—This proverb
is probably designed to teach silent observation.
61. Ó dẸ́ ẹ́yẹ dẸ́ alaiye lóh.
He eats world more than owner of world going.
He enjoys the world more than the owner of the world.—Said of extravagant persons.
62. Dulumó ẹkpa lí ọrọ́n seṣe, á dẸ́bí ọ́ran wọ́ tí.
Slander of ground-pea on neck of white-pea, it condemns the-cause to-enter to-fail.
The slander of the ground-pea against the white field-pea falls upon itself.—Designed to show
that a slanderer may injure himself more than he injures another.
63. ObánidẸ́ ọ́ ba ará rẹ́ dẸ́.
*Injurer he * body his injures.*
He who injures another brings injury upon himself.
64. AbánidẸ́ máh bá nì ẹ́ ifá ẹ́niá; ẹnì tí ọ́ dẸ́ didọ́n nì idẸ́ kikan.
Guest who not with one is profit of person; one who he eats sweet it-is eats sour.
So is a guest who is no advantage to a person; he who eats the sweet should also eat the sour.—
Said of persons who live on others, and will not assist in the labors of the family.

57. Ohun abukùṅ, a contemptuous action or word;—kí á máh ẹ́, we should not do (§ 145, 2).

58. Ba, after ẹnì (§ 139).

59. Bì . . . tí, as;—ba, after bí, if (§ 139).

61. DẸ́aiye (dẸ́ ẹ́yẹ), to enjoy the world;—lóh, pleonastic.

62. This proverb is highly idiomatic and therefore difficult: lí ọ́rọ́n refers to an accusation: ó fí ẹ́sẹ́ rẹ́ lí ọ́rọ́n mí, he charged his sin upon me;—tí implies failure; ọ́ kọ́ ilẹ́ tí, he built a house failed, i. e. began to build and could not finish;—dẸ́bí ọ́ran wọ́ tí, means that the condemnation recoiled on the accuser.

63. ba . . . dẸ́, to injure.

64. The relative is omitted before máh, not;—nì idẸ́; obligation is frequently expressed by the indicative form of the verb.

65. Àbati òlakpa; á ba à ti, á bá à rẹ.
Shakiness of old-wall; we against it push, we with it are-friendly.
It is like a shaky old wall; we push against it, and (finding that it does not fall) we make friends with it (by sitting down in its shade).—Said of persons whom we are at first suspicious of, but, on further acquaintance, receive into our friendship.
66. Abẹbẹ ni ibẹ ikú, abẹbẹ ni ibẹ òran; bí oru ba mú,
*Pleader it-is pleads off death, pleader it-is pleads off difficulty; if heat * is-sharp,*
 abẹbẹ ni ibẹ ẹ.
fan it-is dissipates it.
A pleader (or supplicator) wards off death, a pleader wards off a difficulty; if the heat is severe, a fan mitigates it.—A fanciful play upon the word 'abẹbẹ' is the principal design of this proverbial saying. It also shows the power of entreaty.
67. Iyan mú, ire yo; iyan rọ, ire rù.
Famine is-sharp, cricket is-fat; famine is-relieved, cricket is-poor.
When famine is sharp, the cricket is fat; when famine is relieved, the cricket is poor.—A paradoxical play upon words. It also expresses the fact that when famine prevails, the cricket is eaten as if it were fat or delicious; but when the famine is over, the cricket is rejected as poor and unfit to eat.
68. Odzo kpa bata báta, bata báta, li ori akpáta, li ode adzílubáta; báta
Rain beats patter patter, patter patter, on top of rock, in yard of chief-drummer; drum
 li igi, bata li awọ.
is wood, shoe is hide.
The rain beats, "shoe drum, shoe drum," (or patter patter,) on the rock in the yard of the chief drummer; the drum is wood, and the shoe is leather.—A play upon words.
69. Kánakána bá kánakána dzá, kánakána dá kánakána.—Eni.
Crow with crow fought, crow conquered crow. — One.
A crow fought with a crow, a crow conquered a crow.—One.—The Yorubas sometimes amuse themselves by repeating a play upon words by way of competition. At the end of the sentence, each time it is repeated, a bystander says, "one," "two," &c.; and he who repeats the sentences oftenest without marring a syllable is victor.
70. Ose ni isadzu ẹkún, abamọ ni igbẹhin òran; gbogbo
Smacking-of-lips it-is precedes weeping, mortification it-is follows difficulty; whole
 otokulu kpe, nwọy kọ ri ẹbo abamọ še.
of town assemble, they not see sacrifice of mortification to-make.
As smacking the lips precedes weeping, so mortification follows a difficulty; the whole population of the town assembled cannot find a sacrifice to make against mortification.
71. Ikpa oberẹ li okun itọ.
Path of needle it-is thread follows.
The thread follows the needle.—Applied to anything which happens as a natural consequence.

65. A ba à ti (*we meet it to-push*), we push against it.

66. Oran, a difficulty, generally a cause before the judges.

67. The 'ire' is a large cricket eaten by the poor in times of scarcity.

70. Ose; the Yoruba people are accustomed to smack their lips several times before they begin to weep.

72. Aboṣe ki iṣe iṣe odzó; iṣe babá ni igbà odzó eni.
Job-work not is work of day; work of master it-is receives day of one.
A job (done for oneself) is not the day's work; the master's work claims the chief part of one's time.—Said of slaves, who may perform little jobs for themselves, but must not neglect their master's business.
73. Adaridzini ni iṣeṣe edzó.
Forgiver it-is conquers dispute.
He that pardons the aggressor gains the victory in the dispute.—Designed to inculcate a forgiving spirit.
74. Bi Olorun ba ka ṣeṣe si ni li oron, a gbé.
If God should count sin against us on neck, we perish.
If God should compute our sins, we would perish.—I have heard this remark made by heathens in attempting to settle disputes, but am not sure that it is a national proverb.
75. Fi ohun wé ohun, fi oran we oran; fi oran dzin, ki á yin o.
Put thing to-compare thing, put matter to-compare matter; put matter to-be-distant, that they praise thee.
Compare thing with thing, and matter with matter; forgive the matter, that thou mayest be praised.—Inculcates, as praiseworthy, the duty of examining into the facts of a dispute and exercising a forgiving disposition.
76. Abere bo li owó adete, ó dī ete; oran ba ilẹ, ó dī ero.
Needle falls in hand of leper, it becomes consideration; matter comes-upon the-land, it becomes thought.
If a needle fall from the (mutilated) hand of a leper, it requires consideration (how to pick it up); if a difficult matter come upon the country, it requires thought (how to avert it).
77. Aditajmò ẹsuo ti o li ekulu li o bi iya rẹ.
Genealogy of ẹsuo who he said ekulu it-is she bore mother his.
It is like the genealogy of the ẹsuo, who said his grandmother was an ekulu.—Applied to persons who pretend to be related to great families.
78. Elede kpa afọ tán, ó ṣwá eni rere ti yi ó fi ará rẹ yi.
Pig wallowing in-mire finished, it is-seeking person good whom he will make body his rub.
The pig, having done wallowing in the mire, is seeking some clean person to rub against.—Said of disgraced persons who attempt to intrude themselves upon good society.
79. Onifuru ti itete iṣe onile kpele.
Suspicious-character who first does master-of-house gently.
A suspicious character (being found in a house) immediately salutes the owner of the house (before he is saluted).

72. Odzó and odzó are not equivalent terms: odzó, the space of a day; odzó, time, a day. See Dictionary.

75. Fi . . . wé, to compare;—fi . . . dzin, to forgive.

77. Aditajmò (dà itan mò), a tracing of genealogy;—ẹsuo and ekulu, two different species of antelope.

79. Onifuru, lit. one who is pale with apprehension;—ṣe . . . kpele, to deal well with, to salute civilly.

80. *Ágàdà kò mò orì alagbèdè.*
Sabre not knows head of blacksmith.
 (In battle) the sabre does not know the head of the blacksmith (who made it).—Applied to ingratitude.
81. *Agbèdè gbà wọ̀n là, á ní kî á kápá à ní kpausa.*
Squash received them safe, they said that they cut it for drinking-cup.
The squash having saved them (in time of famine), they said, Let us cut it for a drinking-cup.—Designed to illustrate ingratitude.
82. *À rì abáńdžé àgbọ̀n isalẹ̀; bí ó kú lí ówúrọ̀, á yà lí alẹ̀.*
We see guest of chin below; if it die in morning, it separates in evening.
We meet with guests who are like the lower jaw; if one die in the morning, it separates (from the upper jaw) in the evening.—Said of those who forsake their friends in time of trouble.
83. *Akpàro dżare adžanakpa, Kí lí ó mu aṣọ wáń íṣe lí oko? Á dżare akpàro, Lí oko lí á gbe imu aṣọ ilọ́h.*
reasoned partridge, In farm it-is we do bring clothing going.
The partridge argued concerning the bird-snare of cloth, Why did the farmer bring cloth to the farm? He replied to the partridge, We are accustomed to take our overclothes to the farm.—The meaning of this proverb is, that something can be said on both sides of a question. The partridge, seeing a cloth so spread out as to form a bird-snare, was suspicious and said, What does he mean by this? The farmer replied, that people always bring their wrappers to the farm (laying them on the grass or a bush while at work).
84. *Adžé, Sáluga, ó fi ẹ̀mí iwadžu silẹ̀ ṣé ẹ̀mí ẹ̀línj ní kpeḗ.*
Fortune, the Elevator, he puts one before down to deal one behind in gently.
Adžé, the Elevator, he leaves the foremost to deal favorably with the hindmost.—That is, the first may sometimes be last, and the last first.
85. *Adžé, ọ̀mọ́ hẹ́ — iya mí ńoro ga — á kpa máh gbàgúnj.*
Witch, child of envy—trouble my is-hard is-high—she kills not inherits.
The witch, child of envy—my troubles are sore and hard—she kills but cannot inherit.—Witches are thought to destroy people when asleep by sucking their blood like a vampire.
86. *Adžẹkaṣu kò mò bí iyanj mú.*
Loaf-eater not knows if famine prevails.
The man who has plenty to eat does not appreciate the severity of a famine.
87. *Akeke tí ńkẹ́ ígí kò sẹ́; gbẹ̀nagbẹ̀na mbù ẹ̀tu sí atari.*
Axe which is-cutting tree not refuses; woodman offers propitiation to head.
The axe which cuts the tree is not afraid; but the wood-man makes a sacrifice to his head.—Some kinds of trees are supposed to be inhabited by evil spirits, which might inflict some injury on the woodman unless he offered a sacrifice to his good genius, which is thought to reside in the head.

81. The *agbèdè* grows hard with age, and is cut to make cups;—*gbà . . . là, to save*;—*kí á kápá à, let us cut it* (Gram. § 145, 2).

82. *Agbọ̀n, the chin*; *àgbọ̀n isalẹ̀, the lower jaw.*

83. *Mu . . . wáń, to bring*; *mu . . . lẹ́h, to take*;—*gbe, to abide, to be*, pleonastic like *do* in English (Gram. § 187).

88. *Abetele ni ifodžu onidadžó; notori abetele ki ilé íse idádžó otító.*
Bribe it-is blinds judge; for bribe not can do judgment of truth.
A bribe blinds the judge, for a bribe cannot give a true judgment.
89. *Bi ó kùnj oni kùnj ọ́la kí ogbẹ́ kí ó kpa agilítí, ọ́džó á rọ́.*
If it remains to-day remains to-morrow that thirst that will kill iguana, rain will fall.
If there remain to-day or to-morrow before the iguana will die of thirst, it will rain.—De-
signed to show the providence of God over his creatures.
90. *Fì idžà fu Ọ́lorun džà; fì ọwọ́ lẹ́ ẹrún.*
Give battle to God to-fight; put hand upon temple.
Leave the battle to God, and rest your temple on your hand (as a spectator).—That is trust
in God's providence.
91. *Tinotínọ, tẹ́hínjẹ́hínjẹ́ ní labalába ifi iyinj fu Ọ́lorun.*
Within, without it-is butterfly gives praise to God.
By its beauty, the butterfly praises God within and without, i. e. in all its parts.
92. *Džì agba ọ́ti, džì agba ẹ́tu; ẹ́ni tí á ran wáh, kí idžì agba.*
Open cask of rum, open cask of powder; one whom they send to-come, not opens cask.
Open the cask of rum, open the cask of powder (if yours); but he that is sent with it does not
open the cask.—The Yoruba carriers are remarkably faithful to their trust.
93. *Ogún kọ́ rọ́ ike, agbẹ́dẹ́ kọ́ rọ́ bata; oko kọ́ ńoro rọ́, agbẹ́dẹ́ kọ́*
Ogun not works ivory, smithy not works leather; farm not is-hard to-till, the smithy not
kpa ọ́kọ́ tà.
makes hoes to sell.
Ogun does not work ivory, the smith does not work leather; if the farm were not difficult to
cultivate, the smith would not make hoes to sell.—That is, every man to his trade.
94. *Ilé kán wà lẹ́ Ọyọ́ ní igba atídžó, tí á nkẹ́ Àkídžẹ́: ọ́ibó*
House one was in Katunga in time of antiquity, which they called Silence: white-man
kú m̀bẹ́.
died there.
In old times there was a house in Katunga called Silence: a white man died there.
95. *O sure iku, ọ́ bọ́ sí akọ́ ida.*
He fled death, he entered into scabbard of sword.
He fled from the sword, and hid in the scabbard.—“He leaped out of the frying-pan into the
fire.”
96. *À rí tí ẹ́ni mọ́ iwí, i fí akpadi bó tí rọ́ mọ́lẹ́.*
We see that one knows to-speak, he puts potsherd to-cover that of him up.
We see that one knows how to speak (the faults of others), although he covers his own with a
potsherd.
97. *À kí igbà àkaka lowó akítí; á kí igbà ilé babá lowó ẹ́ni.*
We not take squatting from baboon; we not take house of father from one.
We cannot cure a baboon of squatting (because it is natural to him); we cannot take the home-
stead from a man (because it is his by natural right).

93. Ogún is the god of smiths.

94. Historical and other facts are frequently transmitted to posterity in proverbial sayings.

96. Tí rẹ́, that of him, his.

98. *Aṣé òran ikòkò ṣébi óṅ lí á mbawí, abí ará ifu bí*
Doer of crime of secrecy supposes he it-is they are-speaking-about, being body is-pale as
eni ṣe ohun.
one who did thing.

The perpetrator of a secret crime supposes it is he they are talking about (if he sees men in conversation), his face being pale as one who has done something (wrong).—"Conscience makes cowards of us all."

99. *Asòròkèlẹ̀ bọ́dẓuwò igbẹ̀: igbẹ̀ kí iro; ẹnì tí á bá sọ̀ ní ísẹ̀ ikukpani.*
Whisperer watches bush: bush not tells; he who one with speaks it-is acts traitor.

A whisperer watches the bush; a bush never tells secrets; he to whom one speaks is the traitor.—
If a man wish his secrets to be kept, he should not confide them to others.

100. *Òdò kí kọ́ṅ bọ̀ ẹ́dza lí ọ́dẓú.*

River not is-full to-cover fish in eye.

The river is never so full as to obscure the sight of the fish.—That is, no scheme or purpose is too deep to be confided to a friend.

PARABLE OF THE PRODIGAL SON.

Luke xv. 11—32.

Ọ̀kọ̀nrí kájú lí ọ̀mọ̀kọ̀nrí medzi. Eyi aburo ní inọ̀ wọ̀n wí fu babá rẹ̀
Man one had son two. This younger-brother in among them said to father his
kpé, Babá, fu mí ní iwọ̀n ogún tí o torí mí. Ó sì kpín ohun
to-wit, Father, give me to-have measure of inheritance which it belongs me. He and divided thing of
íní rẹ̀ fu wọ̀n. Kì isì tó idzọ̀ melokan lí ẹ̀lun eyi, eyi ọ̀mọ̀kọ̀nrí
possession his to them. Not and amounted-to day few in after this, this son
aburo kó ohun gbogbo tí ó ní dẓọ̀, ó sì mu ọ̀na rẹ̀ kpọ̀n
younger-brother gathered thing all which he had together, he and took road his straightway
lọ́h sí ilu òkẹ̀rẹ̀; ní íbẹ̀ ní ó gbé ná gbogbo íní rẹ̀ ní inakuna. Ní igbà
go to town of distance; in there it-is he was spending all possession his in extravagance. In time
tí ó bá gbogbo rẹ̀ dẓẹ̀ tán, iyan nlanla wáh mú ní ilu ná; ó*
which he to-destroy all of it ended, famine of greatness came to be sharp in town that; he
sì bẹ̀rẹ̀ sí idi alakíní. Ó sì lọ́h, ó dá ará rẹ̀ kpọ̀ mọ̀ ọ̀lọ̀tọ̀ kájú ará
and began to-be needy-one. He and went, he made self his join cleave-to citizen one inhabitant
ilu ná; ọ̀n sì ran á lọ́h sí oko rẹ̀ lọ́h ísọ̀ ẹ̀lẹ̀dẹ̀. Ayọ̀ ní i ba fi dẓẹ̀
of town that; he and sent him go to farm his go to-watch swine. Joy it-is he would with cat
ondẓẹ̀ tí awọ̀n ẹ̀lẹ̀dẹ̀ dẓẹ̀; ẹnìkẹ̀nì kò fi fu ń.
food which they swine ate; any-one not give to him.

Ní igbà tí ọ́dẓú rẹ̀ wáh ilẹ̀, ó ní, Awọ̀n alágbasé babá mí melómélo
In time which eye his came to-ground, he said, They hiring of father my how-many
lí o lí ondẓẹ̀ adẓẹ̀ yó atí adẓẹ̀ tí, emi sì nkú fu ebí! Emi
it-is he have food eating to-be-full and eating to-leave, I and am-dying for hunger! I

* Ba ... dẓẹ̀, to destroy.

ó dídè sẹ́, emi ô tọ́ babá mi lóh, emi ô sí wí fu ù kpé, Babá, emi
will arise indeed, I will go-to father my go, I will and say to him to-wit, Father, I
 ɲti ɲdẹ́sẹ́ sí ọ́ruɲ, ati ni iwadẓú rẹ̀; emi kò sí yẹ́ tí á ba ma kpè lí
have sinned against heaven, and in presence thy; I not and fit that they should may call to-be
 ọ́mọ rẹ̀ mọ́, fi mí ẹ́sẹ́ bí ọ́kaj ní inọ́ awọ̀n alagbàsẹ́ rẹ̀. Ó sí dídè ọ́ tọ́
child thy more, make me do as one in among they hireling thy. He and arose he went-to
 babá rẹ̀ lóh. Ní igbà tí ó sí tí wà lí òkere, babá rẹ̀ rí í, ánú ẹ́sẹ́
father his going. In time which he and had was in distance, father his saw him, pity affected
 ẹ́, ó sí sùrẹ́, ọ́ rẹ̀ mọ́ ọ́ lí ọ́ruɲ, ó sí fí ẹnù kò ọ́ lí
him, he and ran, he hung upon to-leave-to him on neck, he and made mouth touch him on
 ẹnù. Ọ́mọ sí wí fu ù kpé, Babá, emi ɲti ɲdẹ́sẹ́ sí ọ́ruɲ ati ni iwadẓú
mouth. Son and said to him to-wit, Father, I have sinned against heaven and in presence
 rẹ̀; emi kò sí yẹ́ tí á ba ma kpè lí ọ́mọ rẹ̀ mọ́. Babá sí wí fu awọ̀n
thy; I not and fit that they should may call to-be child thy more. Father and said to them
 ọ́mọ-ọ́dọ́ rẹ̀ kpé, É mu ayo aṣọ́ igujwa wáh,* kí ẹ́ fí í wò ọ́; ẹ́
servant his to wit, Ye take choice garment of stateliness coming, that ye make it clothe him; ye
 fí ọ́ruka bọ́ ọ́ lí ọ́wọ́, ati bata sí ẹ́sẹ́ rẹ̀. É sí mú ẹ́gbọ́rọ́ malù
make ring slip-on him on hand, and shoe to foot his. Ye and take young-one of cow
 abọ́kpa wáh, kí ẹ́ sí kpa á, kí á ma dẓẹ́, kí á sí ma ẹ́sẹ́ áriya;
fatted-to-kill coming, that ye and kill it, that we may eat, that we and may make merriment;
 nitori tí ọ́mọ mí yí tí kú, ó sí tọ̀n yẹ́. Nwọ̀n sí bẹ́rẹ́sí ísẹ́ áriya.
because that child my this had died, he and again lives. They and began to-make merriment.
 Omọ́kọ̀nrí rẹ̀ eyi ẹ́gbọ̀n tí mbẹ́ lí oko, bí ó sí ɲtí† mbò, tí ọ́
Son his this elder-brother who was in farm, as he and was-coming, and he
 sọ̀mọ́ eti ilé, ọ́ gbọ́ òrìṅ ọ̀n idẓo. Ó sí kpé ọ́kaj ní inọ́ awọ̀n
drew-near-to edge of house, he heard singing and dancing. And he called one in among them
 ọ́mọ-ọ́dọ́ wọ̀n; ó bẹ̀rẹ́ kpé, Kí lí á mọ́‡ nkáj wọ̀nyí sí? Ó sí wí fu ù
servant their; he inquired to-wit, What they knew thing these to? He and said to him
 kpé, Aburo rẹ̀ de; babá rẹ̀ sí kpa ẹ́gbọ́rọ́ malù abọ́kpa,
to-wit, Younger-brother thy is-come; father thy and has-killed young-one of cow fatted-to-kill,
 nitori tí ó rí í kpàda lí aláfiá ati ni ilera. Ó sí bíńọ́, ọ́ kọ́ lí
because that he sees him return in peace and in health. He and was-angry, he refused as-to
 atiwò ilé. Nitori ná ní babá rẹ̀ sí ẹ́sẹ́ dẓade, ó sí wà ísíkpẹ́ fú
entering house. On-account of that it-is father his and did go-out, he and was beseeching to
 ù. Ó sí dàhuj, ó wí fu babá rẹ̀ kpé, Kí ye sí í lati ọ́dún mélo yí
him. He and answered, he said to father his to-wit, Take-notice to it from year how-many this
 lí emi ɲtí ɲ-si y ọ́, bẹ́hẹ́ lí emi kò sí rufi y rẹ̀ ní igbà káj rí; iwọ́ kò
it-is I have served thee, so it-is I not and break-law thy in time one heretofore; thou not

* Mu . . . wáh, to bring.

† Bí . . . tí, as; 'tí' having the auxiliary particle 'ɲ.' (Gram. § 128, 2.)

‡ The phrase á mọ́ . . . sí, we know . . . to, is equivalent to the verb to mean.

§ ẓẹ́, to do, is generally employed pleonastically after nitori ná, therefore.

sì ti ífí omọ ewurẹ kán fu mí kī ó fi bá awọn ọrẹ mí še áriya.
and hast given child of goat one to me that it make with them friend my to-make merriment.

Śugbọj bí omọ rẹ yí sì ti de, ẹnì tí ó fi kpanśaga ruj ọrẹ rẹ, iwọ
But as child thy this and has come, one who he made adultery destroy wealth thy, thou

sì tí kpa egbọrọ malù abókpa fu ù. Ó sì wí fu ù kpé, Omọ
and hast killed young-one of cow fatted-to-kill for him. He and said to him to-wit, Child

titi ní iwọ mbẹ lẹdọ mí; ohun gbogbo tí mo ní tí rẹ ní íše. Ó yẹ
continually it-is thou art with me; thing all which I have of thee it-is is. It is-fit

kī á ma še áriya: nitori tí aburo rẹ yí tí kú, ó sì tọj yẹ; ó sì
that we may do merriment: because that younger-brother thy this had died, he and again lives; he and

tí nẹ, á sì rí í.
had been-lost, we and see him.

THE LORD'S PRAYER.

Babá wa tí mbẹ lí òke ọrun, òwọ lí orukọ rẹ, idzọba rẹ de; ifẹ tí rẹ
Father our who art in above heaven; honor be name thy, reign thy come, will of thee

ní kí á še lí aiyẹ, bí tí òke ọrun; fu wa lí ondzẹ ọdzó wa lí oni; dari
be that we do in earth, as above heaven; give us have food of day our in to-day; forgive

igbese wa dži wa, bí awa tí ndaridži awọn onigbese wa; máh sì fà wa
debt our from us, as we are-forgiving them debtor our; not and lead us

sí inọ idẹwo, śugbọj gbà wa ní inọ tulasin. Amin.
to within temptation, but deliver us in within distress. Amen.

DICTIONARY
OF THE
YORUBA LANGUAGE.

INTRODUCTION.

It is proper to inform the reader that the following Dictionary contains scarcely one half of the Yoruba Language. There are doubtless some primitive words which the compiler has not learned; and several thousand derivative vocables have been omitted for the sake of brevity. This severe abridgement, however, is no real defect, since the exact meaning of the omitted words may be ascertained by the rules of derivation quite as easily as we can determine the meaning of inflected nouns and verbs in Latin from the nominative and infinitive. For the convenience of the reader, supposing him to be already acquainted with the rules of derivation as laid down in the Grammar, we here present a review of the various classes of words which have been omitted.

I. Many VERBS of the following kinds:

1. Verbs composed of a verb and noun; as, *beru*, to be afraid; from *ba*, to meet, and *eru*, fear. The omitted verbs of this class are formed chiefly as follows:

a. Of *dá*, to make, and a noun; as, *dýšé*, to sin, from *šé*, sin.

b. Of *džé*, to be, to act, to make, and a noun; as, *džolu* (*olu*, a prince, officer), to be a prince, to rule as a prince.

c. Of *li*, to have, and a noun; as, *lěšé* (*šé*, sin), to have sin, to be sinful, to sin; *laini* (*aini*, need), to be needy, destitute.

d. Of *mò*, to know, and a noun; as, *mète* (*ete*, consideration), to be considerate, provident.

e. Of *šé*, to do, to make, to be, and a noun; as, *šáimò* (*aimò*, ignorance), to be ignorant, untutored; *šáro* (*áro*, meditation), to meditate. Verbs of this class are very numerous.

2. A considerable number of verbs which appear to be formed by placing two verbs in juxtaposition; as, *bilù* (*bí*, to push, and *lù*, to strike), to beat upon, as waves; *sàrè* (*sá*, to run, and *rè*, to go), to run; but in fact, the second member of these verbs is a contracted noun, for *ilù*, a striking, *irè*, a going. Bearing this in mind, the omitted verbs of this class are easily defined by referring to the roots.

3. A considerable number of verbs composed of three or four words; as, *fešetè*, to trample on. A little practice will enable the reader to analyse these verbs, or, as the natives express it, "to take them to pieces," and thus discover their meaning. Usually an elision occurs in the first syllable; as in *fešetè*, which is composed of *fi*, to make, *esé*, the foot, *tè*, to press. But sometimes the first vowel of the noun is elided; as, *tèriba*, to bow, from *tè*, to bend, *ori*, the head, *ba*, to meet.

4. Many compound transitive verbs; as, *fi . . . hàn*, to show; *dá . . . lèbi* (*li èbi*), to condemn.

All the foregoing verbs are in fact phrases, and it is probable that none of them would be treated as vocables in a dictionary compiled by a native.

II. The number of NOUNS omitted from the Dictionary is very large:

1. Several classes of nouns formed from verbs primitive and derivative.

a. Nouns formed by the prefixes 'a' and 'i.'

b. By the prefix 'ai.'

c. By the prefix 'ati.'

d. By reduplicating the first syllable of the verb. For the meaning of nouns formed by these prefixes see "Derivation of Nouns" in the Grammar, or refer to each prefix in the Dictionary.

2. Nouns formed from nearly all nouns by the prefixes, *al*, *ail*, *el*, *el*, *ol*, *ol*, *alal*, *olu*, *oni*. (See Derivation of Nouns and Dictionary.)

3. Nouns formed from most verbs by prefixing 'a,' as above, with the addition of a suffix, chiefly *džù*, to surpass; *kpò*, together; *tán*, completed; as, *asédžù*, excess, lit. an action surpassing or exceeding the bounds of propriety; *asèkpò*, an acting together, co-operation; *asètán*, a completed action, completion. Sometimes other suffixes are employed; as, *là*, to be safe, e. g. *asàlà*, a running to be safe, escape, from *sá*, to run,

and *lâ*, *to be safe*. Such nouns are easily analyzed, by ascertaining the meaning first of the verbal root or middle syllable, and then of the prefix and of the suffix.

III. ADVERBS, or adverbial phrases, composed of a noun and the preposition *ni* or *li*, *in*, are often omitted; as, *lola* (*li o*la), *to-morrow*; *lòkere* (*li ò*kere), *in the distance, far off*. The meaning of such words is obvious so soon as we ascertain that of the noun to which 'l' or 'n' is prefixed.

The student is requested to observe that the accent of Yoruba words in the Dictionary is marked only in those cases where it cannot readily be determined from the rules laid down in the Grammar, §§ 25-27.

P A R T I.
Y O R U B A - E N G L I S H .

A

A B A

- a**, a prefix, the primary use of which is to form concrete nouns from verbs. But the meaning of nouns thus formed is various; and accordingly they may be classified as denoting:
1. The actor or agent; as, asọrọ, *a speaker*, from sọrọ, *to speak*; adža, *a dog*, lit. *a fighter*, from dža, *to fight*.
 2. The patient or recipient of an action; as, aba, *that which is met*, from ba, *to meet*: e. g. óhuj abá, *a thing which is met*.
 3. The action itself; as, abò, *a coming*, from bò, *to come*: e. g. ayuj abò mi di emẹfa loni, *my goings and comings amount to six times to-day*.
 4. The abstract quality implied in an intransitive verb; as, abade, *suitableness*, from bale, *to fit*; ayè, *the state of being alive*, from yè, *to live*.
- á** pron. *he, she, it*; and, by contraction of awa and awọj, *we, they*. It is much used in forming a substitute for the passive verb; as, á lù mi, *they struck me*, i. e. *I was struck*.
- â**, an auxiliary particle equivalent to *shall or will*; as, çoyij â lól, *ye will go*.
- â!** aa! interj. *oh! ah! alas!*
- ab**, n. a contraction of abi, *that which is or has any thing*; as, abeti (abi eti), *that which has ears, which is eared*: e. g. fila abeti, *a cap with ear-flaps*.
- ab**, **a-ba**, a prefix formed of 'a' and ba, *to meet*, and occasionally of 'a' and bá, *with*, implying:
1. *Meeting with, or encountering*; as, abadžo (aba edžo), *meeting with a difficulty or trouble*.
 2. *With or together*; as, abase (še, *to do*), *co-operation, assistance*; abásùj, *a sleeping together*.
- a-ba**. See root bà.
- a-ba**, n. *a thinking of, expecting, expectation, hope*: aba ki li o ydà? (*hope what is-it thou art-making?*) *what do you hope for?*
- a-ba**, n. *an iron staple*; stocks, consisting of a large staple driven into a log and enclosing the ankle.
- a-ba**, n. *a species of wild fig-tree*.
- a-bà**. See root bà.
- a-bà**, (bà), n. *a mat of coarse grass*: eni abà, *a mat of the grass abà*.
- â-ba**, n. *a stack of corn, crib, barn, store*.
- a-bá-bu-dža**, n. *which surprises or thwarts, &c.* See abndža.
- â'-ba-da, fâ'-ba-da**, adv. *for ever*, used only after a negative; as, emi ò še è mọ fabada, *I will never do it again*.
- a-ba-de** (badc), n. *that which fits or is fitted*; *suitableness, adaptedness, congruity*.
- a-bá-dó** (do), n. *a camping together, a fellow encampment*.
- a-bà-do** (òdo), n. *a confluence of streams*.
- a-ba-dža** (džà), n. *a fighting together*.
- a-ba-dže** (džc), n. *an eating together*.
- a-ba-dže** (badžc), n. *which spoils or is spoiled*; *a kind of yam*.
- a-ba-džo** (edžo), n. *a meeting with trouble or difficulty*. As an interjection, *wonderful! shocking!*
- a-ba-džù** (há), n. *a meeting, &c.*; *greatly, extremely*: ó bá mi li abadžù, *it fell upon me with a great or grievous falling*.
- a-bà-džu** (há), n. *an excessive plucking, &c.*
- a-ba-fe**, n. *a medicinal tree*.
- a-ba'-fin-dže** (ba ofin džc), n. *a law-breaker*; *law-breaking*.
- a-ba-fọ** (fọ), n. *a speaking together*.
- a-bá-gó-ke** (gokc), n. *a going up or ascending together*.
- a-ba'-kpa-de** (kpadc), n. *a chance event, accident, coincidence*.

a-ba-lê, *n.* See balê.
 a-ba-mò (imò), *n.* painful reflection on what has happened, *clayrin*.
 a-ba-mò-lê (mòlê), *n.* ambush, conspiracy, highway robbery.
 a-bá-ni-bê-bê (eni), *n.* a fellow-pleader, an advocate, intercessor.
 a-bá-ni-dzé (ba eni), *n.* a guest.
 a-ba-ni-dzé (ba...dzé), *n.* an injurer, slanderer, corrupter.
 a-bá-ni-dzó, *n.* a fellow-dancer, partner.
 a-bá-ni-gbe-le (ilê), *n.* an inmate.
 a-bá-ni-ká, *n.* an assistant in counting money or the like.
 a-bá-ni-ko, *n.* an assistant in collecting or gathering.
 a-bá-ni-rá, *n.* a partner in buying; also, a customer who buys from one.
 a-bá-ni-ríp, *n.* a fellow-traveller.
 a-bá-ni-rò-lê (rò lê), *n.* an assistant in tilling the ground.
 a-bá-ni-ru, *n.* an assistant in carrying anything.
 a-bá-ni-sùn, *n.* a bed-fellow.
 a-bá-ni-še, *n.* a helper, co-worker.
 a-bá-ni-si-kpê. See abánibê.
 a-ba-ni-sò-wo, *n.* a fellow-trader, partner.
 a-ba-ra (aba ara), *n.* a slap: ó gba mi lí abara, (he slapped me in-regard-to a-slap), he gave me a slap.
 a-ba-ra (abi ara), *n.* having a body or skin: agiliti abara yiyi, the rough-skinned lizard.
 a-ba-sùn, *n.* a sleeping with, cohabitation.
 a-ba-še, *n.* aid, co-operation.
 a-ba-ta (ita), *n.* a public square.
 à'-ba-ta, *n.* a little marsh, a pool.
 à'-ba-tí (ba tí), *n.* failure, shakiness of a wall. (P's. 62, 3.)
 a-bá-wí (bá), *n.* reproof, the act of scolding.
 a-bá-wòñ, *n.* a sprinkling, a stain.
 a-be-ká-na (abi ekana), *n.* that which has claws: éran abekana, carnivorous animals.
 a-bê-re. See bêre.
 a-be-še, *n.* a contemptible person: iwò abeše yi! you good for nothing! addressed to inferiors.
 a-bê-tí (abi etí), *n.* that which has ears: fila abetí, a cap with flaps to cover the ears.
 a-be-we (abi ewé), *n.* that which has leaves.
 a-bê, a-bê, &c. See be and bê.
 a-bê, *n.* the underneck: ó wà lí abê oknta, he was in underneath the neck.
 a-bê (be, to cut), *n.* a razor, lancet, penknife.
 a-bê-bê, *n.* a fan.
 a-bê-bê, *n.* a pleader, an advocate.
 a-bê-gi (igi), *n.* a heaver or cutter of wood.

a-bê-hin (abi éhin), *n.* which has something on or pertaining to the back: abíamó abéhin dzáda, a mother with a kicker (i. e. a struggling child) on her back.
 a-bê-i-ya-nu, *n.* importunity.
 a-bê-ka (abi), *n.* which has boughs or branches.
 a-bê-lê, *n.* privacy, secrecy.
 a-bê-lê, *n.* flatness, thinness of a flat substance.
 a-bê-na-gbô-ro (abi), *n.* which has a wide mouth: ibon abengboro, a wide-mouthed gun.
 a-bê-nu-gbâ-gba (abi), *n.* a kind of loose trousers.
 A-bê-o-ku-ta, *n.* which is under the rock, the name of the capital of Egba.
 a-bê-re, *n.* See bêre.
 a-bê-re, *n.* a needle, a pin.
 a-bê-ri, *n.* See bêri.
 a-bê-rò (orò), *n.* a trowel, a shovel to trim mud walls with.
 a-bê-ru, *n.* See bêru.
 a-bê-te-lê, *n.* a begging beforehand; a bribe, bribery, briber.
 a-bê-tu (abi etu), *n.* a brook.
 a-bê-wò (bêwò), *n.* visitation, visitor.
 a-bê-ya (iya), *n.* the armpit.
 a-bí, a-bì, *n.* See bi and lí.
 abi, a prefix, implying being in a state of, having.
 a-bí, *n.* an existence, a being: araiye abi olúá kpete, man, a being of limited eye, i. e. circumstances.
 a-bí (bí, íf), adv. perhaps; ch? iwò inò abi? you know, ch?
 a-bí-a-mò, *n.* a nickname for a mother.
 a-bí-gā, *n.* a mixed breed of large and small horses.
 a-bí-kê-hin (kêhin), *n.* the latter or last born.
 a-bí-ku, *n.* an evil spirit, supposed to kill children.
 a'-bì-lá, *n.* See bílá.
 a-bí-lé (ilé), *n.* one homeborn.
 a-bí-lê-kò (ba, ilê, okò), *n.* a woman living in her husband's house.
 a-bí-lê (ilê), *n.* a native.
 a-bí-mò (omò), *n.* a parent of children.
 a-bí-nò, *n.* one who is angry, &c. See binó.
 a-bí-nò-dzé, *n.* See binó dzé.
 a-bí-nò-kú, *n.* an enemy. (P's. 37, 8.)
 a-bí-ròñ (abi iròñ), *n.* which is hairy.
 a-bí-ròñ (ba iròñ), *n.* a sick person, an invalid.
 a-bí-si (bisi), *n.* increase, propagation by birth.
 a-bí-yê (abi iyê), *n.* which has feathers. (Gen. 1, 21.)
 a-bí-ya (iya), *n.* the armpit.
 a-bò, a-bò, *n.* See bó and bô.
 a-bò, *n.* a female, applied to children and to animals: abò ésin, a mare; abò mali, a cow; also, the half cock of a gun.
 á-bo, *n.* a bag, a bundle.

â-bo, *n.* a shelter, covert, refuge.
a-bo-de (ba), *n.* the outer yard, the space without.
a-bò-dzú (bò odzú), *n.* a covering for the face, a veil.
a-bo'-dzu-wò, *n.* official visitation, superintendence; a superintendent.
a-bo-lé (ilé), *n.* a burglar, burglary.
a-bo-mi-wòp, *n.* a sprinkling, a sprinkler.
a-bò-ra (ara), *n.* a garment, a mantle. See bora.
a-bò-ri, *n.* See bori.
a-bo-ru (abi), *n.* which is hot.
a-bo-yún (abi), *n.* which is pregnant.
a-bò, a-bò. See bò and bò.
â-bò, *n.* cessation; a half: âbò síkedzi, two and a half; âbò síketa, three and a half.
a-bò-dán, (ba), *n.* a meeting of the new year, a living to see it come, the anniversary of the new year.
a-bò-gi-bò-kpè (igi okpè), *n.* an idolator.
a-bò-kpa, *n.* which is fattened to kill. (Luke 15, 23.)
a-bò-ri-sá (óriša), *n.* an idolator.
a-bò-sè-dzè (ba... dzè osè), *n.* a sabbath-breaker.
a-bò-sè (isè), *n.* a job, job-work.
a-bò-wò-gán (bu owó), *n.* a musketo.
a-bu, a-bù. See bu and bù.
a'-bu-dza, *n.* a cutting across, short cut, anticipation of one's words, a confounding: abudza òna, a cross road or street.
a'-bu-ka, *n.* the act of surrounding.
a-bu-ke, *n.* a hunchback.
a-bu-kòj, *n.* an adding, a blessing. See bukòj.
a'-bu-kùj, *n.* remainder, deficiency; contempt (Ps. 35, 26): sè li abukùj, to despise. See bukùj.
a'-bu-la, *n.* adulteration.
a-bu-lé, *n.* a patch, something added to the true statement.
a-bu-mó, *n.* an addition, exaggeration.
a-bu-ra, *n.* who swears. See buru.
a-bu-ran, *n.* which is carded, prepared to be spun.
a-bu-ro (abi iro), *n.* which stands erect.
a-bù-ro, *n.* a younger brother, or any younger relative male or female.
a-bu-ru, *n.* See buru.
a-bù-ru-bu-tán, *n.* a whale.
a-bu-sí, *n.* a grove; one who blesses. See busi.
a-bu-sò, *n.* an invention, a folschood.
a-da, *n.* a bill-hook, a pruning knife.
a-dá, a-dà. See dá and dà.
a-dá. A prefix implying making, constituting, appointing.
a'-da-ba, a'-ta-ba, *n.* a dove: adaba sùsu, the white pigeon.
a-da-bi, *n.* which resembles, likeness.
a-dá'-bo-bò-ni (dá àbo èni), *n.* a defender, an ally.

a-da-bò, *n.* a half: adabo odza, a market held on the day after market-day.
a-da-bò-wò, *n.* self-assumed responsibility.
a-da-dzò, *n.* the time just before day.
a-da-dzò, *n.* a judge, an appointed day.
a-da-gun, *n.* a lake, a pond.
a-da'-gun-lè a-kpo, *n.* a large quiver set on the battle-ground, from which arrows are given to the men.
a-dá-kà-dè-ke (ikà eke), *n.* a tattler, a mischievous person.
a-da-kò (ekò), *n.* a maker of ekò.
a-da-kpè, *n.* contraction of words.
a-da-kpò, *n.* union, confederacy.
a-da-lá-re, *n.* justification, a justifier.
a-dá-lu, *n.* mixture.
a-da'-mah'-lè-sè, *n.* one who makes a failure.
a-da-mò, *n.* a mistaken opinion, heresy.
a-da'-mò-ran, *n.* advice, a proposal; an adviser.
a-dá-mu, *n.* confusion of mind.
a-da-na, *n.* See dana.
a-da'-ni-dá, *n.* which is natural or according to nature.
a-da-ni-du-ro, *n.* a detainer.
a-da'-ni-dzi, *n.* that which awakes or arouses one.
a-da'-ni-kpa, *n.* one who is cruel.
a-da'-ni-lá-ga, *n.* one who is wearisome, importunate.
a-da-ni-la-ra, *n.* a mortifier, disappointer.
a-da-ni-la'-ra-ya, *n.* one who entertains or cheers others.
a-da-ni-lè-kun, *n.* a prohibitor.
a-da-ni-lo-dzu, *n.* one who disappoints.
a-da-ni-lo-ro, *n.* a tormentor.
a-da-ni-ni-dzi, *n.* one who alarms people, an alarmist.
a-dá-nò, *n.* which is thrown away or lost.
a-dán, *n.* which polishes, is polished, etc. See dan.
a-dán, *n.* a bat.
a-dá-re, *n.* a justifier, justification.
a-da-ri-dzi-ni, *n.* one who forgives.
a-dá'-ri-kpòj, *n.* the red-headed lizard.
a-dá-ro, *n.* anxiety, one who is anxious.
a-da-ru-da-kpò, *n.* indiscriminate mixture, confusion.
a-da-sán, *n.* a hereditary debt.
a-da-sí, *n.* which is spared, reserved, a gleaming; an intermeddler, intermeddling.
a-da-sò, *n.* a fiction, a fictitious report, a lie.
a-da-win, *n.* instalments of a debt.
a-da-wo, *n.* a contribution of money.
a-dá-wò-lé, *n.* who assumes responsibility.
a-de, *n.* a covering, a crown: de li ade, to crown; fi ade de, to set a crown on.

a-de, *n.* a charm to bring home the ghost of one killed in war.
a-de-bi-kpa-ni (dà cbi), *n.* that which starves one.
A-de-gbô, *n.* The name of a man, meaning who comes to hear.
a-de-hùṅ, *n.* bargain, covenant; contractor.
a-de-ke, *n.* a liar.
a-de-le-bô (ilc), *n.* a newly married woman, a bride.
a-de-mô, **a-de-mu**, *n.* a water-gourd.
a-de-na (ona), *n.* who lies in ambush; an impediment.
a-de-bi, *n.* condemnation.
a-de-te (dà tɛ), *n.* a leper.
a-de-ti-si-le, *n.* a listener to private conversation.
a-di, *n.* a binding, tangling, etc. See di.
a-di, *n.* oil of the palm-nut kernel.
a-di, *conj.* notwithstanding, after all.
a-di-dôṅ, *n.* flour of parched corn, anything savory.
a-di-dzà (dì idzà), *n.* coming to blows or to a fight.
a-di-dzi, *n.* a scarecrow, a fright.
a-di-dzu, *n.* a blinder or deceiver.
a'-di-e. See ãlire.
a-df-gba-ro, *n.* a colander.
a-di-lu, *n.* child's game of casting lots.
a-di-mi-mô (dà minô), *n.* a sanctifier, sanctification.
a-di-mô, *n.* he who shuts one in, state of being shut in.
a-di-mô, *n.* a secret covenant, a plot.
a-di-mu, *n.* who holds fast, a holding fast; used also as a proper name.
a-din-gbe, *n.* which is dried over the fire, jerked meat.
a'-di-re, *n.* a domestic fowl.
a-di-ro, *n.* a colander.
a-di-si (dà isi), *n.* an inventor. (Rom. 1, 30.)
a-di-tan-mô (dà itan), *n.* a tracing of kinship.
a-di-ti (eti), *n.* a deaf person.
a-do, *n.* a small gourd used for a vial.
a-dô, *n.* an adulterer; lewdness.
a-do-do-dze, *num.* one hundred and thirty (cowries) each: clo o tú à? how dost thou sell it? adododze, one hundred and thirty each.
a-do-dze, *num.* one hundred and thirty.
a-do-gun (dà ogun), *n.* which causes war.
a-do-dzo, *num.* one hundred and sixty.
a-dô-dzo-dzo, *num.* one hundred and sixty each. See adododze.
a-dô-dô-fa, *num.* one hundred and ten each.
a-dô-fa, *num.* one hundred and ten.
a-dôṅ, *n.* flavor, taste, sweetness.
a-dô-rin, *num.* seventy.
a-dô'-rô-rin, *num.* seventy each.
a-dô'-rô-rin, *num.* ninety each.

a-dô-rin, *num.* ninety.
a-dô-saj, *num.* one hundred and seventy.
a-dô'-sô-saj, *num.* one hundred and seventy each.
a-dô-ta, *num.* fifty.
a-dô'-tô-ta, *num.* fifty each.
a-du, *n.* a few: adu ènia, a few people.
a-dú, *n.* a very black person.
a'-du-gbô, *n.* an old acquaintance, a neighbor.
a-du'-gbo-lù, *n.* a stumbling block.
a-du-kpè, *n.* thanks, thankfulness: adukpè loḍo Qlorun, thanks to God.
a-du-ra, *n.* prayer to God only.
a-dza, *n.* a dog; a fairy skilled in medicine.
à-dza, *n.* an attic, a loft, a ceiling overhead.
a-dzà. See adzara, of which it is a contraction.
a-dza-ba, *n.* trouble, unhappiness.
a-dzà-bô, *n.* escape through hard struggling.
a-dza-di, *n.* which is broken in the bottom; adzadi agbôn, a broken bottom basket.
a-dza-dze, *n.* a low, mean fellow.
a-dza-e, *n.* a cord with which a prisoner's hand is bound to his neck.
à-dza-ga, *n.* a neck-shackle, a yoke.
a-dza-ga-dzi-gi, *n.* a violent jerking at something solid.
a-dza-gbôn, *n.* the tamarind-tree.
a-dza-gun, *n.* a soldier, a title of respect much like "esquire."
a-dza-i-lè, *n.* a ceiling over the mouth of a grave or pit.
a-dza-ka, **a-dza-ka-lè**, *n.* an epidemic, pestilence.
a-dza'-ka-šu (džè akašu), *n.* one who cuts the large loaf, i. e. who has plenty.
a-dza-ko (oko), *n.* a kind of wild dog.
a-dza-kpa, *n.* a petty trader, a nickname given to the tortoise.
a-dzà-là. See adzàbô.
a-dza'-na-kpa, *n.* a bird-snare made of cloth.
a-dza'-na-ku, *n.* the elephant.
a-dzan, *n.* meat cut small to retail.
a-dza-o, *n.* a kind of large bat.
à-dza-ô-su, *n.* the moon's dog, i. e. the evening star. See aguala.
a-dza-ra, *n.* a climbing plant the leaves of which impart a black stain.
a-džè, *n.* the god of money, fortune.
a-dže-dže, *n.* a stranger or alien: adžedže ih, a strange or foreign town; šc adžodže si, to be estranged from. (P's. 78, 30.)
a-dže-re, *n.* an earthen pot pierced full of holes to dry meat in.
a-dže, *n.* a paddle, an oar.
a-džè, *n.* a witch.
a-džè-kùṅ, *n.* a remnant after eating.
a-džè-kpô, *n.* the eud, an eating together.

a-džę-łę, *n.* an official agent, consul.
a-džę-ni-a (čnia), *n.* a cannibal.
a-džę-ti, *n.* eating and leaving a part uneaten.
(Luke 15, 17.)
a-džę-yō, *n.* eating to the full. (Luke 15, 17.)
a-dži-bō-wa-bá, *n.* which pre-exists.
a-dži-džin, *n.* a shadow. (Ps. 23, 4.)
a-dži'-gbe-se, *n.* a debtor.
a'-dži-mō (Arab.), *n.* the Mohammedan Sabbath.
a-dži-na, *n.* expenditure, expenses.
a-džf-nde, *n.* a rising up, the resurrection.
a-džin, *n.* profound silence, the depth of night.
a-džin-sin-sin, *n.* deep concealment, that which is concealed.
a-dži-re ! *good morning !* (lit. did you wake well ?)
à-džo, *n.* a journey.
ā-džo, *n.* anxiety : še ādžo, to be anxious.
a-džó-gun (dže ogun), *n.* an heir.
a-džo-kpa-run, *n.* which burns fiercely, devouring fire.
a-džó-ò-kù (ò, not), *n.* which is unquenchable.
a-džó-ràn, *n.* a catching fire from something else on fire.
a-džo-wu, *n.* one who is jealous ; jealousy.
a-džó, *n.* an assembly, crowd : adžó odún, a feast, festival.
a-džó-džę-kpò, a-džó-mọ-kpò, *n.* an assembly for a feast. (1 Pet. 4, 3.)
a-džó-kpin, *n.* a partaker, sharer : še adžókpín, to partake, share.
a-džo-rin, *n.* a travelling together : egbẹ adžórin, a travelling companion.
a-džó-rò, *n.* a consultation, council.
a-džó-sọ, *n.* a talking together.
a-džó-yò, *n.* a rejoicing together.
a-džu-ba, *n.* a newly cleared field.
a-džu-dę (odę), *n.* an armet of iron worn by hunters.
a-džu-mọ, *n.* an acting or being together, companionship.
a-fa. See fa.
a-fá. See fá.
a-fai-mọ (fi aimọ), *adv.* perhaps, possibly, doubtfully : bi yi ó de lola afaimọ, if he will come tomorrow is uncertain.
a-fá-ra, *n.* a bridge ; two sticks rubbed together to produce fire : afára oyin, honey-comb.
à-fa-ra, *n.* slowness, dilatoriness.
a-fe, *n.* a kind of rat.
a-fe-bi-kpa, *n.* See adebikpa.
a-fe, *n.* pleasure, affection, love : mo fẹ li afẹ tan, I love with perfect love.
a-fe-džu, *n.* a frowner, a frowning.
a-fe-fe, *n.* wind, air, spirit.
a-fe-hin-ti (fi ehin), *n.* a prop, support.

a-fe-mọ-džu-mọ, *n.* the dawn, daybreak.
a-fe-nò, *n.* which is winnowed away.
a-fe-nu-si (fi enu), *n.* a meddler.
a-fe-re, *n.* lightness ; cork-wood.
a-fe-ri, *n.* search, a seeker : še afẹri, to seek.
a-fe-sọ-na (sí òna), *n.* who is betrothed.
a-fe-tán, *n.* perfect love.
a-fi, a-fi-bi, *conj.* unless, except.
a-fi-bi-kpò-re (fi kpò), *n.* an ungrateful person.
a-fi-dži, *n.* forgiveness, repeal of law.
a-fi-hàn, *n.* a showing, guidance, exhibition.
a-fi-lẹ (fi ilẹ), *n.* abandonment, renunciation.
a-fi-na (fiŋ òna) *n.* an engraver, engraving.
a-fi'-nọ-sá'-dže-re (fi inọ še adžere), *n.* one with a treacherous memory, an unreliable person, unteachable.
a-fi-no-ę-hin (ehin), a-fi-no-šo-de (ode). See the preceding word.
a-fin, *n.* a palace ; an engraver, engraving ; an albino.
a-fin-džu (odžu), *n.* neatness, tidiness ; a tidy person.
a-fin-gba (igba), *n.* an engraver of calabashes.
a-fi-re-še (ire), *n.* wilfulness in doing an evil action.
a-fi-sọn, *n.* one who is accused.
a-fi-yan-džu-še, *n.* acting by constraint ; reluctance.
a-fi-ye-si (iye), *n.* attention, notableness. (Acts 2, 20.)
a-fo, *n.* a space, room ; openness, an opening.
a-fo-džu-di (fi), *n.* insolence.
a-fo-džu-sọ-na, *n.* a looking for, expectation.
a-fo'-fo-ro, *n.* cork-wood.
a-fo-mọ, *n.* a parasite, mistletoe.
a-fo'-ni-fo-dži, *n.* a valley.
a-fo-re-še-bi (fi ore še ibi), *n.* an ungrateful person.
a-fo-ta, *n.* purblindness : ó še afota, he is purblind.
a-fọ, *n.* hogs' mire.
a-fọ-ba-džę, *n.* overthrow, destruction.
a-fọ-džú (fọ), *n.* a blind person.
a-fọ-gun, *n.* a bottle.
a-fọ-ko-ko (ikoko), *n.* a pot-washer. (Ps. 68, 8.)
a-fọ-na-hán (fi òna), *n.* a guide.
a-fọn-fe-re, *n.* a flute-player, piper.
a-fọ-ò-gbọ (ò, not), *n.* unruliness, disobedience.
a-fọ-ran-lọ (fi òran), *n.* one who investigates a case or dispute, a reconciler.
a-fọ-ran-mọ (fi oran), *n.* accusation, suspicion.
a-fọ-šę, *n.* a fulfilled prediction ; a foretelling.
a-fọ-wọ-bò (fi owọ), *n.* a secret.
a-fọ-wọ-ra, *n.* pilfering.
a-fọ-wọ-ta, *n.* a careless search.
a-fu-ra (fú ara) *n.* a suspicious person.
a-ga, *n.* which is high, a height ; a rampart, ladder, chair, stool, table.

a-gā. See agara, of which it is a contraction.
a-ga-ba-ge-be (gun àba gun ebe), a *double-dealer*, a *hypocrite*.
a'-ga-da, *n.* a *short sword*: agada kô inô ori ala-
 gbèdè, the sword knows the head of the blacksmith
 (who made it).
a'-ga-da'-go-do, *n.* a *lock*, especially a *padlock*.
a-ga-kpo-si, *n.* a *bier*.
a-ga-la-ma-ša, *n.* a *trick*, *deceit*, *naughtiness*.
a-ga-na, *n.* a *highway robber*.
a-ga-ndžu, *n.* a *palace*.
a-gā-ndžu. See agindžu.
a-gān, *n.* which *sews* or *is sewed*, *cuts* or *is cut*, &c.
 See gān.
a-gān, *n.* which *despises* or *is despised*, a *despising*,
contempt; a *barren woman*: yà agān, to be barren.
a-gaj-gaj, *n.* a *flat stone* on which *glass beads* are
 ground or polished.
a-gān-gān, *n.* a *pinnacle*, *topmost point*.
a-ga-ra, *n.* *weariness*: agara aye ma dá mi, I am
 weary of life.
a-gá-ra, *n.* the *coney* (hyrax).
a-gba, *n.* a *ask*.
a-gbà, *n.* *help*.
à-gba, *n.* an *elder*, an *adult*, a *man*: àgba àgba,
 man by man.
a-gba-boj (ibon), *n.* a *cannon*.
a-gbà-bò, *n.* a *foster-child*.
a-gba-da, *n.* a *loose garment*; in the translation of
 Exodus, the *liver*.
a-gbá-do, *n.* *maize*.
a-gbā-du, *n.* a *viper*.
a-gba-dža, *n.* a *girdle*.
a-gba-džò, *n.* an *assembly* of the whole people.
a-gba-gba, *n.* a *plantain*: agbagba èyècè, a *spotted*
pigeon.
a-gba-gun, *n.* that which causes the *assembling* of
 soldiers; an *army*.
a-gbai-ye, *n.* the whole world: odžú agbaiye, the
 face of the earth.
a-gba-ko, *n.* a *coming in contact*, a *precise point* of
 time; a *moment*: li agbako ná, at that moment.
a-gba-ku, *n.* a *frame* in which a *load* is placed to
 be carried on the head.
n'-gba-la, *n.* a *walled garden*.
a-gba-la-dža, *n.* a *kind of shirt*.
a-gba-lá-gba, *n.* an *elderly* or *honorable man*.
a-gba-le, *n.* a *kind of insect*.
a-gba-lu, *n.* the *whole town*, the *population*.
a-gba-mi, *n.* the *open sea*.
a-gbā-ni, *n.* a *helper*.
a-gba-nrè-re, *n.* the *unicorn*: agbanrè-re olowo
 kán, the agbanrè-re is one-horned.
a-gba-ò-džò, *n.* one who is *old in days*, an *aged*
person.

a-gba-ra, *n.* *strength*, *violence*.
a-gbá-ra, *n.* a *strong climbing plant* used for ropes.
a-gbà-ra, *n.* a *stockade*.
a-gba-ri, *n.* the *skull*.
a-gba'-ri-gba, *n.* a *kind of antelope*.
a-gba-sa, *n.* a *mass of rocks*.
a-gba-si, *n.* *accumulation*.
a-gba-sin, *n.* a *ewe* taken care of for a *portion* of
 her increase.
a-gba-še, *n.* *help for hire*: fu mi li agbaše, hire
 me. (Matt. 20, 7.)
a-gba-tán, *n.* *entire help*, *helping throughout*.
a-gba-tò-džu, *n.* one who *keeps something* for an-
 other, a *trustee*.
a-gba-wò, *n.* which is *hired* or *rented*, as a house.
a-gbe, *n.* a *resident*, *inhabitant*; *forgetfulness*; *begging*
 for alms.
à-gbe, *n.* a *large gourd-bottle*.
a-gbe-bò, *n.* a *hen*.
a-gbe-de (gbò), *n.* one *skilled in language*, a *lin-*
guist.
a-gbe-de-me-dzi, *n.* the *middle*, *midst*.
a-gbe-dži (gbà edži), *n.* a *rain hat*.
a-gbe-džò-lo, *n.* a *long-necked gourd*.
a-gbe-džù, *n.* *great assistance*; ó gbe mi li agbe-
 džù, he aided me much.
a-gbe-gbe, *n.* *neighborhood*, *surrounding region*.
a-gbe-lé-bu, *n.* a *cross*. (Luke 21, 21.)
a-gbe-nde, *n.* a *raising up*, the *resurrection*.
a-gbe-ni, *n.* who *exalts* or *aids* one.
a-gbe'-ra-ga, *n.* who *exalts himself*, is *proud*.
a-gbe-re, *n.* *fornication*.
a-gbe, *n.* a *whetler*; a *farmer*; a *kind of sword*.
a-gbe-de (agbe idé), *n.* a *smith's shop*, *smith work*,
 lit. the *whetting* of brass.
a-gbe-dže, *n.* a *kind of squash*.
a-gbè-ku-ta (okuta), *n.* a *stone-cutter*, a *lapidary*.
 He makes beads and other ornaments of agate,
 jasper, and cornelian.
a-gbè-má-ye, *n.* a *barren hen*.
a-gbìñ-yi-ká-gbà (ògbà), *n.* a *hedge*.
a-gbo, *n.* a *flock*, a *ring of dancers*, a *stack of corn*:
 omo agbo, a *babe*; agbo ilé, the *inner court* of a
 house.
a-gbo, *n.* a *ram*.
a-gbò, *n.* which is *old*, an *old person*: še agbò, to
 be old; a *cat-fish*; a *fermented medicinal wash*.
a-gbò-de-gbà, *n.* a *thief* stationed out of doors to
 receive what burglars steal.
a-gbò-džu-lé, *n.* who *perseveres*, acts *firmly*.
a-gbo-wò-de (gba owó ode), *n.* a *toll-gatherer*,
tax-collector.
a-gbòj, *n.* the *cocconut-tree*, a *cocconut*.
à-gbòj, *n.* the *chin*: àgbòj isalé, the *lower jaw*.
a-gbòj, *n.* a *basket*, *hamper*.

a-gbōn, *n.* a wasp.
a-gbōn-rin, *n.* a kind of antelope.
a-gbō-ti (gbà ọtì), *n.* a butler.
a-gbō-ya, *n.* hearing quickly: iwọ gbō agbọya (thou hearest hearing-quickly), you pretend to be deaf.
a-ge-re, *n.* the stand on which Ifa is set.
a-ge-mō, *n.* a chameleon; the cock of a gun.
a-gi-di, *n.* stubborn; an obstinately wicked person.
a-gi-dí, *n.* balls of cold ẹko wrapped in leaves.
a-gi-lí-ti, *n.* a kind of lizard.
a-gi-ndžu, *n.* a wilderness, a desert.
a-gí-sa, *n.* a rag.
a-go, a-go-go, *n.* a bell, a clock: ago melo? what o'clock is it? ago medži ni, it is two o'clock; ago medži ro, the clock struck two.
a-go, *n.* a cup, small box as for pills.
a-gō, *n.* a striped rat.
ā-gō! get out of the way! āgō mi li òna, get out of my road! āgō ẹsin, get out of the way of the horse!
a-gō-go, *n.* that which is tall; tallness.
a-go-go-ri (gonḡo ori), *n.* a sharp point.
a-go-ro, *n.* a rabbit.
a-go-ró, *n.* a striped rat.
a-gọ, *n.* a shroud.
a-gō, *n.* a tent, hut, shanty.
a-gō, a-gō-ní, *n.* one who neglects family discipline.
a-gōḡ, *n.* a grudge, hatred, strife. (Rom. 1, 29.)
a-gōḡ-gọ, *n.* one armed with a club.
ā-gu-ā-la, *n.* the planet Venus, called the moon's dog.
A'-gu-da, *n.* a Spaniard, or other dark European.
a'-gu-fōḡ (gun ọfōḡ), *n.* the crested crane.
a-gu-na, *n.* an embroiderer.
a-gu-ndžę (gun džę), *n.* a table-fork.
a'-gu-tan (gun itan?), *n.* a sheep.
a-ha, *n.* a drinking-gourd.
a-ha-łę, *n.* a boaster; boasting.
a-ha-mō, *n.* entanglement, difficulty.
a-ha'-mọ-ra, *n.* who is entangled in business, who is harnessed in armor.
a-ha-na, *n.* a reckless, wicked man.
a-han-han, *n.* a lizard resembling the iguana.
a-ha'-ri-ya, *n.* bird-shot.
a-he-re (ere), *n.* a farm-house, a barn.
a-hó' (hó), an exclamation of contempt: ẹ́e alfo si, to despise.
a'-ho-ro, *n.* desolation, ruins.
a-ho-to, *n.* tight pantaloons.
a-hōḡ, *n.* the tongue.
a-hu-sa, *n.* an esculent nut.
ai, a prefix. not, un-, in-.
ai-ba, *n.* which is not met, &c., not meeting, &c.
See ba.

ai-ba-džę, *n.* which is not corrupted or spoiled, incorruptible.
ai-bá-wí, *n.* blamelessness. (Mat. 12, 5.)
ai-bę-ru, *n.* courage, boldness. (Acts 18, 26.)
ai-bò, *n.* defencelessness.
ai-dá, *n.* unceasingness, uncrecatedness.
ai-dá-a-ra, *n.* bad health.
ai-dę-ra, *n.* unnegligence, strict application.
ai-di'-ba-džę, *n.* uncorruptedness, incorruption.
ai-džę, *n.* which is uncuttable; a not permitting, unsuitable.
ai-džę-bi, *n.* innocence, uncondemned.
ai-dži-yar, *n.* which does not dispute, is indisputable.
ai-fę, *n.* unwillingness, indifference.
ai-fę-ní, *n.* uncharitableness.
ai-fō-ya, *n.* boldness, courage.
ai-fō, *n.* soundness, unbroken.
ai-fō, *n.* uncleanness, unwashed.
ai-gba-gbō, *n.* unbelief.
ai-gbe-de, *n.* state of ignorance of a language.
ai-gbo, *n.* sluggishness, stubbornness.
ai-gbó, *n.* unripeness, immaturity.
ai-gbō, *n.* disobedience.
ai-gbōḡ, *n.* lack of wisdom, folly, &c. See gbōḡ.
ai-gbōḡ-ran, *n.* See aigbó.
ai-ká, *n.* which is uncounted, left out, excepted: gbogbo woy li aiká eyi, all of them except this.
ai-kōḡ, *n.* which is unfilled. See the next word.
ai-kōḡ-si-nó (si inó), *n.* being unsatisfied, a murmuring.
ai-kpa, *n.* which is not killed, unquenched.
ai-kpę, *n.* who is not invited, uncalled.
ai-kpę, *n.* undurableness.
ai-kpiḡ, *n.* which is undivided, undistributed.
ai-ku, *n.* immortality, unquenchableness; aiku, usually pronounced aku! or oku! is a very common salutation, whence the Yorubas are called in Sierra Leone "the Aku people."
ai-la'-ba-wọḡ, *n.* which is unstained, unblemished.
ai-la'-bu kun, *n.* which is faultless, unexcusable.
ai-la'-bu-la, *n.* which is unadulterated.
ai-le-ra (lé ara), *n.* infirmity, weakness.
ai-le-ri (li eri), *n.* purity, cleanness.
ai-le-wu (li ewu) *n.* which is in safety.
ai-łę-bi (li ẹbi), *n.* which is guiltless.
ai-łę-mi (li emi), *n.* which is spiritless, dead.
ai-łę-nu (li enu), *n.* which has no mouth or opening.
ai-łę-ri, (li eri), *n.* which has no testimony, is unproved.
ai-łę-sę (ese), *n.* which has no feet.
ai-łę-šę (řšę), *n.* which is sinless, innocent.
ai-łę-la (ọla), *n.* which is unhonoured.
ai-łę-mọ (ọmọ), *n.* who is childless: ó wà li ai-łomọ, he was childless.

ai-máh, a double negative employed pleonastically after another negative; as, emi ò lè ísè aimáh lóh, *I must go*, lit. *I not am able to do not go*. Ailóh or máh lóh may be used instead of aimáh lóh.

ai-mò-re (mò òre), *n.* ingratitude, who is ungrateful.

ai-mo-ye (moye), *n.* ignorance, who is ignorant.

ai-mò, *n.* ignorance, which is unknown or unusual.

ai-mó, *n.* which is unclear, not clear or light; uncleanness, pollution.

ai-ni, *n.* who has not; need, destitution.

ai-ni-di (idi), *n.* which is causeless, unreasonable: nwọj kórirá rẹ̀ lí ainidi, *they hated him without a cause, or unreasonably*.

ai-ni-kpai-ya, *n.* fearlessness.

ai-nf-kpe-lé, *n.* which has no addition: lí ainikpelé, *without addition*.

ai-ni-kpe-te, *n.* which is undesigned, unintended: lí ainikpete, *without intention, undesignedly*.

ai-ni-kpe-kun, *n.* which is endless, everlasting.

ai-nf-kpi-le-še, *n.* which is unfounded or has no foundation.

ai-ni-ni-ye, *n.* which is numberless.

ai-nf-ye-nó, *n.* who has no understanding.

ai-nf-yin, *n.* which is unpraised, unhonored.

ai-nf-yọ-nó, *n.* which has no mercy or compassion: ó lé wọj lí ainuyonó, *he drove them unmercifully*.

ai-rá-kpa-da, *n.* who is unredeemed.

ai-re-ko-dza, *n.* soberness, temperance.

ai-re-lè, *n.* which is undumbed, lack of humility.

ai-ri-ran, *n.* dimness of sight.

ai-ri-wí, *n.* who is inexcusable, finds nothing to plead; inexcusableness.

ai-rò, *n.* thoughtlessness, inconsiderateness.

ai-ro-dzú (rí odzú), *n.* a being busy, unremitting occupation.

ai-ro-wọ (rí owó), *n.* Same as the preceding.

ai-sán, *n.* sickness: še aisan, *to be sick*.

ai-sí, *n.* absence.

ai-si-mi, *n.* unrest, perseverance.

ai-si, *n.* independence.

ai-sá, *n.* which is uncut, unraped.

ai-sá-nú (še anú), *n.* unmercifulness. (Jas. 2, 13.)

ai-še, *n.* inaction; which is not done.

ai-še-de-dé, *n.* transgression.

ai-še-gbe, *n.* equity, impartiality.

ai-še-me-le, *n.* diligence; industry.

ai-še, *n.* which is unfulfilled.

ai-šẹ, *n.* which is innocent, faultless. (1's. 59, 4.)

ai-še-taj (etan), *n.* uncorrectfulness, sincerity.

ai-ši-me-le. See ašemele.

ai-ši-ye-me-dzi, *n.* undoubtedness, certainty.

ai-šo-do-do, *n.* injustice, unrighteousness of action.

ai-šo-dzú-šá-dzú, *n.* impartiality.

ai-šo-tó (še otó), *n.* injustice, wrong.

ai-ta-ra, *n.* equality: ešinj sure lí aitará nwọj yọ, *the horses ran equally and came out together*.

ai-tó, *n.* insufficiency: še aitó, *to be not enough*. (Mat. 25, 9.)

ai-tó, *n.* crookedness, absurdity.

ai-wá-ka-ra (wu), *n.* unleavened bread.

ai-wẹ, *n.* which is unwashed: aiwẹ owó, *unwashed hands*. (Mat. 15, 20.)

ai-wú, *n.* which is unswelled or unleavened: awú akara, *unleavened bread*.

ai-ya, *n.* breast, chest, heart, stomach, bosom; courage, influence.

ai-ya-fò, **ai-ya-dza**, **ai-ya-kpa**, **ai-ya-lá**, *to affect with fear*: aiya fò mi, *I am afraid*, lit. *the heart jumps me*; dá aiya fò, *to frighten one* (1's. 10, 18); aiya kpa mi, *my heart fails*. (Ps. 40, 12.)

ai-ya-kpa, *n.* undeviatingness, union, as opposed to schism.

ai-ya-tọ, *n.* which does not differ, identity.

ai-ye, *n.* the world; condition, days or times of one, circumstances in life, duration of life, as distinguished from àye, life.

ai-yé, *n.* which is not understood, unintelligibility; unceasingness.

ai-yè, *n.* which is lifeless; lifelessness.

ai-ye-rai-ye, **ai-ye-ti-ti-lai**, *n.* which is everlasting; eternity.

ai-ye, *n.* See aigbo.

ai-ye-se (yi eše), *n.* firmness, steadfastness.

a-ká, *n.* a crib.

a-ka-be, *n.* the cloth-beam of a loom.

a-ka-dán, *n.* a felon on the finger.

à-ka-ka, *n.* the squatting posture.

à-ka-la, *n.* the large vulture.

a-ka-lá-mbi, *n.* a sack.

a-ká-mó, *n.* the act of surrounding.

a-kân, *n.* a crab; an equulet.

a-kan-še, *n.* a rarity; which is made to order; a speciality. (Acts 19, 11.)

á-ka-ra, *n.* bread.

a-ká-so-è-wu, *n.* a sack coat, loose garment.

a-ka-só, *n.* stairs, ladder, fork of a tree.

à-ka-sú, *n.* a large loaf or ball of eko.

a-ka-ta, *n.* a kind of wild cat.

à-ka-ta, *n.* the umbrella-hot of the natives.

a-ka-taj-kpo, *n.* a cross-bow.

a-ká-ta-ri, *n.* the zenith.

a-ka-we, *n.* metaphor, allegory, explanation: aka-we ojan, *a comparison of matters*.

a-ká-we, *n.* a reading, a lesson.

a-ka-yin (ka chin), *n.* a toothless person.

à-ke, *n.* an axe: àke gboro, *an adze*.

a-ke-de (ode), *n.* a public erier.

a-ke-dza-ọ, *n.* a cross-road.

a-ke-gi (igi), *n.* a chopper or hewer of wood.

a-ke-guŋ (okó), *n.* an old worn-out hoe.
a-ke-ke, *n.* See *áke*.
a-kē-kē. See *akérékére*.
a-ke-kuŋ, *n.* stubble.
a-ke-lè, *n.* dropsy of the chest.
a-ke-re, *n.* a very small person.
a-kē-re-kē-re, *n.* a scorpion; the trigger of a gun.
a-ke-re-ko-ro, *n.* a nickname given to spiteful little people.
a-kē-ri (ke, to cut, ori, head), *n.* a hater.
a-ke-ru, *n.* a bob-tail.
a-ke-si, *n.* a call, a caller, visitor.
a-ke-te, *n.* a bed of earth, a bed.
a-ke-ti, *n.* a crop-ear.
a-ke, *n.* a large she-goat.
a-ke-dup, *n.* the gout.
a-ke-hiŋ-dā-si (ehin), *n.* a turning the back upon, one who forsakes (Mat. 26, 33) : *še akēhiŋdāsi, to forsake*.
a-ke-saŋ, *n.* a palace.
a-ke-še, *n.* the red-flowered cotton.
a-kē-te, *n.* a hat.
a-ke-toŋ, *n.* a new hoe; a bough.
a-ki-ì-džè (ì, not), *n.* who does not reply, silence.
á-ki-loh, *n.* a salutation on parting, good-bye.
a-ki-mô-lè (ilè), *n.* that which is pressed down. (Luke 6, 38.)
a'-ki-ra, *n.* African tobacco.
a-ki-ri, *n.* a wandering, a wanderer.
a-ki-sa, *n.* a rag, scrap of cloth.
a-ki-taŋ. See *átan*.
a-ki-ti, *n.* a baboon : oibó akiti àgbá! the white man is an old baboon! (cried in the streets of Abbeokuta by the children when they see a white man.)
a-ki-ye-si, *n.* attention to, an overseer, that which is notable.
a-ko-bi-a, *n.* barrenness : yà akobia, to be barren.
a-ko-de (akú ode), *n.* a salutation to one in the streets.
a-ko-dža, *n.* a bringing to an end, finishing, completion.
a-ko-džò, *n.* a piling up, accumulation, a lump (Rom. 14, 16) : *še akodžò, to gather in a crop*.
a-kó-kā, *n.* the first of a series, first counted.
a-kó-ki, *n.* a salutation on meeting in the road.
a-ko-ko, *n.* a tooth; a woodpecker.
a-kó-ko, *n.* a point of time : akóko kòdža, the time is past.
a-kó-kùŋ, *n.* a remainder, remnant.
a-kó-kpò, *n.* a collecting together, collection, draught. (Luke 5, 4.)
a-ko'-lò-lo, *n.* a stammerer, a stammerer.
a-ko'-ni-ši-še, *n.* a taskmaster, a driver.
a-kó-ri-ra, *n.* a hater.
a-kó-rò, *n.* a boggy or muddy place.

a-kò-sa, *n.* a bird of prey.
a-kò-so, *n.* control, restraint : *še akoso, to rule over*. (Gen. 1, 16.)
a-ko-šo, *n.* a smelling-bottle.
a-kó-táŋ, *n.* a completion of collecting : li akótáŋ, finally. (1 Pct. 3, 8.)
a-ko-to, *n.* a calabash.
a-kò, *n.* the male of beasts. See *abò*. Also, full cocked (gun); harshness, roughness : okuta ako, a hard stone.
a-kò, *n.* a stork; a scabbard.
a-kò-bi, *n.* first-born.
a-kò-džù, *n.* a very learned man, scholar.
a-kò-gba, *n.* a fence, hedge.
a-kò-kan, *n.* the first, the foremost.
a-kò-lé, *n.* a superscription (Luke 23, 38); the address on a letter.
a-kò-le, *n.* a builder.
a-kò-mu, *n.* that which is first taken.
a-kò-ni (eni), *n.* a strong man.
a-kò-ni (eni), *n.* a teacher.
a-kòŋ, a-kuŋ, *n.* beads made of shell.
a-kò-ò-džò, *n.* every fifth day when full market is held.
a-kòŋ-rin, *n.* a singer.
a-kòŋ-si-nò (inò), *n.* a grumbling, a grumbler.
a-kòŋ-wò-si-lè (ilè), *n.* which is full to overflowing.
a-kò-rò, *n.* the first rains.
a-kò-ròŋ, *n.* a closet, private room.
a-kò-se-ba (ese), *n.* chance, luck.
a-kò-so (eso), *n.* first ripe fruit, first fruits.
a-kò-še, *n.* first made, beginning.
a-kò-táŋ, *n.* one who is perfectly taught, well informed.
a-kò-wah, *n.* the first coming, first comer.
a-kò-we (iwe), *n.* a writer, a scribe.
a-kpa, *n.* an arm, wing, side, bough : li akpa kan, on one side, aside.
a-kpa, *n.* a thorny tree.
à-kpa, *n.* a prodigal, a spendthrift; a drum cord, a pack rope : àkpa asara, a roll of tobacco.
a-kpa-da, *n.* a return, renovation.
a-kpa-da-hù, *n.* a fresh start, a young sprout.
a-kpá-di, *n.* a potsherd.
a-kpá-gbè-yin, *n.* a runt.
a-kpá-ko, *n.* a board, a plank floor.
a-kpá-ko, *n.* a footstalk of the wine-palm.
a-kpa-la, *n.* a kind of gourd; a clod of earth; a whistle.
a-kpa-lò (alò), *n.* a riddle-maker : akpalò kpatitá, a riddle-maker makes them to sell.
a-kpa-mò-ra, *n.* long suffering.
a-kpa-ni (eni), *n.* a murderer, an executioner.
a-kpa-ni-džè, *n.* a devourer. (Mat. 7, 15.)
a-kpa-ra, *n.* barrenness of land.

a-kpa-ri, *n.* a bald-headed person.
a-kpà-ro, *n.* a partridge.
a-kpa-roj, *n.* a kind of ratan.
a-kpa-ta, *n.* a shield.
a-kpá-ta, *n.* a rock.
a-kpè-džę, *n.* an invited guest.
a-kpè-džò, *n.* an assembly.
a-kpe'-džu-re, *n.* a pattern, model.
a-kpe-lé, *n.* a surname.
a-kpe-na, *n.* one who summons or calls a meeting together.
a-kpè-na, *n.* warp-pins of a native loom.
a-kpe-re, *n.* a pad to ride on.
a-kpe, *n.* a staying : akpe li o kpe, you stayed long.
a-kpé, *n.* a clapping of hands : šč akpé, to clap.
a-kpe-dža, *n.* a fisherman.
a-kpe-re. See akpedžure.
a-kpe-ta, *n.* part of a dead body, as a finger, a nail, or a lock of hair, brought home from the battlefield to the relatives.
a-kpi-ni, *n.* the chief of the priests called ođę.
a-kpi-nti, *n.* a kind of drum.
a-kpo, *n.* a quiver.
à-kpo, *n.* a bag : àkpo agadagodo, a kind of leather bag ; àkpo íšana, a bag for flint and tinder.
a-kpo-finj, *n.* the chief archer.
a-kpo-kpo, *n.* a roll of cloth ; the pod of certain trees.
a-kpo-lu'-ku-tu, *n.* the large cocoon of the African silkworm.
a-kpo'-ri-ki, *n.* See akpofin.
a-kpo-ro, *n.* a walk in a garden.
a-kpo-ró (kpa oró), *n.* an antidote.
a-kpo-ti, *n.* a box, a stool : akpoti itise, a foot-stool.
a-kpoj, *n.* a bachelor : akpoj obiri, a woman who has weaned her child.
à-kpoj, *n.* restlessness.
a-kpó-nti, **a-kpó-ti**, *n.* a brewer.
à-kú (aikú), *n.* a salutation.
a-kua-bò (abò), *n.* salutation to one returning.
a-kua-lę (alę), *n.* salutation in the evening.
a-kuà-rej (arę), *n.* salutation to one who is fatigued.
a-kua-rò (aurò), *n.* salutation in the morning, good morning.
a-kua'-ti-džò (atidžò), *n.* salutation to one who has not been seen for a long time.
a-ku-bò. See akuabò.
a-ku-dinj, *n.* the heart-wood of a tree.
a-kú-džó-ko, *n.* salutation to one who is sitting.
a-kuę-ru (eru), salutation to one carrying a load.
a-kuí'-e-gbe, *n.* rheumatism.
a'-ku-kò, *n.* a male fowl, a cock.
a-ku-lé (ilé), *n.* salutation to one in the house.
a-kuj, **a-kuj-rej te**, *n.* a stupid person.

a-kuj-yuj-gbà, *n.* a court flatterer, a bard, a drummer.
a-ku-rò, *n.* a garden by the water side, for the dry season.
a-kū-tà, *n.* salutation to one who is selling.
à-la, *n.* five white cloth, linen, cambric, &c.
a-lá, *n.* a dream : lá alá, to dream.
a-la'-ba-džę, *n.* a fellow-guest, an associate.
a-la'-ba-kpa, *n.* a partner in hunting or fishing.
a-la-ba'-kpa-de, *n.* chance, luck.
a-la'-ba-kpij, *n.* a partner, a sharer.
a-la'-ba-mò-lę, *n.* a highway robber, a kidnapper.
a-la'-ba-rij, *n.* a fellow-traveller.
a-la'-ba-še, *n.* a helper.
a-la'-bi-nò-kú, *n.* a deadly foe.
a-lá-bò, *n.* a shelterer, defender.
a-la'-bo-džu-to, *n.* a superintendent.
a-la'-bò-o-wò, *n.* the owner of a bundle of cowries.
a-la'-bu-kòj, *n.* who blesses or is blessed.
a-la'-bu-kùj, *n.* who despises or is despised : alabukuj àroj, an invalid, a disabled person.
a-la-bu-si, *n.* one who bestows.
a-la-dā-mò, *n.* an errorist, a heretic.
a-la-da-si, *n.* a meddler.
a-la-da-sò, *n.* one who speaks in the name of another without authority : aladasò ni Mòhòmòdu, Mohammed was self-sent.
a-la-de, *n.* one who wears a crown, a crowned head, king : oja alade, the king's children.
a-la-di, *n.* a dealer in the oil adi.
a-la-dòj, *n.* paste of bene-seeds.
a-la-dò-ta, *n.* which costs sixty cowries.
a-la'-du-gbo, *n.* a neighbor.
a-la-dža, *n.* a peace-maker, a reconciler.
a-la-džę, *n.* a self-assumed nickname.
a-la'-džò-kpa. See alabakpa.
a-la-džò-ni, *n.* a partaker ; one in the same condition, a fellow.
a-la'-džu-ku, *n.* a seller of džuku tobacco.
a-la'-fe-ti-gbò (fi eti), *n.* a hearer.
a-la'-fe-hij-ti (fi čin), *n.* a prop, a supporter.
a-la'-fe-nu-si (fi čnu), *n.* a meddler, a busy-body.
a-la'-fe-ri, *n.* a seeker.
a-lā-fī-a, *n.* peace, safety, prosperity.
a-la'-fi-hàj, *n.* a shower, exhibitor ; a traitor.
a-la'-fi-la, *n.* a dealer in caps.
a-lā-finj, *n.* one who owns a palace.
a-la-fi-ye-si, *n.* an observer, overseer, superintendent.
a'-la-fo, *n.* a hole, scuttle ; a valley.
a-la'-fo-džu-to (fi odžu). See alaiyesi.
a-la'-fu-ra, *n.* a suspicious person.
a-la-fu-ta, *n.* a purse, a wallet.
a-la-ga (aga), *n.* a dealer in chairs.
a-la-gā-ri, *n.* a saddler.

a-la-gba, *n.* an elder, honorable man, gentleman.
 a-la'-gbà-fò, *n.* a washerwoman.
 a-la-gbà-ra, *n.* a strong man, a great man.
 a-la'-gbà-rò, *n.* a hired farm-servant.
 a-la'-gbà-sò, a-la'-gbà-wi, *n.* a spokesman, an
 advocate.
 a-la'-gbà-še, *n.* a hireling.
 a-la'-gbà-tà, *n.* one who sells on commission.
 a-la'-gbà-tò, *n.* a foster-nurse.
 a-la'-gbà-wi. See alagbàso.
 a-la-gbe, *n.* a beggar.
 a-la'-gbè-dè, *n.* a blacksmith, a smith.
 a-la'-gbo-wo (gbà owò), *n.* a receiver of money.
 a-la'-gbò-raj (gbò ọran), *n.* one who is heedful,
 obedient.
 a-là-gì, *n.* a splitter or sawer of wood.
 a-la-gì-di-gba, *n.* beads manufactured from
 palm-nuts.
 a-la-gì-sa, *n.* a ragged person, a dealer in rags.
 a-la'-he-re, *n.* one who gathers in a crop.
 a-la'-he-sò, *n.* a news-monger, a smatterer.
 a-la'-ho-ro, *n.* one who is desolate.
 a-lai-bò, *n.* which is unsheltered, defenceless.
 a-lai-du-ro, *n.* which is unstable, changeable.
 a-lai-gbe-dè (gbò ede), *n.* one who is ignorant of
 the language, a barbarian.
 a-lai-gbò, a-lai-gbò-raj, *n.* one who will not take
 advice.
 a-lai-gbọ, *n.* one who is unwise.
 a-lai-ko-la, *n.* who is untattooed, uncircumcised.
 a-lai-kò, *n.* one who is untaught, ignorant.
 a-lai-ku, *n.* who is immortal.
 a-lai-là, *n.* who is unsaved, unsafe.
 a-lai-le, *n.* which is weak, unsound.
 a-lai-le-ra, *n.* who is weak or infirm.
 a-lai-lè-re, *n.* which is unprofitable.
 a-lai-le-so, *n.* which is fruitless, barren.
 a-lai-lè-še, *n.* who is sinless, innocent.
 a-lai-lò-gbọ, *n.* one without wisdom.
 a-lai-lò-la, *n.* one without honor.
 a-lai-mo-re, one who is ungrateful.
 a-lai-mo-ye, *n.* one without understanding.
 a-lai-mò, *n.* one who is ignorant.
 a-lai-mò-wé, *n.* one who cannot read.
 a-lai-ní, one who has not, who is needy : še alaíni, to
 need, to want.
 a-lai-ní-ba-bá, *n.* a fatherless child.
 a-lai-ní-gba-gbò, *n.* an unbeliever.
 a-lai-ní-ka-nò, *n.* one without cruelty.
 a-lai-ní-to, *n.* one who has not enough.
 a-lai-ní-ya (iya), *n.* a motherless child.
 a-lai-ní-ye, *n.* which is numberless.
 a-lai-ní-ye-nò (iyè inò), *n.* who is without under-
 standing.
 a-lai-ri-wí, *n.* one without excuse.

a-lai-sí, *n.* one who is absent.
 a-lai-še, *n.* one who fails to do ; which is necessary.
 (Acts 15, 28.)
 a-lai-še, *n.* one who does not sin. (1's. 19, 13.)
 a-lai-šo-do-do, *n.* one who is unrighteous.
 a-lai-šò-tò, *n.* one who does wrong.
 a-lai-tò, *n.* which is not right.
 a-lai-ya, *n.* who has a heart : alaiya mimò, one with
 a clean heart.
 a-lai-ye (li aiye), *n.* the owner of the world : 6 òzaiye
 òzù alaiye lóh, he enjoys the world more than the
 owner of the world (said of extravagant persons).
 a-lai-yè, *n.* which is alive.
 a-lai-ye, *n.* one who is unfit, unworthy.
 a-lai-yò, *n.* one who is hungry. (Luke 6, 11.)
 a-la'-ka-ra, *n.* a baker, a dealer in bread.
 a-la-ka-taj-kpo, *n.* a cross-bow man.
 A-la-ke, *n.* the Lord of Ake, a title of the King
 of Egba, from lí, to have, and Ake, the name of the
 royal city.†
 a-la'-ke-le, *n.* a master weaver.
 a-la'-ke-sí, *n.* a visitor.
 a-la-kọ, *n.* an addition to.
 a-la'-kò-še, *n.* a beginner.
 a-la'-kò-tí, *n.* a disobedient person.
 à-la-kpa, *n.* an old wall.
 a-la'-kpa-run, *n.* a destroyer.
 a-la'-kpa-tà, *n.* a butcher.
 a-la'-kpè-dže, *n.* an invited guest.
 a-la-kpin, *n.* a divider, sharer.
 a-la'-kpo-lu, *n.* an apothecary.
 a-là-la, *n.* which is white.
 a-la-là, *n.* a dreamer.
 a-la-lè, *n.* evening by evening : li alalè, every
 evening.
 a-la'-lu-kpá-yi-dà, *n.* a juggler.
 a-la'-mgba, a-la-mò, *n.* the red-headed lizard.
 a-là-mí, *n.* a spy, a secret observer ; which is spot-
 ted, speckled.
 a-la-mò, *n.* a secret. See alamgba.
 A-la'-mọ-re, *n.* A title of Ọbatala, as the maker of
 the body, lit. the owner of the good clay.
 a-la'-mọ-ri. See alamgba.
 a-la-ní-yan, *n.* one who is anxious.
 a-la'-nta-kun (ta okun), a-laj-sa-sa, *n.* a spider.
 a-là-nu, *n.* one who is merciful.
 a-la-ra (Iiara), *n.* which has a body (Mat. 14, 36),
 a free person.
 a-la'-ra-bá-ra, *n.* kinds, fashions : onírùrù alara
 bara, all sorts of fashions.
 a-la'-rà-dže, *n.* one who buys his provisions.
 a-la'-raj-še, *n.* a helper.
 a-là-re, *n.* one in the right, righteous.
 a-la-ré-ke-ré-ke, *n.* a scoundrel.
 a-la'-rè-kò-dža, *n.* a transgressor.

- a-la'-re-na**, *n.* one employed to engage a bride for another, a go-between.
a-lā-rí, *n.* scarlet.
a-la'-riŋ-dzò, *n.* a strolling dancer.
a-la'-riŋ-ki-ri, *n.* a wanderer, stroller.
a-la-ro, *n.* which is blue.
a-la'-ro-bò, *n.* a petty trader.
a-la'-ro-ko, *n.* a farmer, tiller.
a-la'-ro-ye, *n.* a great talker.
a-lā-rù, *n.* a porter, carrier.
a-la-sa, *n.* a king's messenger.
a-la-sè, *n.* a cook.
a-la'-si-ki, *n.* who is prosperous.
a-la-sq, *n.* a talker.
a-la-sò, *n.* a quarrelsome person.
a-la'-sò-dòŋ, *n.* a flatterer, one who exaggerates.
a-la-ša, *n.* a military officer.
a-la-šá-ra, *n.* a dealer in tobacco or snuff.
a-la'-še-dzù, *n.* who acts extravagantly, a self-willed person.
a-la'-še-ràn, *n.* one whose actions infect others, a leader in evil.
a-la-šò, *n.* one who has cloth, a dealer in cloth.
a-la-ta'-mkpo-ko, *n.* a grasshopper.
a-la'-ti-le-hij, *n.* a sustainer, supporter.
a-la-tòŋ-šè, *n.* one who mends or repairs, a reformer.
a-la-we, *n.* which has cotyledons.
a-lā-we, *n.* a faster, a mourner.
a-la'-wi-i-gbò, *n.* one who is unruly, who refuses advice.
a-la'-wi-i-ye, *n.* one who does not speak intelligibly.
a-l-a'-wi-ká, *n.* a wizard, a witch.
a-la'-wí-ye, *n.* one who explains.
a-la-wò, *n.* a diviner, a priest.
a-la-wò, *n.* a leather or hide dealer;—as an *adj.*, which has color: maḷu alawò kpukpa, a red colored cow; alawò kpikpò, many colored.
a-la'-wò-fij (afij), *n.* one who lives in a palace.
a-la-yāŋ-dze, *n.* a swindler.
a-la-ye, *n.* which is spacious, roomy.
a-lā-ye, *n.* which has life.
a-la'-ye-kan, *n.* a kind of apron.
a-la-yi, *pron.* this.
a-la'-yi-dá-yi-dá, *n.* an artful fellow, a dissemler. (Ps. 26, 4.)
a-le, *n.* a concubine.
a-lò-bu, *n.* one who vilifies, or abuses.
a-le-dzò, *n.* a stranger.
a-le-gba, *n.* a kind of yellow monkey.
a-le-so, which is fruitful.
a-le, *n.* evening.
a-li-ga'-ri-mí, *n.* a spirited horse.
a-li-ká-ma, *n.* wheat.
a-li-ki-ba, *n.* a blanket.
- Al-ku-ra-ni** (Arab.), *n.* the Koran.
a-lò, *n.* a district; flame.
a-lo-ngo, *n.* tight-legged trowsers.
a-lo-re, *n.* a sentinel's stand, a gibbet.
a-lò, *n.* which is inverted; a riddle.
a-lò, *n.* which is bent, grafted: aḷò ina, flame.
a-lò'-lè-kè (ilèkè), *n.* a bead-grinder.
a-lò'-mo-rí (omò ori), *n.* which has a lid.
a-lò-mò, *n.* which is engrafted.
a-lò-ni-lò-wò-gbà (lò ọwò), *n.* an extortioner.
a-lu-ba-ra, *n.* a beetle. See bambam.
a-lù-ba-ta, *n.* a beater of the drum called bata.
a-lu-bò-sa, *n.* an onion.
a-lù-dòŋ-dòŋ, *n.* a beater of the drum called dòŋdòŋ.
a'-lu-fā, *n.* a learned man, religious.
a-lù-fa, *n.* teacher, doctor in religious knowledge.
 See olifá.
a-lu-gba, *n.* a door-facing.
a-lu-gbe, *n.* domesticated honey-bees.
a-lu-gbòŋ, *n.* a likeness, resemblance.
a-lu'-kan-rin, *n.* a crow.
a-lu-ka-sa-fa, *n.* a jacket, tunic.
a-lu-ka-wa-ni, *n.* an agreement.
a-lu-ke-mbu, *n.* a stirrup.
à'-lu-kò, *n.* a cockatoo.
à-lu-kò, *n.* purple. (Acts 16, 14.)
à-lu-kpa'-yi-da, *n.* sleight of hand.
a-lu-mā-ga-dzì, *n.* scissors.
a-lu-se, *n.* a door-lock.
a-lu-sij, *n.* a damage, misfortune.
a-lu'-wa-la, *n.* ablution.
a-lu'-wa-si, *n.* parade, ostentation.
a-mā-lá (mò alá), *n.* an interpreter of dreams.
a'-ma-la, *n.* yam-flour mush.
a-mbò (bò, to peel), a white man, in the Iketu dialect; whence orombo, lit. orange, or the white man's fruit.
a-mbò-sij, **a-mbò'-to-rí**, *adv.* what else?
a-mbu-a, *n.* red ink.
a-mè-wa (mò èwa), *n.* a judge of beauty.
à-mí, *n.* a sign.
a-mí, *n.* a spy.
a-mí-kàn, *n.* a breathing on.
a-mí-kpò, *n.* which is shaken together. (Luke 6, 38.)
ā-mfij, *adv.* amen.
a-mí-sí, *n.* a breathing into.
a-mò-fij (mò ofij), *n.* a lawyer.
a-mo-dzù-ká-ro (mu), *n.* an overlooking, or not observing.
a-mo-re, *n.* a thankful person.
a-mo-ye, *n.* an intelligent person.
a-mò, *n.* a large earthen pot.
à-mò, *n.* potter's clay.

a-mḡ, *n.* which adheres; figuratively, a child.
a-mḡ-dun, *n.* next year: woyi amḡdun m' à tó gbauga-gbauga, by this time next year I shall be a great man.
a-mḡ-dza, *n.* a guess: še amḡdza, to guess.
a-mḡ-dže, *n.* one who tries suspected persons by water ordeal: še amḡdže, to try by water.
a-mḡ-džù, *n.* one who is well informed.
a-mḡ-džù, *n.* drunkenness, a drunkard.
a-mḡ-hun-gbo-gbo, *n.* who is omniscient.
a-mḡ-kpa, a-mḡ-kpa-ra, *n.* drunkenness, a drunkard.
a-mḡ-kpé, *conj.* though, notwithstanding.
a-mḡ-kun, *n.* a lame person, lameness.
a-mḡ-le (mḡ ilé), *n.* a builder.
a-mḡ-lẹ, *n.* a conspirator: še amḡlẹ, to conspire.
a-mḡ-lẹ-kpa, *n.* assassination.
a-mḡ-na, *n.* a guide: še amḡna, to guide, lead.
a-mḡ-na, *n.* booty, plunder.
a-mḡ-ra, *n.* an attendant, body-servant.
a-mḡ-ran, *n.* a wise person.
a-mḡ-še, *n.* wilfulness, obstinacy.
a-mḡ-tán, *n.* pretended knowledge, self-conceit.
a-mḡ-te-kun, *n.* an animal like a leopard.
a-mḡ-te-le, *n.* foreknowledge.
a-mu, *n.* a hook.
ā-mu, *n.* confusion of mind.
a-mu-bá, *n.* means, instrumentality.
a-mu-di, *n.* a cold.
a-mu-kpa-da, *n.* a bringing back, restoration.
a-mu-ran, *n.* a tailor's hook, to hold the cloth while sewing.
a-mu-re, *n.* a girdle; a kind of lizard.
a-mú-roj, *n.* a bleeding at the nose.
a-mu-wáh, *n.* result, effect, issue.
a-mu-ya, *n.* seizure of goods for debt.
a-na, *n.* yesterday: ó de li ana, he came yesterday.
á-na, *n.* a relative by marriage; extension of kindred. (Gen. 30, 20.)
a-na-bí (Arab.), *n.* the prophet: anabí Musa lí o wí, the prophet Moses said.
a-na'-bi-ri (obiri), *n.* a female relative, sister, aunt, &c.
a-na'-kḡn-ri (okḡnri), *n.* a male relative.
a-ní (ní, to say), *adv.* even, yea.
a-nf-a-ní, *n.* doubt, uncertainty.
a-ni-do-kpin (de okpin), *n.* complete possession.
a-nf-ni-la-ra, *n.* an oppressor.
a-ni-tán, *n.* complete possession; used also as a proper name.
a-ni-yan, *n.* anxiety, care.
a-nte-te, *n.* a kind of cricket.
ā-nú, *n.* pity, sorrow: še ānú, to pity; ko ānú, to mourn.
aj-fa-ni, which is easily performed; advantage.

aj-ge-re, *n.* a wooden leg.
a-ra, *n.* an oath.
a-rá, *n.* body, skin, member of a community, self: araló (ilé), family; arílẹ (ilé), citizen; ará mi dá, my body is well, i. e. I am well; ará mi fun, my skin is pale, i. e. I am alarmed; ará kàn mi, my body pains me, i. e. I am grieved, vexed; ará iyara, the body itself, the natural body.
a-rā, *n.* thunder.
a'-ra-ba, *n.* the cotton-tree (bombax).
a-ra'-bi-ri (obiri), *n.* a sister, a female relative.
a-rá-džo (rè adžo), *n.* a traveller.
a-ra'-kḡn-ri, *n.* a male relative.
a-rá-lẹ, *n.* a member of the family.
a-rá-lẹ, a-rá-lu, *n.* a citizen, inhabitant.
a-ra-mḡ-ri, *n.* a tight cap.
a-ran, *n.* intestinal worms.
a-rán, *n.* velvet.
à-ran, *n.* dotage: še àran, to be old and silly.
a-ran-ba-ta, *n.* a shoemaker.
a-ran-kàn, *n.* bitterness, spitefulness.
a-ran-má, *n.* which is infectious.
a-rán-ni-lọ-wḡ, *n.* help, a helper.
a-ran-še, *n.* See the preceding.
a-ran-şḡ, *n.* a sewer, tailor.
a-ran-wu, *n.* a cotton-spinner.
a-ra-ra, *adv.* at all, in the least.
a-ra-rá, *n.* a dwarf.
ā-rá-run, *num.* five by five.
a-rá-tu-bu, *n.* a prisoner, one in jail.
a-ra-yá, *n.* liveliness, cheerfulness, merriment.
ā-re, *n.* a being in the right: emi šé āre, I am right.
a-ré-ke-ré-ke, *n.* dishonesty, knavishness; a trick, a knave: edžo še arékeréke, the serpent was subtle. (Gen. 3, 1.)
a-re-re, *n.* deep silence.
a-re, *n.* eldership, older; as a title of honor, generalissimo: iwḡ šé are mi, you are older than I; are ni i dže, he is the are.
ā-re, *n.* fatigue: are mu mi, I am tired: ó tó are, it is enough to tire one; ará mi di āre tán, I am tired. (1's. 73, 26.)
a-re-ká-kan-fḡ, *n.* a general in the army.
a-re-kú-nda, *n.* deceit.
a-re-lẹ, *n.* abasement, an abaser.
a-re-mḡ (omḡ), *n.* the eldest child, first born.
a-re-ni-dže, *n.* a cheater.
a-re-wa (aré ewa), *n.* a beautiful person.
a-rí, *n.* which is seen: ẹtu mbe li oko? arí, are there any guinea-fowls on the farm? there are: arí! see now!
a-ri-di-dži, *n.* an apparition.
a-ri-fi, *n.* which is hot, heat: inḡ rẹ gbona bi arifi, the inside is hot as heat.
a-ri-hun-gbo-gbo, *n.* all-seeing.

a-riŋ, *n.* the centre, time, previousness: li ariŋ r̄, in the middle of it: mo še ã li ariŋ kân, I did it once; mo ri li ariŋ kân, I have seen it before; li ariŋ ðòlò, in the midst of the rain.

a-riŋ-džo, *n.* a street dancer.

a-riŋ-ko, *n.* a point of time; chance.

a'ri-wá, *n.* the north.

a-ri-wi, *n.* an excuse, extenuation.

a'ri-wo, *n.* noise, uproar.

a-rò, *n.* meditation: še arò, to meditate.

a-rò, *n.* a corn-crib; blue dye.

à-ro, *n.* sorrow, mourning: dà àro, še àro, to mourn, to be sorry.

ã-ro, *n.* restlessness; a hearth, a stand on which pots are set to boil.

a-ro-bò, *n.* petty traffic.

a-rò-dže, *n.* a resting-place on the road.

a-rò-huŋ-gbò-gbo. See arihungbogbo.

a-rò-kân, *n.* painful reflexion, grief, remorse.

a-ro-ko, *n.* the head man of a farm.

a-ro-kpín, *n.* a limit: še arokpín, to limit.

a-ro-le, *n.* an heir.

a-ro-mò-lẹ, *n.* the afternoon.

a-rò-ni-ká, *n.* a witch, wizard.

a-ro-si-lẹ, **a-ro-tẹ-lẹ**, *n.* a thing agreed on, terms, bargain.

a-ro-wa, *n.* now: wá li arowa, come now.

a-ro-ye, *n.* grumbling, disputing: še aroye, to grumble, dispute.

a-ro, *n.* one with withered limbs, a cripple.

a-rò, *n.* the smith's trade.

a-rò, *n.* affliction, lamenting.

a-rò, *n.* a quiver made of a long gourd.

a-ro-kin, *n.* one skilled in traditions.

a-ro-ku-ro, *n.* the latter rains.

a-rò-mò-bí-mò (ó ri omọ), *n.* one who has grand-children.

A-rò-ni (arọ òniá), *n.* the name of a fairy. (It is sculptured as a female, with one arm and one leg, with a long queue and a ball at the end.)

a-ròŋ, *n.* sickness: ni ibule aròŋ, in sickness. (Ps. 41, 3.)

a-ròŋ-kà-ròŋ, *n.* all sorts of diseases; an evil disease.

a-ru-da, *n.* a propitiatory sacrifice.

a-ru-ŋiŋ, *n.* a law-breaker.

a-ru-gbò, *n.* an old person.

a-ru-ḡo-gaŋ, *n.* an iron hook.

a-ru-kòŋ, *n.* a freshet; an extra sacrifice.

a-ruŋ, *num.* five.

a-ruŋ-di-lò-gbòŋ (di li, from ou), *num.* twenty-five.

a-ruŋ-le-lò-ta (le li, loud on), *num.* sixty-five.

a-sa, *n.* a subtle.

a-sá, *n.* a slight, a running.

a-sá! *interj.* excuse me! said by a bailiff when he arrests a man. See asia.

a-sa-di-dže, *n.* a foot-race.

a-sa-ka-ni-lẹ, *n.* the square of a house.

a-sá-lá, *n.* a fleeing for safety, escape, refuge: sa asá-lá, to escape.

a-sá-lẹ, *n.* barrenness: di asá-lẹ, to be barren. (2 Pet. 1, 80.)

a-sân, *n.* emptiness, vanity, naught: asùŋ li orišá, idols are vain or contemptible; li asàn, in vain, without excuse or cause.

a-sân-kòŋ, *n.* full payment.

a-sa-re, *n.* a runner.

a-sá-sẹ, *n.* a cook.

a-sá-siŋ, *n.* a runaway, who forsakes his father to live with another.

a-se, **a-še**, *n.* paint, color.

a-sẹ, *n.* a meal, a feast: asẹ alẹ, a supper; asẹ idžò, a public feast; asẹ iyawo, a wedding-feast; asẹ ówuro, breakfast; asẹ osan, dinner.

a-se-kpòŋ, *n.* a barren woman, used as a term of reproach.

a-se-ndže. See asise.

a-se-nò, *n.* a barren woman.

a-se, *n.* a strainer; the fetid field-rat.

à-se, **ai-sẹ**, *n.* a large door.

a-se-mi (omi), *n.* a water-filter.

a'si-a, *n.* a flog, ensign.

a'si-a! *interj.* excuse me! I beg pardon! alas! See asá.

ã-si-ki, *n.* good luck, success.

a-siŋ, *n.* service.

a-siŋ-gba, *n.* an express, or the sending of things, generally the king's goods, from post to post.

a-siŋ-kpa, *n.* bitter service.

a-siŋ-rin, *n.* the rat called asẹ.

a-siŋ-wiŋ, *n.* a fool, a crazy person, lunacy.

a-si-wa, *n.* the last state. (Luke 11, 26.)

a'si-wa a'si-bò, *adv.* now at last; ndžé, asiwa asibò yi ó de, then, at last he will come.

a-so-fei-ye-dže (fi ciye), *n.* a species of fly (lit. it bears for birds to eat).

a-sò-gbò, *n.* ripe fruit.

a-sò, **a-sò-kpò**, *n.* wrangling: asò babá idžá, wrangling is the father of fighting.

a-sò-dòŋ, *n.* sweet talk, flattery, exaggeration.

à-sò-ni dá-ho-ro, *n.* a desolation.

a-sò-ni-dà-yè, *n.* which quickens, or makes alive.

a-soŋ-kòŋ, *n.* increase, the dropsy.

a-soŋ-mò, *n.* nearness, proximity.

a-sò-ro-dže-dže, **a-sò-ro-ke-le**, *n.* a whisperer, tattler.

a-so-táŋ, *n.* completeness of talking: ó sòrọ li aso táŋ, he spoke perfectly. (Acts 18, 26.)

- a-so-tê-lê**, *n.* prophecy, prediction; so asotêlê, to prophesy, predict. (Acts 19, 6.)
a-so-ti, *n.* an unfinished talking, a failure in making a speech.
a-so-ye, *n.* a reasoning, explaining; so asoye, to convince. (Acts 18, 28.)
a-sù-bô, *n.* a gilding, or plating of metal.
a-sùñ, *n.* state of being asleep.
a-sùñ-ká, *n.* the sleep of death.
a'-sun-wôj, *n.* a wallet, a purse.
à-sá, *n.* a fashion, a custom: àsá lailai, an old custom.
a-sá, *n.* a falcon: asá ni Takpa çiyê, the falcon is the Takpa of birds. (The Takpa or Nufe people are said to be the swiftest of men.)
a-sá, *n.* which is picked up: asá èniá, an idler, loafer, vagabond.
a-sá-dzú, *n.* a forerunner.
a-sá-gbe, *n.* a beggar.
a-sá-gí (igi), *n.* chips.
a-sá-gon, *n.* contention, a contentious person.
a-sá-kpa, *n.* a canopy over a corpse.
a-sá-lê, *n.* barren or worn out land.
a-sá-lê, *n.* evening.
a-saŋ, *n.* food without meat or sauce.
a-sá-ra, *n.* snuff.
a-sá-rô, *n.* mush, porridge.
a-sá-ro, *n.* meditation, meditator: še asáro, to meditate.
a-sá-ti, *n.* a stack or shock.
a-sá-ti, *n.* which is rejected.
a-sá-wa-da, *n.* jesting, playfulness.
a-sá-wi, *n.* a one-sided statement, special pleading.
a-sá-ya, *n.* playfulness, as that of a kitten.
a-sá-yan, *n.* which is selected.
a-še, *n.* an action, actor; paint.
a-še-dzù, *n.* extravagant behavior, excess.
a-še-fe-fe, *n.* who is puffed up, proud.
a-še-hân, *n.* which is done for display.
a-še-kán, *n.* a final action.
a-še-kpe, *n.* which is perfected. (1 Pet. 5, 10.)
a-še-kùñ, *n.* which remains unfinished.
a-še-le-ke, *n.* falseness. (Jas. 1, 21.)
a-še-sá, *n.* disgraceful action.
a-še-tán, *n.* which is completed.
a-še-ti, *n.* a failure. See ašekuy.
a-še-ti-nô, *n.* self-will. (2 Pet. 2, 10.)
a-še, *n.* power, a commandment; good speed, success: aše ikò, authority, commission (Acts 26, 12); iše aše, a mighty work, a miracle; kpà aše, kpa... li aše, to command, decree.
a-še, *n.* which comes to pass, a fulfilment, effect; imprecation; the menses.
a-še-ye-sá-te (eye ate), *n.* a double-dealer, dissembler.
a-še-hij-de (ehin), *n.* an agent.
- a-še-nu** (enu), *n.* an advocate, mediator.
a-šê-še-ko šê, *n.* beginning.
a-ši-kpa-ya, *n.* a revealing, disclosing.
a-ši-ri, *n.* a secret, a discovery.
a-ši-še, *n.* a laborer, a poor man.
a-ši-šo-ri, *n.* a pistol.
a-ši-wê-re, *n.* a fool. (Ps. 31, 33.)
a-šô, *n.* a morose sour look: ašo erin, an elephant feeding alone.
a-šo-dzú. See ašehijde.
a-šo-re, *n.* a well-doer, benefactor.
a-šo-ri, *n.* a tree to which the natives ascribe the propertics of the ipas.
a-šo-rô, *n.* a sharp-pointed knife.
a-šô-ro, *n.* a tormenter, a vindictive person.
a-šô-wo, *n.* a trader, merchant.
a-šo, *n.* cloth, clothing; a watcher: ašo ošo, a fine dress; ašo tita, a curtain.
a-šô, *n.* one who is fierce, a savage.
a-šo-lu (ašo, watcher, ilu, town), *n.* a magistrate.
a-šô-tê, *n.* a revolver, rebel, hater.
a-šu-kan, *n.* a kind of bread.
a-šu-wôj, *n.* a measure.
a-ta, *n.* red pepper.
à-ta, *n.* the ridge of a house.
a'-ta-ba, *n.* a dove: ataba orenkère (rè ni kère), a wild pigeon.
a-tá-dza-tê-ran (ati adza ati eran), *n.* cattle, domestic animals of any kind.
a-ta-fô, *n.* a whitlow.
a-tai-ye-rai-ye, *adv.* everlastingly.
a-ta-lê, *n.* ginger.
a-ta-li-a, *n.* the larger species of Malaghetta pepper.
a-ta'-mkpo-ko, *n.* the thumb.
a-ta'-mọ-ra, *n.* one who is girded with armor, or entangled in business.
a-tá-na-má-na (ati ana mọ ana), *adv.* from yesterday till now.
a-tá-nô, *n.* what is thrown away, refuse.
à-tan, *n.* a dung-hill, dirt-pile.
a-ta-re-re, *n.* a kind of pepper.
a-ta-ri, *n.* the crown of the head.
a-te, *n.* a kind of rat.
a-te, *n.* a hat; bird-lime.
a-te-te, *n.* which is first, youngest.
a-te-te-ba, *n.* which is first met, an outer yard, frontier.
a-te-te-bi, *n.* the first-born.
a-te-te-ko-še, **a-te-te-še**, *n.* the beginning.
a-te, *n.* flatness, insipidity, disgrace.
à-te, *n.* a fan for winnowing.
a-te-gun, *n.* a fresh breeze.
a-te-le, *n.* which follows, the next, the second.
a-tê-lê-bọ-si, *n.* the outer yard.
a-te-lê-hin, *n.* a hunchback.

a-tẹ-lẹ-se, *n.* the sole of the foot.
a-tẹ-lọ-wó, *n.* the palm of the hand: ibu atẹlọwó, a hand-breadth.
a-tẹ-mọ-ra, *n.* long suffering.
a-tẹ-ru, *n.* a slave-dealer.
a-tẹ-wọ-gbà, *n.* which is acceptable.
a-ti, a *prefix*, forming nouns which present the meaning of the verb in a substantive form; as, atiri, seeing; á nwóna atiri, we are trying to see.
a-ti, *prep.* from.
a-ti, *conj.* and; ati—ati, both—and: ati iwọ ati emi, both you and I.
a-tí, *n.* a sheaf.
a'ti-bá, *n.* a meeting, a coincidence; used also as a proper name.
a'ti-ba-ba, *n.* a platform, a scaffold.
a'ti-bò, *n.* a coming, an advent.
a'ti-de, *n.* an arrival.
a-ti-dza-run, from five days till now: emi ò ri í li atizarun, I have not seen him for five days.
a'ti-dze-fa, *n.* from six days till now.
a'ti-dzọ (ati ọdzo), *n.* old times, former days: li atidzọ iwa, from the day of being, i. e. from the beginning of creation.
a-ti-kpi-lẹ-se, *n.* the beginning.
a'ti-kpo, *n.* a resident, sojourner, immigrant: se a'tikpo, to sojourn, emigrate.
a'ti-ma, *auxil. part.* denoting continuance: atima ri, to be seeing.
a-ti-raj-di-raj (iraj de iraj), *n.* genealogy.
a-ti-si-si-yi-lòh, *n.* this time and forward: li atisisiyilòh, henceforth.
a'ti-se-ní-se, *n.* a punishing, punishment.
a'ti-tu'-ni-nò, *n.* a comforting, consolation.
a'ti-wáh, *n.* a coming, arrival, advent.
a'ti-wáh ọ-dzọ, *n.* the east.
a'ti-wọ o-run, *n.* the west.
a-tò, *n.* which straightens, a long-necked gourd.
a-to, a-to-to, *n.* noise: kpà ato, to make a noise; atoto! hear ye! "oh yes!" a word used by the town criers.
a-to-ni-mo-ni (ati oni mọ oni), *n.* morning till now: emi ò dzelun li atonimoni, I have not eaten to-day.
a-to-ri, *n.* reason of, account of: li atori, for the reason that, on account of.
a-tọ, *n.* urine: ilé ato, the bladder.
a-tọ-dzọ-mọ-dzọ, *n.* a long time; which is old: ọyọ atọdzọmọdzọ, an old story.
a-tọ-dzú, *n.* a director.
a-tọ-kọ (tu ọkọ), *n.* a pilot, helmsman.
a-tọ-kun, *n.* a leader, guide.
a-tọ-mọ-ọ-mọ (ati de ọmọ), *n.* generation to generation: yi ò wà li atọmọmọ, it will remain from generation to generation.

a-tọ-na, *n.* a spy, watchman on the road.
a-tọn-bi, a-tun-bi, *n.* regeneration.
a-tọn-dá, *n.* a recreating.
a-tọn-hù, *n.* a repetition of behavior, a fresh sprouting out, revival.
a-tọn-kpa, *n.* a candle.
a-tọn-se, *n.* a mending, amendment.
a-tọn-wi, *n.* repetition of a thing said.
a-tọ-run-wáh (ati ọrun), *n.* which is original.
a-tọ-si, *n.* gonorrhœa.
a-tọ-wọ-ọ-wọ (ati de ọwọ), *n.* tradition. (Mat. 15, 2.)
a-tọ-wọ-wáh, *n.* which originates with oneself.
a-tu-bò-se, *n.* which brings to completion.
a-tu-bò-tán, *n.* termination, end of life.
a-tu-dimò, *n.* a covenant breaker. (Rom. 1, 31.)
a-tu-kọ, *n.* one who rows or paddles a boat.
a-tu-lẹ, *n.* which breaks up the ground, as a plough.
a-tú-ni-ni-nò, *n.* which comforts.
a-tun. For words beginning in atun, see atọn.
á'-u-rọ, *n.* morning.
a-wa, *pron.* we: awa ná, we ourselves; awa tika-ra wa, we ourselves, our own selves; ará wa, ourselves.
a-wá, *n.* a sparrow.
á'-wa-da, a jest, a joke: sê àwada, to jest.
a'-wa-mú, *n.* adherence.
a'-wa-nò, *n.* a waster, spendthrift.
a-wa-ri, *n.* search: wáh li awari í, look till you find it.
a-wa-tán, *n.* perfect or perfected search.
a-wa-ti, *n.* an abandoned search, a failure to find: á wáh á li awatí, we looked but could not find it.
a-wa-wi (wáh wi), *n.* an excuse, subterfuge.
a-wa-ya, *n.* bird shot.
a-wa-yá, *n.* struggling, agony: se awayá, to struggle, to be in agony.
a-we-re, *n.* the yellow monkey.
a-wè-re, *n.* folly, silliness.
a-we, *n.* breadth of cloth; a cotyledon.
à-we, *n.* mourning, a religious fast: gbà àwe, to fast.
a-we-mọ, *n.* a washing clean, purification.
a-we-nò, *n.* which is washed off, a being cleansed or pure.
a-wi-gbọ, *n.* hearsay, plain speaking.
a-wi-ì-da-ke (ì, nol), *n.* incessant talking.
a-wi-ì-gbọ, *n.* one who refuses to receive advice.
a-wi-kpe, *conj.* provided that.
a-wi-máh-yi-hun (ohun), *n.* a true statement, one who speaks without equivocation.
à-wij, *n.* credit: tà lí àwíj, to sell on credit.
a-wi-rij, *n.* a witch, a wizard.
a-wi-si, *n.* which is said in addition, superadded terms.

a-wí-ya-nu (enu), *n.* importunity.
a-wí-ye, *n.* discussion, explanation: sò awíye, to explain, discuss.
a-wo, *n.* any white earthen vessel, a plate; a shock of corn; the black-crested Guinea hen: awo koto, an earthen basin; awo oko, awo kpoko, a dish; awo imi, a chamber-pot; awo aya, a breast-plate.
a-wò, *n.* a secret bargain, a superstitious mystery; a spy-glass: awò odzú, spectacles; awò dídídí, a looking-glass.
a-wo-dí, *n.* a hawk.
a-wò-ko, *n.* colic.
a-wò-ko, *n.* the mocking-bird.
a-wò-ní, *n.* a visitor.
a-wò-ran, *n.* a likeness, resemblance.
a-wo-re, *n.* luck.
a-wò-sé, *n.* a pattern.
a-wò-tán, *n.* a cure: sé awòtán, to cure.
a-wo-tí-rí, *n.* a bow-knot.
a-wo-wo, *n.* a channel.
a-wo-ye, *n.* an inspector, spy.
à-wọ, *n.* a hide, leather; color, outward appearance: àwọ sama, a cloud.
a-wọ-hin, *n.* a bunch-back.
a-wọ-lẹ-hù, *a.* a fabrication, a lie.
a-wọ-lẹ-wọ-rí, *n.* a bowlegged person.
a-wọ-ní, *pron.* those.
a-wọn, *n.* a tortoise; a cunning scamp, a miser, stinginess: sè awọn, to be stingy.
a-wọn, *pron.* they: àwọn ná, awọn tikara wọn, they themselves.
a-wọn, *n.* the tongue.
à-wọn, *n.* a net.
a-wọn-kán, *pron.* certain, some.
a-wọn-şọ, *n.* a weaver.
a-wọn-yí, *pron.* these.
a-wu-dze, *n.* red beans.
a-wu-dzọ, *n.* the midst of a crowd.
a-wu-dzú, *n.* confusion, the midst.
a-ya, *n.* a wife.
à-yá, *n.* a monkey.
a-ya-ba, *n.* a king's wife, a queen.
a-ya-bá, *n.* devoutness. (Acts 17, 17.)
a-ya-ko, *n.* a mother-in-law. (Mat. 10, 35.)
a-ya-kpa, *n.* division, separation.
a-ya-mọ, *n.* a daughter-in-law.
a-ya-mọ-bí, *n.* otherwise, unless.
a-ya-ndze, *n.* a cheat, imposition.
à-yan, *n.* a cockroach, a stench: sé àyan, to stink.
à-yan, *n.* inquisitiveness.
a-yan-fe, *n.* which is chosen, beloved; a friend; in the translation of Scripture, "the elect."
a-yan-ga, *n.* a word of threatening or rebuke to an inferior.
a-yan-sé, *n.* which is made or done to order.

a-yan-sé-bi, *conj.* unless, except.
a-ye, *n.* space, room, opportunity, or time to do a thing; aye agha, a chief room.
a-yé, *n.* breadth of cloth.
à-ye, *n.* the state of being alive, that which is alive.
a-ye-tán, *n.* perfect understanding of a thing. (Acts 24, 22.)
a-yi-dá, *n.* change, cycle of time, a year, next season.
a-yi-da'-yi-da, *n.* much talk, loquaciousness.
a-yi-ka, *n.* a surrounding, circle, halo.
à-yin, *n.* a palm-leaf mat.
a-yin-riñ, *n.* light blue color.
à-yo, *n.* the game called warry.
a-yo, *n.* which is beloved, much prized.
a-yó, *n.* eating to the full, which is full.
a-yọ, *n.* which is selected, chosen.
a-yọ, *n.* joy, happiness: yọ ayọ, to rejoice.
a-yọ-lu-wò (ilu), *n.* a spy sent to survey a town.
a-yọ-mọ, *n.* a daughter-in-law, the wife of a king's son.
a-yọ-ní-wò (eni), *n.* a spy set over one.
a-yọ-sañ, *n.* money paid for sacrifice.
a-yọ-sé, *n.* which is done by stealth.
a-yún, *n.* a going: ayún abò, ayún awáh, going and returning.
à-yun, *n.* a saw, a file.

B

ba, *v.* to come in contact with; and hence, to meet, overtake, find, befall: ba tí rẹ lóh (meet of thee go), go thy way; go about thy business; ba...li òhny (See ba...lòhun); ba...li oruko dze (See ba...lorukodze); ba...ni inọ dze (See ba...ninodze).
bá, *v.* to bring in contact with; and hence, to plait; to strain, to bespeak, to come to the point in speaking about a thing; to fit; to alight; to sit, to lie close or hide; to bend or to be bent: bà àro, to strain potash; mo bà eşin, I bespoke the horse; eiyẹ bà lé oknta, the bird alighted on the rock; ibonj bà, the gun is bent.
ba, *aux. pref.* shall, will, would, should, ought.
bá, *adv.* at all: kí işe ọn bá, it is not he at all.
ba, ba-un, *adv.* so, as: tali o wi ba? (who said so?) iru enia ba wọni, such people as these.
bá, *prep.* with, from, for: bá mi lóh, go with me: ó bá mi rà àdiẹ (he from me bought fowl), he bought a fowl from me; bá mi wá owó (for me find money), find or get money for me.
ba-ba, *n.* copper, red Guinea-corn.
ba-bá, *n.* a father, a master.
bá-ba, *n.* a great matter.

bà-ba, *n.* a small matter : bába lò bába moḷe, a great affair covers up a small affair.
ba-ba-lá (baba nlá), *n.* a grandfather, a patriarch.
ba-bá-là-se (alásè), *n.* a chief cook.
ba-bá-là-wo (aláwò), *n.* a priest of Ifa.
bá-bi-ka, *n.* a popular dance.
bá-bu-dzá (abudzá), *v.* to surprise by coming upon suddenly, to thwart.
ba-da, *n.* a title.
bá... dá-kpò, *v.* to unite with, to join : ó bá wón dakpò, he joined them.
ba-dè, *v.* to suit, agree, fit : ó bade, it suits or fits : bata bá mi lí eṣe dè, the shoe fits me (on the foot).
ba... dze, *v.* to spoil, corrupt, injure, destroy : badze, to be spoiled, &c.
ba... dži-yan, *v.* to contradict : ó ba mi džíyan, he contradicted me.
ba-dzò (edzò), *v.* to get into trouble : mo badzò ni llorin, I got into trouble at llorin.
bá-fin (bá aṣin), *n.* a eunuch, in the King's palace, where there are six of them.
bá-ga-dai' by the staff of Égun! (an oath) : bagadai'! igi dá oloko sá, the tree fell and frightened the farmer, i. e. the mountain labored and brought forth a mouse.
bai, *adv.* See bayi.
báì-báì, *adv.* dimly shining.
bá-ka-ná (bí okan ná), *adv.* alike, the same.
ba-lá-bu-dzá (ba lí abudzá), *v.* See abudzá.
ba-la-ga (bá lé aga), *n.* a youth, a young man nearly grown, an adolescent.
bá-lé (ilé), *n.* a master of a house, landlord.
bá-lè, *v.* to be quiet, contented.
bá-lè (ilè), *n.* a governor.
bá... lè-ru (lí eru), *v.* to frighten.
bá-lo-gun (lí ogun), *n.* a military officer.
bá... lò-huy (lí in òhunn), *v.* to assent to. (Luke 23, 51.)
bá... lo-ru-ko-dze (ba dze lí oruko), *v.* to slander : ó bá mi loruko dze, he slandered me.
ba-lu-wè (ibi aluwè), *n.* a bath-house.
bam-bam, *n.* a beetle, for beating mud floors.
bá-mò, *v.* to consult with.
bá-mò-lè (mò ilè), *v.* to lie in ambush.
ban-gí-dzi. See obangidzi.
bá... ní'-dzam-ba, *v.* to do violence to, to assault.
bá... ni-nò-dze (bá dze ní inò), *v. t.* to vex, to grieve.
bá-o, *adv.* See bawo.
ba-ra, *n.* the vine of the egusi.
bá-ra, *n.* See eḷegbara.
bá... re, *v. t.* to agree, to be friendly.
bá... re-kpò, *v. t.* to be adapted to. (Luke 5, 36.)
bá... rò, *v.* to advise, to consult with.

bá-sa (Egba), *n.* a large room, parlor.
bá... sò, *v.* to quarrel with, scold.
bá... sùn, *v.* to cohabit.
bá... še, *v.* to assist, co-operate ; to suit. (Acts 15, 15.)
ba-ṣò-run. See ibaṣorun.
ba-ta, *n.* hide, leather, shoe, sandal, hoof ; a small box.
bá-ta, *n.* a kind of drum.
ba... tán, *v.* to be akin.
ba... ti, *v.* to miss (as an arrow) : mo bá eiyè ti, I missed the bird.
ba-tu-re (Hansa), *n.* a white man.
bá... wí, *v.* to rebuke, to blame.
ba... wi-dzò (wi edzò), *v.* to judge. (Acts 7, 7.)
ba-wo, *adv.* how ?
bá... wọn, *v.* to blot, besprinkle.
ba-yi, *adv.* so : lóh bayi, go in this or that direction (as the speaker points out).
ba-ni (Egba), *adv.* in the hand : mú okó bani, take a hoe in your hand.
be, an obsolete verb signifying to heap up (?) whence bebe and ebe.
be-be, *n.* the bank or brink of a river or ditch ; a shoal ; a heap : bebe idi, the rump : bebe odzú, the eyebrow.
be-kpe-dze, (ba ekpe dze), *v.* to swear falsely.
bè-re, *v.* to ask, to inquire, to exact : ó bère o, he inquired after you.
bè-se, *n.* a saddle-cloth.
bè, *v.* 1. to cut ; 2. to jump ; 3. to be of a red color ; 4. to be impudent ; 5. formerly, perhaps, to descend, whence abè and bère ; 6. to breed, applied to pigeons and to carnivorous animals only ; 7. to cool by fanning : bè lè (ilè), jump down : bè sánšan, to split into strips : bè... lí ori (See bè... lori).
bè, bè-bè, *v.* to beg, entreat.
bè-he, *adv.* so, thus : bèhe kó, no, not so ; bèhe gègè, even so ; bèhe ní, yes, so it is ; bèhe ní kò, neither.
bè-kpe, *n.* a paupav.
bè-lè, bè-lè-bè-lè, *v.* to be thin, flat.
bè-lè-dze, *adv.* beautifully red or yellow.
bè... lo-ri (lí ori), *v.* to behead.
bè-nde, *n.* a blow with the fist : kò... ni bende, to strike with the fist.
bè-nte, *v.* to be lean, weakly : ará mi bente, I am lean.
bè-re, *n.* a kind of grass (broom-sedge).
bè-rè (bè and rè), *v.* to be low, flat, sloping ; to stoop : kú bèrè, to be lying dead.
bè-rè-sí, *v.* to begin.
bè-rí (ori), *v.* to behead.
bè-ru (ba eru), *v.* to fear.
bè-ru-bè-ru, *v.* to be timid : *adv.* timidly.

bè-ru-ke-ru (eru ki eru), *v.* to fear something; generally employed in the negative: emi ò bèru-keru, I fear nothing.

bè... wò, *v.* to visit, to investigate.

bí, *v.* to ask; to affect, or cause to suffer; bí... lí ebi (See bí... lebi); bí ino dze (See binodze).

bí, *v.* to generate, beget, bear, breed; to follow or succeed.

bí, *v.* to push, vomit: bí kiri, to beat or drift about on the water.

bí, *conj.* if, as, though, whether: bí ònia, like a person; bí oñj, according to law.

bí? a sign of interrogation: ó mò bí? does he know?

bí-ba-wo? *adv.* whereby? in what way? how?

bí-bè, *n.* a begging, supplication.

bí-bí, *n.* birth, a bearing: ó ðekun bí, she left off bearing.

bí-bò, *n.* a covering, which is covered.

bí-bò-mò-lè, *n.* which is overwhelmed. (Ps. 77, 3.)

bí-bu, *n.* a patch in a roof.

bí-è-ni-a, *adv.* humanlike, humanely.

bí-e-ru-kpe, *adv.* like dust.

bí-è-ni-kpè, *adv.* as, as if.

bí-è-ran-ko, *adv.* brutally.

bí'ki-ta, *v.* to notice or regard.

bí-kò-še, **bí-kò-še-kpè**, *conj.* but, except, unless.

bí-là, *v.* to open a way or give place in a crowd.

bí... le-bí (lí ebi), *v.* to ask, inquire: bí oñ lebi, ask him.

bí... lè-re (lí èrè), *v.* to question, interrogate.

bí... lé-dzò (lí èdzo), *v.* to arraign, interrogate a person in a court.

bí... lò-hun (lí ðhun), *v.* to reproach for a fault.

bí-lù, *v.* to beat against, as waves.

bí-mò (òmò), *v.* to beget, or bear a child.

bí-na-bí-na, *n.* abusive language.

bí... nf-nò (inó), *v.* to grieve, to vex.

bí-nò (inó), *v.* to be angry.

bí-nò-dze, *v.* to feel grieved or vexed.

bí-ò-su-mà-rè (òsunarc), *adv.* in the form of a semicircle.

bí-ò-kon-ri, *adv.* manly.

bí-ò-lò-run, *adv.* godlike, godly.

bí-ri, a suffix, *contr.* from óbiri, a woman: omó-biri, a girl.

bí-rí, *v.* to be small (applied to land).

bí-rí, *v.* to be large (applied to land).

bí-ri, bí-ri-bí-ri, *n.* darkness;—*adv.* darkly, very dark.

bí-ri-ga-mí, *n.* a haversack, satchel.

bí-ri-ko-to, *v.* to be small, as a hole in the ground: dá ilio birikoto, dig a small hole.

bí-sí, *v.* to increase or multiply.

bí... tí, *adv.* and *pron.* as, how, what, that: še bí tí ònia, do like a person; bí emi ó tí še? how or

what shall I do? emi bí tí Egba, a mat like those of the Egbas; bí tí inó rē, according to your mind or will; ní bí tí, inasmuch as.

bí... tí-lè, *conj.* though, if even: bí á tílè sòtè sí í, though we have rebelled against him.

bí-ye-sí (bù), to respect or reverence the great. See kabiyesi.

bò, *v.* to peel, to strip off, to bray like a he-goat.

bò, *v.* to cover, to be full of leaves, to overwhelm.

bò-bo, *adv.* very or intensely (hot).

bò-de (ba odo), *n.* a custom-house.

bò-dzo (bí òdzo), *adv.* like a coward, cowardly.

bò-dzu-mò (ba odzu), *v.* to chide, reproach.

bò-dzu-to, bò-dzu-wò, *v.* to look upon, to care for, to see after.

bò-dzu-wò (bù), *v.* to look at, visit.

bò-dzu-yàn (ba odzu), *v.* to blind with brightness: òrun bodzuyan, the sun is blinding.

bò-lè (ilè), *v.* to rob a house, to confiscate.

bò-lè, *v.* to cover or thatch a house.

bò-le-bò-le, *n.* a robber.

bò-le-bò-le, *n.* a thatcher.

bò-lè-še-bí, bò-lè-še-kpè (bí), *adv.* if possible.

bò-lè (ilè), *v.* to cover the ground; to flourish.

bò-lo-bò-lo, *n.* a honey-making gnat without sting.

bò-mi-wòñ (bù omi), *v.* to sprinkle with water.

bò-mò, the white-grained Guinea-corn (a species of Sorghum).

bò... mò-lè, *v.* to overwhelm.

bò-ní (Egba), *v.* to be large.

bò-ní-bò-ní, *v.* to be very large.

bò-ra (ara), *v.* to cover, to cover the body.

bò-ri (bò ori), *v.* to surpass, to prevail, to cover the head or top.

bò-ro, *very near* (as to distance). See gbòro.

bò-rú-kò... dze (ba orukò dze), *v.* to slander.

bò-tí, *v.* to tear half-way open, to half strip.

bò-tí-bò-tí, *adv.* foolishly (talking), sillily.

bò-yun (abi oyun), *v.* to be pregnant.

bò, *v.* 1. to drop (as of a solid); hence 2. to slip or slide; 3. to take down, as from a peg; 4. to take off one's clothes; 5. to feed; hence, 6. to worship; 7. to wash any part of the body, as the face; 8. to beat, as a mud-floor; 8. to empty (Ps. 10, 8): ọran ná bọ lí ọwọ mí, that business failed in (lit. fell out of) my hands; mo bọ lí ewu ná, I escaped (lit. slipped out of) that danger.

bò, *v.* 1. to insert; 2. to pierce; to boil or cook in water; 4. to put on a garment; 5. to shake (lit. insert) hands; 6. to enter or go out of a house; 7. to arrive, to be in the act of coming: bọ lè, get down; sokólè bọ, come down; ó ntutu bọ, it is getting wet; nwoj sare bọ, they are coming on a run; ó mbọ wáh, he is coming.

bò-dzu (òdzu), *v.* to wash the face.

bọ-gi (igi), *v.* to worship a tree or image.
bọ-ki-ni, *n.* a neat person, dandy.
bọ-lá (lù olá), *v.* to honor, reverence.
bọ-lẹ, *v.* to fall down, as when struck. (Ps. 89, 23.)
bọ-lọ-gi, *n.* a kind of lily.
bọ-lọ-dzọ, *adv.* beautifully (black). Comp. *beledže*.
bọ...lọ-wọ (lì ọwọ), *v.* to shake hands.
bọ-mi (omi), *v.* to put into water, to dip.
bọn, *v.* to be filthy, slovenly.
bọ-ni, *n.* a kind of acacia used by tanners.
bọ-ra (ará), *v.* to wash oneself.
bọ-ru-kọ-nu, *n.* a stupid spendthrift; wastefulness.
bọ-se (bò ẹsẹ), *v.* to go aside on a call of nature.
bọ...si-kpo (ikpo), *v.* to restore one to his place or position.
bọ-wáh, *v.* to be in the act of coming: á ñbọwáh, we are coming (now on the road).
bọ-wọ (bù ọwọ), *v.* to divide.
bọ-wọ, *v.* to shake hands.
bọ-wọ (bù ọwọ), *v.* to honor.
bọ-wọ-lọ-wọ, *adv.* fancifully made.
bọ-ya (bi ó yà), *adv.* perhaps.
bú, *v.* to cry aloud, to abuse; to stink; to take a portion of.
bù, *v.* 1. to give; 2. to cut or break, as bread; 3. to cross each other, as roads; 4. to roast in the ashes; 5. to moulder or rot: bù mi lì omi, give me some water.
bu-ba (ibi ibà), *n.* a hiding-place.
bu-bu-ru (buru), *n.* badness: ènia buburu, a bad person.
bu-do (ibi idó), *n.* a camping-place.
bù-dza (ọdza), to entrust a thing to one to be sold.
bù-dza (bá idza), a reaching the road; see *dza*, *v.* to make a near cut to a place, to anticipate what one is about to say.
bu-dzẹ, *n.* a fruit used for making black ornamental marks on the skin.
bu-dzẹ (ibi idzẹ), *n.* a feeding-place, a stall.
bù...dze, *v.* to bite.
bù...ka (ika), *v.* to surround, encompass.
bù...ká, *v.* to distribute around: mo bù owó ká wọn, I gave them money all round.
bu...kà, *v.* to set on the top of: bu ikòkò kà ina, set the pot on the fire.
bù-ke (bù òke), *v.* to swell, to rise in a hump or hillock.
bù-kọj, *v.* to add to, to fill up; to bless.
bù-kùj, *v.* to be deficient, to despise, to make little of. (Jas. 2, 6.)
bù-là, *v.* to mix, to adulterate.
bù...lá-bu-ka (lì abuka), *v.* to surround.
bù...la-džan (alžan), *v.* to cut into bits, to mince.
bu-le', *v.* to add to, to patch.

bù...lù, *v.* to overwhelm, to smite with, to affect with: ó bù ifọdzu lù wọn, he smote them with blindness.

bù-mọ, *v.* to add to; to hide or conceal itself about one, as vermin: ó bù mọ iyin, it hides about or cleaves to you.

bùn, for *bù*, *v.* to give.

bu-ra (ara), *v.* to swear, to take an oath.

bu-ru, *v.* to be bad, ugly.

bu-ru-bu-ru, *adv.* badly, closely (hiding).

bu-ru-ku, *adv.* intensely, very.

Bu-ru-ká, *n.* an evil deity who causes some kinds of fits, and produces death in small-pox.

bù-sí, *v.* to add to, to bless, to offer sacrifice to.

bu-só (ibi isó), *v.* a tying-place for animals, a stall.

bu-sọ (ibi isọ), *n.* a resting-place, where travellers put down their loads.

bu-sù, *n.* loose, heavy sand.

bu-sùj (ibi isùj), *n.* a sleeping-place, a bedstead.

bù...sán, *v.* to bite severely, as a dog: o bù mi sán, he bit me.

bù...wọn, *v.* to sprinkle with anything.

bù-yin (iyin), *v.* to praise, to honor: mo bùyin fu ọ, I praise thee.

D

dá, *v.* 1. to make, create.

2. to assault, strike: ó dá mi lì igi, he struck me with a stick.

3. to flash: manamana dá, the lightning flashes.

4. to break or be broken: ó dá mi lì ẹsẹ, he broke my foot, or leg: ẹsẹ mi dá, my foot is broken.

5. to cease: ọdzo dá, the rain ceases.

6. to be dry, without rain: ọdà dá lì ọdún ni, there is a drought (lit. it droughts) this year.

7. to give: dá ẹkọ fu adza, give mush to the dog: dá owó, to contribute money.

8. to prepare or buy: dá ẹkọ, buy mush, i. e. have it prepared.

9. to pay: dá owó ọdẹ, to pay a tax.

10. to prescribe: talí o dá ẹbọ ná? who prescribed that sacrifice?

11. to speak or mention: máh ẹ dá orukọ wẹ, do not mention his name.

12. to conquer, whip: kanakana dá kanakana, a crow whipped a crow.

13. to be intelligent, give promise: ọmọ ná dá, that child is intelligent.

14. to be sound: arí mí dá, my body is sound.

15. to overturn, as a stone or anything heavy: dá...lì aga. See *dá...laga*.

dá, *v.* 1. to pour out.

2. to overturn, capsize, as a boat.

3. to remove a thing from one position to another.
 4. to betray, disappoint.
 5. to purify, as silver.
 6. to be acceptable, as a sacrifice.
 7. to turn about, change the position of.
 8. to offer a sacrifice.
 9. to become.
 10. to bend or be bent, as a sword.
 11. to attend to, as cattle.
- da, *adv.* where? iwe mi da? where is my book?
 da-ba (aba), *v.* to think of, expect, suppose.
 dā-ba, *v.* to be flat, as a roof.
 da-bí, *v.* to resemble, be like, to act the part of.
 da-bò-bò (abò bò), *v.* to shelter, defend, protect.
 da-da, *n.* which is nude.
 Da-da, *n.* one of the Yoruba idols, a proper name of a person.
 da...du-ro, *v.* to detain.
 da-dza, *v.* to screw up.
 da-dzi, *v.* to arise before day.
 da-dzò-ko, *v.* to sit, to sit steadily or long.
 da-dzò, *v.* to appoint a day for any purpose; to judge.
 da-dzu, *v.* to be evitent, confident, impudent.
 da-dzu-da-dzu, *adv.* evidently, confidently, certainly.
 dá...fò, *v.* to invent a report or story.
 da-gba (àgba), *v.* to grow, to be developed.
 da-gbe-re (dà), *v.* to bid farewell.
 da-gbe-se, *v.* to run in debt.
 da-gbo (ogbo), *v.* to grow old.
 da-gin, *n.* the back of a furnace or chimney.
 da...gi-ri, *v.* to frighten, to drive people together, as when they collect from fear of war.
 da-guj (oguj), *v.* to collect into a pool or pond.
 da'ho-ro, *v.* to desolate or destroy a town.
 dā-huj (dā òhuj), *v.* to reply, answer.
 dai-ya-fo (lò aiya), *v.* to frighten, discourage.
 dá-ka-ka, *v.* to squat.
 dá-kàn, *v.* to strike against.
 da-ke, *v.* to be silent, to cease; figuratively, to be dead.
 dá-ke-dzè, dá-ke-rò-rò, *v.* to be calm, as the wind.
 da-ko-dza, *v.* to step over, pass by, to neglect.
 da-kpa-ra, *v.* to be hard, as flint; to canker, to rust.
 da...kpè, *v.* to contract a word.
 da...kpò, da...kpò-mò, *v.* to adhere, join, mingle.
 da-kú, *v.* to faint, to be at the point of death.
 da-kuj, *v.* to withhold.
 dā-kuj, *v.* to reel thread.
 dá...ku-ro, *v.* to release, acquit; to depart.
 dá...la-da-dzù (li), *v.* to over-drive, as a flock.
 dá...la-ga (li aga), *v.* to weary.
- dá...la-gbe-de-me-dzi, *v.* to cut in two, to divide.
 da...la-mu (li), *v.* to confuse, confound.
 da...la-ra (li), *v.* to disappoint, to annoy.
 da...la'ra-ya, *v.* to entice, to cheer.
 da...lā-re, *v.* to justify.
 da...lā-wij, *v.* to trust, to sell to one credit.
 da...lā-ye, *v.* to give life to, to quicken.
 da...lè, *v.* to put down.
 da...lè-kuj, *v.* to prevent, forbid.
 da...lè-sè (li), *v.* to cripple the foot or leg.
 da...lè-sè, *v.* to convict of sin.
 da...lī-da, *v.* to strike with a sword.
 da...lò-dzo, *v.* to frighten, intimidate.
 da...lò-dzù, *v.* to make one certain: ó da mi lodzù, I am sure of it.
 dā...lò-dzù, *v.* to disappoint.
 da...lo-go, *v.* to glorify.
 da...lò-huj, *v.* to answer, reply.
 da...lo-ro, *v.* to torment, torture.
 da...lu, *v.* to bore.
 da...lú, *v.* to mingle, adulterate.
 da-lù, *v.* to fall upon: okuta dalù kpa à, a stone fell on and killed him.
 da...me-dzi (medzi), *v.* to cut or divide into two parts. So, da...mèta, da...mèrin, &c., to divide into three parts, four parts, &c.
 da...mò, *v.* to cause to adhere, to strike against, to impute: kò da èsè mò wa, he does not impute sin to us: kò da èsè mò Adama, he did not create Adam a sinner.
 da-mò, *v.* to hold an erroneous opinion, to invent a doctrine, to be a heretic.
 da-mò-dza (amòdza), *v.* to guess.
 da-mò-raj (òraj), *v.* to purpose, advise.
 dā-mu (āmu), *v.* to perplex, confuse; to be confounded, to be damned.
 da'mu-re (amure), *v.* to gird.
 da-na (ina), *v.* to make or kindle a fire.
 da...ni-da (dā ni idā), *v.* to be or to make according to nature, to look or be natural.
 da-ni...da-gi-ri, *v.* to frighten people, as war, which drives them together.
 da...ni-de (ide), *v.* to redeem, set free.
 da...ni-dza (idza), *v.* to throw in wrestling.
 da...ni-dzi (idzi), *v.* to frighten, surprise.
 da...ni-gi (igí), *v.* to beat with a stick, to cudgel.
 da...ní-kpa (ikpa), *v.* to cause division or strife, to separate or alienate friends.
 da-ni...lò-dzù (odzù), *v.* to make one certain: ó danilodzù, we are certain of it, confident as to its truth.
 da...nò, *v.* to pour out, throw away, waste: nwọj sọwọ danò loni, they failed in their negotiation today.

dá-nú (ɛnu), *v.* to be fluent, talkative.
 dan, *v.* to be smooth, bright, as metal; to be slippery, as a road; to polish; to be good, all right.
 ɔ̄ an, a sign of interrogation: iwɔ̄ mɔ̄ dan? do you know?
 dan-dan, *n.* a tale mirror.
 dan-ka-re, *n.* soldiers.
 dan...wò, *v.* to try, to tempt; to consult an oracle or a priest, to divine.
 da-ra (lá ara), *v.* to be good, handsome, pretty.
 dà-ra (ára), *v.* to introduce a new fashion or custom.
 da-ra-da-ra, *n.* goodness;—*adv.* in a good manner, well.
 dà-raj (ɔ̄ran), *v.* to transgress, to commit a fault.
 da-ràn-da-ràn, *n.* a cattle-driver, herdsman.
 da'-ra-ya (araya), *v.* to make or to be cheerful, merry.
 da-ri (lá ori), *v.* to lead, to drive.
 da-ri...dži (lari and dzi, *fv.*), *v.* to forgive.
 da-ri...džɔ, *v.* to assemble, to meet.
 da-ro (aró), *v.* to dye blue.
 dà-ro (áro), *v.* to grieve, to feel uneasy about a thing.
 da-ru, *v.* to stir up, confuse things; to be mingled in a confused manner.
 da-ru-da-kpò, da-ru-kpò, *v.* to mix or be mixed confusedly.
 da-ru-da-ru, *adv.* entirely; ikuku bo ilu mọlẹ darudaru, the fog hides the town entirely.
 da-ru-gbò (di arugbò), *v.* to grow or be old.
 da-sá, *n.* a small covered dish.
 dā-sa, *v.* to live down, to fail and stop.
 da-se (ɛse), *v.* to stop going to a place; to cease, leave off.
 da...sí, *v.* to intermingle; to reserve, to spare.
 da...sí-lẹ (ilẹ), *v.* to cause a thing, to introduce; to reserve, spare, discharge.
 da...sò, *v.* to talk about, mention.
 da sá, *v.* to presume, dare. (Acts 5, 13.)
 dā-sa, *v.* to introduce a custom or fashion.
 da...še, *v.* to fail, to risk. (Ps. 12, 1.)
 da-šo-bò (ašo), *v.* to clothe, cover.
 dau-du, *n.* eldest son of a prince, the heir apparent.
 da-wij (áwín), *n.* to pay by instalments.
 dá...wò, *v.* to consult an oracle, to inquire of the gods.
 da-wò (owò), *v.* to contribute, to pay: dawó ɛsu, to pay into the savings club; dawó lẹ, to pay down.
 da-wò-kpò (owò), *v.* to combine in a scheme.
 da-wò-lẹ (owò), *v.* to lay hands on, undertake.
 dá-wú (owú), *v.* to reel or wind thread.
 dá-ye-lé. See dijele.
 de, *v.* to come to, arrive at, come upon, to extend to; to cover with a lid; to wear, as a hat: bá mi de olúú òna, go with me to the gate; de...li ale (see de...lale).

de, *prep.* for, ready for, to.
 dè, *v.* to bind, shackle: dè mọ, to bind to.
 de-bi-kpa (lá ebí), *v. l.* to stare.
 de-de (Egba), *pron.* all, every.
 dè-dè, *adv.* rightly, properly.
 de-hùn (òhun), *v.* to conclude a bargain.
 de-ke (dá), *v.* to invent or tell a lie.
 de...la-de (li ale), *v.* to crown.
 de...lò-na (òna), *v.* to withstand, oppose.
 de...mò-lẹ, *v.* to cover up.
 dè-na (òna), *v.* to stop the road, to obstruct: dèna de, to lie in wait for.
 de-ri (ori), *v.* to cover the head.
 de-ti. See diti.
 de-wò (lá ɛwò), *v.* to prohibit on religious grounds.
 de, *v.* to hunt, chase, to set a trap: de sí, to set a dog after; de sílẹ, to lay a snare.
 dè, *v.* to be soft, ripe, loose, slack; to grow negligent, to mitigate, as pain: dè...li ara (see dè...lara).
 de-bi (lá ebí), *v.* to pronounce guilty, to condemn.
 dè-dè, *adv.* near by, at hand: dèdò sú dèdè, the clouds are dark and low, i. e. near the earth.
 de-dò (òlò), *v.* to fish with a net.
 de-dza (ɛdza), *v.* to fish.
 de-dza' (ažda), *v.* to hunt with a dog.
 de-džú (odžú), *n.* coarse cloth.
 de-gbe, *v.* to lie in the woods or prairies.
 de-hij (Egba), *adv.* again, more: máh dehin šeke, don't lie any more.
 de-kun (dá ɛkun), *v.* to cease, to yield: dèkun! forbear! desist! let me alone!
 de-kun* (òkun), *v.* to set a rope snare.
 de...la-ra (li ará), *v.* to relieve, to make comfortable.
 dè-nó (ínó), *v.* to fast.
 dèj-gé, *n.* soft mush.
 de-ra (ará), *v.* to be negligent, slothful.
 de-re-dè-re, *adv.* loosely hanging.
 de-ru (eru), *v.* to be terrible: ó dèru sí mi, it is terrible to me.
 de-ru (di), *v.* to bind or pack goods.
 de-ru-ba (eru), *v.* to make afraid.
 de-se (ɛse), *v.* to sticken the puer, stop.
 dè-še (lá ɛše), *v.* to sin.
 de-ti (eti), *v.* to incline the ear, to listen, hearken. dèti sílẹ, to listen secretly or attentively.
 dè-ti, *v.* to be difficult, to fail in an attempt.
 de...wò. See danwò.
 di, *v.* to bind, tie, close up; to wreath; to require; to chew tobacco; to be entangled, complicated; to coagulate, to grow hard on cooling, as tallow; to be deficient, to lack: ó di odži, it lacks two cowries; di...li odžu (see di...lodžu). See dij.

- dī**, *v.* to be, become, to be changed : ó nll arugbó lgh, he is growing old ; di òfó, to disappear, vanish ; tifi ó ti di isisiyi, till now (lit. till it made to become now) ; ó di alá, wait till to-morrow (lit. till it becomes to-morrow) ; ó di idzó kedži nwọj lgh, they went the next day.
- di** (dì), *prep.* from, employed in composition : medži di li ogun (two from on twenty), eighteen.
- dī-ba-dže**, *v.* to spoil, be corrupted.
- dī-bi**. See dā-bi.
- dī-bo** (dà), *v.* to cast lots.
- dī-da**, *n.* which is made, which is healthy : dida gbi, condemnation ; dida ará, health ; še dida ará, to heal.
- dī-de**, *v.* to arise.
- dī-di**, *n.* which is bound, wreathed. See dī.
- dī-dī**, *n.* the game of drafts.
- dī-dzá**, *v.* to cause war, to become a fight.
- dī-dže**, *v.* to complete, to emulate.
- dī-dži**, *v.* to be afraid, to be disappointed, mistaken : mo didži babá ni ni, I thought it was my father, but was mistaken.
- dī-džu**, *v.* to be entangled.
- dī-ē**, *n.* a little, a few, some.
- dī...ē-lẹ-sẹ mu-lẹ or ni-lẹ**, *v.* to establish, confirm.
- dī-fẹ**, *v.* to bloom, to blossom.
- dī-gba-ro**, *v.* to remain standing, to wait.
- dī-gba-ti**, *conj.* till.
- dī-gbo-še**, *adv.* by and by.
- dī-gi**, *n.* a glass, a mirror.
- dī-go**, *n.* a breech-cloth.
- dī...ha'-mọ-ra**, *v.* to gird.
- dī...ka-lẹ**, *v.* to establish, confirm.
- dī-kpa-ra**, *v.* See dakpara.
- dī...la'-mu-re** (li), *v.* to gird.
- dī...le-ti** (li), *v.* to deafen, to refuse to hear.
- dī-lẹ**, *v.* to be dilatory, at leisure.
- dī...lẹ-ru** (li), *v.* to enslave.
- dī...lẹ-wọj** (li), *v.* to chain.
- dī-lo-dzá** (li), *v.* to tangle, to blindfold.
- dī-lu**, *v.* to congeal.
- dī-mọ**, *v.* to fasten on, to cleave or cling to.
- dī-mọ**, *v.* to agree upon, covenant.
- dī-mu**, *v.* to hold, uphold, lay hold on.
- dī-na**, *v.* to block up the road, impede, hinder.
- dī-nf-bo** (ni), *v.* to grasp, enclose in the hand.
- dī-nf-gbe-sij** (ni), *v.* to take captive.
- dij, di**, *v.* to bake, parch, fry.
- dij-ka-ra** (akara), *v.* to bake bread.
- dī-ri-ki-si**, *v.* to conspire, plot against.
- dī-roj** (iroj), *v.* to plait the hair.
- dī'-si-si-yi**, *adv.* till now, hitherto.
- dī-ti** (eti), *v.* to be deaf.
- dī-wó**, *v.* to be in a strait or difficulty.
- dī-ye-le**, *v.* to set a price on, charge for.
- dó**, *v.* to encamp, to inhabit (an indecent word) : dó ti ká, to encamp against, to besiege.
- dó-do**, *n.* the nave ; in the Iketu dialect, a room in a house.
- dó-dó, dó-dó-dó**, *n.* truth, righteousness : še dodo-do, to be upright.
- dó-dzu-bọ-lẹ**, *v.* to turn the face towards the ground, to hang down the head.
- dó-dzu-de**, *v.* to turn upside down.
- dó-dzu-kò-dó**, *v.* to hang down the head, to meditate, ponder.
- dó-dzu-ti**, *v.* to make ashamed, to put to shame, to abash.
- dó-gi-ri**, *v.* to gallop.
- dó-go-ti**, *v.* to dun.
- dó-gun**, *v.* to rust.
- dom-dom-ai-ye** (dọj dọj), *n.* comforts, luxuries of life.
- dó-ri-kò-dó** (ori). See dodzakòdó.
- dọ-ba-lẹ** (dà ibulẹ), *v.* to prostrate, to lie flat.
- dọ-de**, *n.* a raven.
- dọ-dọ**, *adv.* much shrivelled or cool.
- dọ-gba**, *v.* to be equal, right, straight.
- dọ-kọ-du-ro** (dọkọ), *v.* to anchor.
- dọj**, *v.* to cry, as any beast or bird.
- dọj**, *v.* to be sweet, pleasant ; to affect pleasantly or painfully : inọ ni dọj, my mind is pleasant, i. e. I am pleased ; inọ dọj mi, my belly aches or pains me ; inọ mi dọj sí i, I am pleased with him (Mat. 3, 17) ; ki li ọ dọj ọ, what ails thee.
- dọj-dọj**, *n.* a kind of drum.
- dọj-mọ**, *v. t.* to please.
- dú**, *v.* to be black.
- dú**, *v.* to deny, to refuse, to grasp : ó dù mi li owó, he refused me money.
- dú-bu-lẹ**, *v.* to lie down : dubulẹ àrọj, to be sick a-bed.
- dú-du**, *n.* blackness.
- dú-dže**, *v.* See didže.
- dú-gbo-lu**, *n.* a stumbling-block.
- dú-kẹ-lu-kẹ**, *adv.* merrily.
- dú-kpe**, *v.* to thank.
- dú-lu-mọ**, *v.* to slander.
- dúnj, dùnj**. See dọj, dọj.
- dú-ra**, *v.* to make an effort to prevent falling when one stumbles.
- dú-ro**, *v.* to stand, to wait, stay : duro ti, duro tiri sí, to stand by, wait on ; mu...duro, to make or cause to stand.
- dú-ru**, *n.* a violin, a guitar : lù dùru, to play the violin ; lī odzá ókunj dùrn, on the harp. (Ps. 49, 4.)
- du-ru-du-ru**, *n.* greatness (applied to the works of God).

dža, *v.* to jerk, to break, as a rope; to break loose, as a horse; to snatch, to drop from aloft, to find out a thing; to reach the road.

džá, *prep.* through, throughout a place.

džá, *v.* to fight, quarrel, strive; to rage, as a storm: džá òlè, to steal; nwọj džá à tó bálẹ lólh, they dragged him to the governor; džá...lì òlè (see džá...lòlè).

dža-bẹ, *v.* to escape by struggling.

dža-de, *v.* to go out;—*adv.* out, forth: džade! turn out!

džá-fa-ra (lẹ́ẹ́ afara), *v.* to be slow, to loiter.

džá-gan, *v.* to be rough, harsh.

džá-gbá, *v.* to perform a job (applied to pawn-servants, who must do jobs for the pawnee, when called on).

džá-gba-džá-gba, *adv.* confusedly.

dža-gi-di-dža-gan, *n.* a low, mean fellow (Acts 17, 5); base conduct.

džá-gu-dá-kpa-li, *adv.* on any account.

džá-gu-du, *v.* to struggle together, tug at each other.

dža-gun, *v.* to fight, in war;—*n.* a title.

džá-hij-dža-hij, *adv.* through, from side to side.

džai-ye (džẹ), *v.* to enjoy the world, to act extravagantly.

dža-ka, *n.* a woy.

dža-ka-di, *v.* to wrestle.

dža'-ka-re, *n.* soldiers.

dža-ko-ro, *v.* to contradict, oppose.

dža'-ku-mó, *n.* a leopard.

džá-kun (ókun), *v.* to break a rope, to break loose.

Dží-ku-ta (okuta), *n.* the stone-easter, a name of Sango, the god of thunder.

dža-lá, *v.* to escape by fighting, to fight one's way through.

džá-le (òlè), *v.* to steal, pilfer.

džá...le-ka-na (li ekana), *v.* to pinch, to scratch.

džá-lẹ (lílẹ́), *v.* to go through the country;—*adv.* to the ground (see koro); flutly, utterly refusing.

dža-lẹ, džá-lẹ-džá-lẹ, *adv.* thoroughly.

dža...lẹ-nu (li enu), *v.* to wean.

dža...lò-le (li òlè), *v.* to steal from.

džá-lù, *v.* to attack by surprise.

džá-ma, *n.* a soldier.

dža-mba, *n.* damage, violence: ba ni džamba, to assault, to do violence to.

dža-na (òna), *v.* to reach the road, to be reasonable in one's position.

dža...ni-de (ni lide), *v.* to release one by force.

dža...ni-ko-ro (ikoro), *v.* to contradict.

dža...ni-yan (iyau), *v.* to dispute with.

dža-nu (enu), *v.* to boast.

džan-džan, *adv.* intensely hot: oru mú džan-džan, the sun is very hot.

dža-ngbo-ro, *n.* the kuce-cap.

dža-nká-wọ, *n.* *soot.*

dža-re, *v.* to be right; to justify, to be justified; if you please.

dža-si, *v.* to reach, arrive at, drop into; to be or act as: džasi bi, to be according to.

dža...ti-lẹ (ti ilẹ́), *v.* to cast down.

dže-gbe-dže-gbe, *adv.* childishly, foolishly.

džé-ni-a-džé-ni-a, *n.* a cannibal.

džé-re, *v.* to gain, desecrate, earn.

džé-re-džé-re, *adv.* sparklingly, dazzlingly.

džẹ, *v.* to be, to act in a capacity: bi (Ọlọrun) ba džẹ kpẹlu mi, if God shall be with me.

džẹ, *v.* to cut, to consume; to owe; to deserve, to gain, earn, get; to perform, to make; to reply, to deliver (a message); to let or permit, to be willing, will, would; to mean, as a word, to be named: džẹ fu, to consent to (Gen. 34, 23); džẹ...li ẹri (see džẹ...lẹri).

džẹ, džẹ-džẹ, *adv.* quietly, still.

džẹ-bi (ebi), *v.* to be guilty, to be condemned.

džẹ-di-ẹ-di-ẹ, *n.* a kind of cockatoo, so called from its cry.

džẹ-džẹ-džẹ, *adv.* very gently, quietly.

džẹ...gbe-se. See džigbese.

džẹ-gú-du-ra-gú-du, *n.* a vagabond, a loafer.

džẹ-hun (ohun), *v.* to cut: džẹhun lara (li ará), to feed on. (1's. 49, 14.)

džẹ-ka, *v.* to snore.

džẹ-la-ra (li ari), *v.* to feed on.

džẹ-lẹ-ri (li ẹri), *v.* to bear witness.

džẹ-lọ-wẹ (li ọwẹ), *v.* to aid in work.

džẹ-ni-ya (iya), *v.* to punish, afflict.

džé-ri, *v.* See džẹ-leri.

džẹ-run, *v.* to derour.

džẹ-un, *v.* See džẹhun.

džẹ-wọ (ọwọ́), *v.* to confess.

dži, *v.* to steal.

dži, *v.* to awake, awaken, quicken, frighten.

dži, džin, *v.* to fall into a hole, to tap a cask, to knock; to be deep, obscure, or hard to understand, to be distant: dží li ẹşẹ (see dží...lẹşẹ).

dží...di-de, *v.* to arouse, to raise from the dead.

dži-dža, *n.* which is lustrous.

dži-džá. See džá.

dži-dža-du, *v.* to scramble for a thing.

dži-džẹ, *n.* food. See džẹ.

dži-džin (dži), *n.* depth, distance, lowness.

dži-džọ, *n.* resemblance. See džọ.

dži-džu, *n.* which is east, &c. See džu.

dži-gbe-se (džẹ), *v.* to go in debt, to owe.

dži-gbi-ni, *adv.* abundantly fruitful.

dži-gọj-ron, *v.* to be deep, as a pit.

dži-hin (džẹ), *v.* to deliver a message, to answer for an offence.

dži-ka-nu (Nufe), *n.* a brick.

dẸi . . . lẹ-sẹ (lẹ ẹsẹ), *v.* to strike the foot against, to supplant.

dẸi . . . lẹ-sẹ (ẹsẹ), *v.* to strike with the fist.

dẸi-mi-dẸi-mi, *adv.* gorgeously.

dẸi mi-rà-ta, *n.* a term of abuse.

dẸi-na, *v.* to heal, as a wound.

dẸi-na (ṅna), *v.* to be far off.

dẸi-nde, *v.* to arouse, to raise from the dead.

dẸi-ndi (di), *v.* to steal and conceal: dẸindi dẸindi to be thievish.

dẸi-nlẹ (ni ilẹ), *v.* to be deep, abstruse, mysterious.

dẸi-sẹ (dẸẹ isẹ), *v.* to deliver a message, to act as a mediator.

dẸi-ya (iya), *v.* to suffer.

dẸi-yaj (iyaj), *v.* to be careful, anxious; to contradict, deny.

dẸó, *v. i.* to dance, to whirl; to burn.

dẸò, *v.* to leak, to drop, as water.

dẸo-fọ-lọ, *n.* a kind of cap.

dẸo-guj (ogúj), *v.* to inherit, possess.

dẸo-ko, *v.* to sit, dwell, abide: dẸoko de mi, wait for me.

dẸo-kpa, *v. t.* to consume, burn up.

dẸo-na (ina), *v. t.* to burn.

dẸo . . . ni-run, *v. t.* to burn up, consume.

dẸo-ran, *v.* to catch or take fire.

dẸo-run, *v.* to burn up, consume.

dẸo-we-re (dẸà), *v.* to struggle, to be in trouble.

dẸo-wu (dẸẹ owú), *v.* to be jealous.

dẸo-ye (dẸẹ oye), *v.* to be a ruler, to govern.

dẸo, *v.* to be alike; to assemble, to be together: dẸo! please! dẸo mi lí orọj, let my neck atone; dẸo rẹ, let it atone; dẸo mi lọwọ, let me atone.

dẸo-ba (dẸẹ ọba), *v.* to reign, rule.

dẸo-dẸo, *adv.* very, greatly, well.

dẸo-lá (dẸẹ), *v.* to enjoy an honor due to another.

dẸo-lọ, *n.* a long-necked calabash.

dẸo-wọ (dẸẹ ọwọ), *v.* to let, permit; to let alone.

dẸo-wọ . . . dẸẹ, *v.* to let alone.

dẸo-wọ-lọ-wọ, *v.* to release, dismiss.

dẸu, *v.* to be worm-eaten, as wood; to take up a thing.

dẸù, *v.* to cast, to throw; to surpass. In comparison, more, more than, above, very. (See Gram. § 207.)

dẸu-ba, *v.* to respect, to remember with gratitude.

dẸu-di-dẸu-di, *adv.* confusedly, applied to the mind.

dẸù-fu, *n.* an armlæt.

dẸu-ku, *n.* tobacco of native manufacture.

dẸu-mọ, *adv.* together.

dẸu-nọ, *v.* to throw away, to lose, to be lost.

dẸu-re, *v.* to point, direct, show how to do.

dẸu-wọ (ọwọ), *v.* to beckon.

E.

e, a prefix, having the power of a.

ē, *interrog.* what? which? ẹ ti sẹ? why?

è, *adv.* and prefix. in-, un-: èndò, unknown; è dara, not good.

ē, *pron.* him, her, it, after a verb ending in 'e'; as. sẹ ē, do it, kpè ē, call him.

è-be, *n.* a hill to plant yams in: kọ èbe, to make yam-hills.

e-be, *n.* yam-parings: fi èbe fu ẹran, give the yam-peelings to the goat.

e-bi, *n.* a journey: mo rẹ èbi, I went a journey.

e-bí, *n.* hunger: ebi kpa, hunger affects; ebi nkpa mi, I am hungry; ebi kò kpa ọ, thou art not hungry.

e-bi, *n.* vomit.

è-bí, *n.* a question, interrogation: bi í lí èbi, ask him.

e-bi-lí-si, *n.* a demon, the devil.

è-bo, *n.* a binding; a species of fig-tree.

e'-bo-lo, *n.* a pot-herb.

e-bu, *n.* a crossing; a curse, abuse.

ē-bu, *n.* mildew.

è-bu, *n.* small yams to plant, yam-plantings.

e'-bu-te, *n.* a landing-place, wharf: omi bọ ebute mọle, the water covers the wharf.

e-de, *n.* a crawfish, a prawn.

è-de, *n.* a language, a nation: emi ọ gbọ ède rẹ, I do not understand thee.

e-di, *n.* a deficiency.

e-dí, *n.* a cause, origin. See idi.

è-dí, *n.* a binding, a bond.

e-dí-dí, *n.* a stopper, a cork; a bundle, parcel.

é-do-ló, *n.* the house-cricket.

e-dú, *n.* charcoal.

e-dẸa-nọ, *n.* passion, intense feeling.

e-dẸé, *num.* seven.

e-dẸi, *num.* two.

è-dẸi (Egba), *n.* rain.

é-dẸi-ká, *n.* the shoulder.

é-dẸi-kan, *n.* a thief, a robber.

e-dẸi-lá, *num.* twelve.

è-dẸo, *n.* a snake: èdẸo lí oró, the snake is poisonous.

e-dẸo-nọ (inọ), *n.* an intestinal worm.

e-dẸu-dẸu, *n.* a kind of fan.

e-ga-ke, e-gi-ni, *n.* a tickling: máh rin ọmọ lí egake, do not tickle the child.

e-gba-ya, *n.* a pole tied across rafters.

e-gbe, *n.* profit; vindication; contiguity.

e-gbé, *n.* loss, perdition: egbé ni fu ọ! damn thee!

e-gbe-re, *n.* a kind of evil spirit.

e-gbi, *n.* a kind of antelope.

e-gbin, *n.* filth.
 e-gbo, *n.* bran, husk of grain.
 e-gbó, *n.* boiled maize, hominy; toughness.
 è-gbo, *n.* a root; a sore, ulcer.
 e-gbón, *n.* a flea, a tick.
 e'-ge-de, *adv.* only.
 e-gi-ni. See egaké.
 e-gi-ri, *n.* chilliness: egiri mu mi, *I am chilly.*
 e-guñ, *n.* an imprecation.
 e-guñ, e'-guñ-guñ, *n.* a bone.
 E'-guñ-guñ, *n.* one of the gods.
 e'-gu-re, *n.* a village.
 è-gu-riy, *n.* dirt, filth.
 e-há-sé, e-há-ti-sé, *adv.* why? what for?
 e-he-re, *n.* a crop, a harvesting.
 e-hin, *n.* a tooth: chin ọkánkaj, *a front tooth;*
 chinđoj, *toothache.*
 e-ho-ro, *n.* a rabbit.
 e-hu, *n.* a sprout, blade of young grass.
 e-hù, *n.* which is old and stale.
 e'-i-bó, o'-i-bó, *n.* a white man.
 ei-di, *n.* a wart.
 e-kaj, e-ka-na, *a cluie, finger-nail.*
 e-kaj, *n.* young sprouts.
 è-kaj, *n.* a wooden pin or peg.
 e-ke, *n.* a lie, falsehood; a liar.
 e-ke-džé, *num.* the seventh.
 e-ke-dži, *num.* the second.
 eki, *adv.* only: eki wura, *pure gold.*
 e-ki-ri, *n.* a kind of goat.
 è-ki-ti. See okiti.
 e-kó, *n.* which is callous; hard pods of okra.
 e'-ko-lo, *n.* the earth-worm.
 è-kọ. See orukọ.
 e-kpa, *n.* a crust.
 e-kpe, *n.* a curse, an oath.
 e-kpo, *n.* chaff, husk, bark; palm-oil.
 e-ku. See ekute.
 e-ku-ku, *n.* a cocoon.
 e'-ku-lu, *n.* a kind of antelope.
 e-kuñ, e-ku-kuñ, *n.* a knife-handle, a hilt of a
 sword.
 e-kuñ, *n.* protracted sickness; a region of coun-
 try.
 e-kuñ, e-ku-ruñ, *n.* the knee.
 e'-ku-rọ, *n.* the dry palm-nut.
 e-ku-ru, *n.* bread of pea-meal.
 e'-ku-ru, *n.* dust.
 e-kú-ru, *n.* the mango.
 e'-ku-te, *n.* a rat.
 e-ku-ya, *n.* a pot-herb.
 e-le, *n.* force, violence, hardness.
 e-lé, *n.* a course or layer, on a wall; an eminence;
 iron tools, weapons; interest on money: èlè! *to*
arms!

e-le-gbe, *n.* an aider, instigator; one who responds
 in chorus.
 e-le-gé-de, *n.* a pumpkin.
 e-le-ke, *n.* a liar.
 e-le-kpe, *n.* a swearer.
 e-le-ni-ni, *n.* a backbiter, a despiser.
 e-lé-ri, *n.* which is filthy, filthiness.
 e-le'-ru-kpe, *n.* which is earthy or earthly.
 e-lè-se, *n.* a maker or seller of colors.
 e-le-so, *n.* which is fruitful, fruit-bearing.
 e-lè-šu, *n.* one possessed with the devil.
 e-le-ti, *n.* one who is obedient.
 e-le-yi, *pron.* this.
 é-lo, *adv.* how much? in price: élo yi? *how much*
for this?
 è-lo, *n.* use; furniture, a utensil, ingredient: ohuñ
 èlo, *a vessel.*
 e'-lu-bọ, *n.* yam-flour.
 e-mi, *pron.* I, me: emi ná, emi tikańú mi, *I myself.*
 e-mi-nà, *n.* the fruit-bearing yam-vine.
 e-mi-rin, *n.* the sand-fly.
 e-mọ, *n.* a bur growing on grass: emọ agbo, *a*
large kind of bur.
 è-mọ, *n.* which is unknown, strange; a monster, a
 wonder; ọmọ de lomi, *a wonderful thing has hap-*
pened to-day.
 e-na, *n.* a stretching; a visit.
 è-na, *n.* warp-pins of a loom.
 e-ni, *num.* one.
 è-ni, *n.* an addition to price or quantity, something
 added to a message.
 è'-ni-a, *n.* a human being, person; mankind, people.
 e-ra, i-ra, *n.* a kind of antelope.
 e-rà, *n.* a small black ant.
 è-ráj. See iráj.
 è-rañ, *n.* crab-grass.
 è-rāñ, *n.* infection.
 e-ré, *n.* an imprecation.
 e-rè, *n.* an image; goodness, guilt, going: erè ọsin,
the gait of a horse.
 è-re, *n.* a question: bi lí ère, *to ask;* ère òlì rě?
why? for what reason?
 è-rè, *n.* the boa constrictor.
 è-re, *n.* gain, desert, guilt, interest on money; a
 crop: džé ère, *to gain.*
 e-re-ké-re, *n.* dishonest gain, filthy lucre.
 e-re-ké-ti, *n.* a dunghill.
 e-re-ko, *n.* a hamlet.
 e-re-ku-šu, *n.* an island.
 e-re-ni, *n.* the fourth day hence: ọ ò lẹ́hí lí èreni,
I will go four days hence.
 e-ri, for ori, *n.* the head: eri ekun, *the knee-pan.*
 è-ri, è-rin, *n.* filth, wet bran fed to goats.
 è-ri-gi, *n.* the gums.
 e-rin, *n.* an elephant.

è-riŋ. See ɔ̄ri.
 e-riŋ-mi (omi), *n.* the river-horse, hippopotamus.
 e-ro, *n.* a caravan; a nit.
 e-rô, *n.* a percussion-cup, a lucifer match.
 è-ro, *n.* consideration; a relation or telling; a device, thought.
 e-ro, *n.* a funnel, lamp-filler.
 e-rú, *n.* deceit, craft.
 è-ru, *n.* ashes, lime, ash color.
 e-ru-ku-ku, *n.* the tame pigeon.
 e'-ru-kpe, *n.* dust, earth.
 e-ruŋ, *n.* an ant.
 e-sa, *n.* a small red ant.
 e-se, *n.* a cat; the butter-tree nut.
 è-se, *n.* preparation for the future, providence.
 è-se, *n.* paint, color.
 e-si, *n.* a reply.
 e-so, *n.* fruit, a seed-vessel of any kind.
 e-sôŋ, *n.* accusation, a suit at law.
 e-sũ, *n.* jasper, carnelion.
 è-su, *n.* a payment to the funds of a club.
 è-sũ, *n.* sugar-cane grass.
 e'-su-ɛ, *n.* nausea: kpa li esue, to nauseate.
 e-su-ru, *n.* a small bitterish yam.
 e-su-su, *n.* a leech.
 e-še, *n.* gleanings.
 è-šé, *adv.* why?
 è-ši, *n.* a mistake, accident, error.
 e-šij-šij, *n.* a fly.
 e-šú, *n.* a locust, the white ant when winged.
 è-šu, *n.* the devil, Satan.
 e-šu-su. See esnsu.
 e-šu-wa, *n.* former times.
 e-ta, *n.* dry bean; soreness of the gums.
 e-te, *n.* a lip; intention, thought, device.
 e-té, *n.* a fragment, morsel.
 e-ti, *n.* an ear; edge, proximity: fi eti si ti emi, hear me; eti igon, a corner, angle.
 e-ti-le (ilè), *n.* vicinity, nearness: ó wà li etile, he was near.
 e-ti-ri, *n.* numbness.
 è-ti-ri, *adv.* why? See eyi.
 è-ti-še, *adv.* why? what for?
 e-tu, *n.* which is loosed, stripped off; a discovery.
 è-tu, *n.* an old farm nearly worn out.
 è-tu-tu, *n.* pacification, reconciliation.
 e-wé, *n.* childhood, youth, a child.
 e-wé, *n.* a leaf, herb.
 e-wé-bè (èbè), *n.* an esculent herb of any kind.
 e-we-ke-we, *n.* a leaf or herb of any kind.
 e-wé-ko (oko), *n.* a garden herb of any kind.
 e-wí, *n.* insanity.
 e-wô, *pron.* which? what? why?
 e-wô, *n.* time, season: ewô òdzo, the rainy season.
 è-wô, *n.* prohibition, something prohibited.

e-wu, *n.* danger: di ewu, to be or become dangerous.
 e-wu, *n.* grey hair.
 è-wu-rá, *n.* a kind of soft yam.
 è-wu-rê, *n.* a goat.
 è-wu-ro, *n.* a pot-herb.
 e-yi, e-yi-yi, *pron.* this: eyi ti, this or that which; eyi ná, this, that, the same; eyi ti ri? why?
 e-yi-ni, *pron.* that: eyini ni, that is.
 e-yin. See chiŋ.
 e-yi-ta-wi-yi (ti á), *adv.* just now, straightway, directly, immediately.
 e-yo, *n.* a pod of okra.

E.

ɛ, *a prefix.* See a.
 ɛ, *adv.* yes. See liɛ.
 è, *pron.* ye, you.
 è, *pron.* him, her, it.
 ɛ-ba, *n.* nearness, proximity to the ground: li ɛba, by (if near the ground). See lɛba.
 ɛ-ba-dò (òdò), *n.* the water-side, shore.
 è-be, *n.* outcry, supplication.
 ɛ-bi, *n.* fault, guilt, condemnation.
 ɛ-bi-ri, *n.* a large quiver.
 ɛ-bi-ti, *n.* a trap, an insecure crag, or the like.
 ɛ-bô, *n.* a sacrifice: ɛbô alakoto, the sacrifice in the basket or vessel, i. e. a human sacrifice.
 E-bô-ro, *n.* a name of Egungun.
 è-bô-tò, *n.* cow-dung.
 ɛ-bu, *n.* an abode; a kiln, a furnace.
 ɛ-bú, *n.* a crosswise direction.
 ɛ-bun. See ɛbu.
 è-bun, *n.* a gift, present.
 è-bu-ru, *n.* a back door or passage.
 ɛ-da, *n.* a flower.
 ɛ-dá, *n.* a creature; instinct, natural properties, nature; creation; a kind of rat; interest on money: kè ɛdà, to create.
 ɛ-dá-lè (ilè), *n.* a deceiver, traitor.
 ɛ-dan, *n.* the Ogboni staff.
 è-dé, *n.* which is soft, ripe, slack.
 ɛ-dé-gba-riŋ, *num.* seven thousand.
 è-di-nó-gun, *num.* sixteen.
 è-dó-gun, *num.* fifteen.
 ɛ-dô, *n.* the liver; resolution, firmness: ɛdô kôfo, irascibility.
 ɛ-dôŋ, *n.* a kind of monkey.
 ɛ-dôŋ, *n.* sweetness; grief (see dôŋ); a hatchet; a proper name frequently given to one of twins: imi ɛdôŋ, a sigh.
 ɛ-dza, *n.* a fish.
 ɛ-dze, *n.* blood: ɛni ɛdze, a bloody or bloodthirsty man.

e-džq, *num.* eight.
 e-džó, *n.* a criminal matter; dispute; harm: dá džó, to judge, as a magistrate; dá...li e-džó, to condemn.
 eċ-di-nó-gun, &c. See e-di-nó-gun, &c.
 e-fa, *num.* six.
 e-fā, *n.* a kind of trowsers.
 e-fe, *n.* fault-finding, accusation.
 e-fe, *n.* a jest, mockery: sê e-fe, to jest; sê e-fe si, to mock, ridicule.
 e-fi, e-fin, *n.* smoke.
 e-fq, *n.* greens, pot-herbs.
 e-fq-kq (ŋko), *n.* shipwreck.
 e-fqj, *n.* a corn-husk; footstalk of a palau-leaf; a crossbow arrow: eċj ilia, a rib.
 e-fqj, *n.* a buffalo.
 e-fū-fu, *n.* wind, breeze, air.
 e-fuj, *n.* chalk, lime, white clay.
 e-ga, *n.* the yellow palm-bird.
 e-ga, *n.* a grasshopper.
 e-gan, *n.* a thick forest: eċjan ošusu, a thorny forest.
 e-gan, *n.* contempt, reproof, blasphemy: sċro eċjan, to blaspheme.
 e-gan-ran, *n.* unripe fruit.
 e-gba, *n.* which is swept.
 e-gba, *n.* the mangrove tree.
 E-gba, *n.* the name of a tribe.
 e-gba, *n.* the pulse.
 e-gbā, *num.* two thousand.
 e-gbā-dže, *num.* fourteen thousand.
 e-gbā-dzi, *num.* four thousand.
 e-gbā-džq, *num.* sixteen thousand.
 e-gbā-fa, *num.* twelve thousand.
 e-gba-ra, *n.* a kind of rat.
 e-gbā-rin, *num.* eight thousand.
 e-gbā-run, *num.* ten thousand.
 e-gbā-san, *num.* eighteen thousand.
 e-gbā-ta, *num.* six thousand.
 e-gbā-wa, *num.* twenty thousand.
 e-gbċ, *n.* the side, the loins; a companion, a company, society: eċge-egbċ orilċ eċde, a multitude of nations.
 e-gbċ-dó-gun, *num.* five thousand.
 e-gbċ-fa, *num.* twelve hundred.
 e-gbċ-gbċ-run, *num.* adv. by the thousand.
 e-gbċ-ra, *n.* equality.
 e-gbċ-ri, *n.* obscurity, mystery; one initiated.
 e-gbċ-rin, *num.* eight hundred.
 e-gbċ-rin-lā, *num.* twenty-eight hundred.
 e-gbċ-run, *num.* one thousand.
 e-gbċ-san, *num.* eighteen hundred.
 e-gbċ-sin, *n.* nettle-rash.
 e-gbċ-ta, *num.* six hundred.
 e-gbċ-ta lā, *num.* twenty-six hundred.

e-gbin, *n.* filth.
 e-gbqj, *n.* an elder brother, a male relative.
 eċgbqj, *n.* which is shaken or to be shaken: eċgbqj owú, cotton whipped with a bow ready for spinning.
 e-gbqj-rq, *n.* the young of cattle: eċgbqj mali, a calf.
 e-gċ, *n.* a snare, a trap; brittleness.
 e-gċ, *n.* a dog's collar.
 e-gu, *n.* a seat in a tree on which a hunter sits to watch for beasts.
 e-gūj, *n.* a thorn, briar, prickly: eċgūj ikoko, a large thorn used for arrow-heads.
 e-hā, *n.* a close-fitting garment.
 e-hij, *n.* the back, hinder part; the last of a series; the outside of a town; the top of anything in a vessel; absence: eċij oċa, after to-morrow: eċij asu, a remnant of cloth left in the loom; á ó li aċbara li eċij Qjorun, we have no power without (or apart from) God; sê e li eċij mi, do it in my absence; wó eċij, to look after one who is walking away.
 e' i ye, *n.* rebellion, revolt.
 e-i-yé, *n.* a bird.
 e-ka, *n.* a band, ring; a branch, bough, prong; the collar-bone.
 e-kan, *adv.* once: li eċan, once, at once, immediately, formerly; mo ti sê li eċan, I have done it once.
 e-kan, *n.* sourness.
 e-ke, *n.* indulgence to inferiors, confidence.
 e-ké, *n.* a beam, joist, rafter; the trigger of a gun.
 e-ko, *n.* sour wash of maize.
 e-kó, *n.* which is hard, as fruit.
 e-kó, *n.* doctrine.
 e-ko-ké-ko, *n.* superstition, false doctrine.
 e-kqj, *n.* which fills up, fulness, a supplement.
 e-kqj, *n.* a grumbling, murmuring.
 e-kpa, *n.* the ground pea or pea-nut: eċpa roro, the oily pea-nut; eċpa bisan, the wealy pea-nut.
 e-kpqj, *n.* a spoon, a dipper.
 e-kpó, *n.* redness, ripeness of fruit, flattery.
 e-kpó, *n.* a testicle.
 e-kpó-rq, *n.* a ditch, drain, sewer.
 e-kŋ, *n.* a kind of trap or snare.
 e-kŋ-lé, *n.* a gable end, a back yard.
 e-kuj, *n.* cessation, prohibition, a door, shutter: dá eċkuj, to cease; dá...li eċkuj, to forbid, prohibit; sê eċkuj, ha eċkuj, to shut the door.
 e-kūj, *n.* a crying, weeping.
 e-kuj, *n.* a leopard; a region, a waste place.
 e-ku-ya, *n.* the herb Cleome.
 eċ, eċ, (see al, ala), prefixes, denoting the actor, owner, &c.
 e-lā, *n.* which is cloven, split off; a detached portion, fragment.

e-lè-be, *n.* a pleader, a *l* advocate.
 e-lè-bò-tò, *n.* *cow-dung*.
 e-lè-da, *n.* a *cr* creator.
 e-lè-dè, *n.* a *hog*.
 e-lè-dže, *n.* which is *bloody*.
 e-lè-fij, *n.* which has *smoke*, is *smoky*; a *smoker*, a *steamer*.
 e-lè-gân, *n.* a *despiser*, *scoffer*.
 e-lè-gbà, *n.* a *helper*, *deliverer*.
 e-lè-gba, *n.* a *palsied person*, a *paralytic*.
 e-lè-gba-ra, *n.* the *devil*.
 e-lè-gbe, *n.* a *companion*, a *leader*.
 e'-lè-ge, *n.* which is *fragile*, *brittle*.
 e-lè-go-do, *n.* *coarse calico*.
 e-lè-kè' re-dè, *n.* which is *weak*, *infirm*.
 e-lè-kun, *n.* a *weeper*, *mourner*; figuratively, a *daughter*.
 e-lè'-kpe-re, *n.* a *kind of soft maize*.
 e-lè-la, *n.* a *part* or *portion*.
 e-lè-mi (ĕmi), *n.* one who has *breath*; a *servant*, so called because his master's life is in his hands.
 e-lè-mò, *n.* a *palm-wine dealer*.
 e-lè-mò-šò, *n.* one who is *tasteful in dress*.
 e-lè-ŋò, *n.* a *spider*.
 e-leŋ-ga, *n.* a *grasshopper*.
 e-lè-ri (eri), *n.* an *eye-witness*.
 e-lè-se, *n.* which has *feet*, which *relates to the feet*: eleşe meriŋ, which has *four feet*, a *quadruped*; di eleşe niĕ, to *establish*, *confirm*.
 e-lè-še, *n.* who has *sin*, a *sinner*.
 e-lè-šij (ešij), *n.* a *horseman*.
 e-lè-taŋ, *n.* a *dissembler*.
 e-lè-ya (eya), *n.* who is *scorned*, *despised*; *ridicule*; a *scorner*.
 e-lè-ye, *n.* a *tidy person*, who has *clothes made to order*.
 e-lè-wà (e'wà), *n.* a *handsome person*.
 e-lè-wòŋ, *n.* who is *chained*, a *prisoner*.
 e-lo-mi, e-lo-mi-raŋ, *pron.* another, others.
 e-lu, *n.* *indigo*; a *mixture*.
 e-lú-lu, *n.* a *thrush*.
 e-lu-ru, *n.* a *mouse*.
 e'-me-dži, *num.* twice.
 e'-me-fa, *num.* six times.
 e-me-ta-lo-kan (me'ta li okan), *n.* that which has *three in one*; the *trinity*.
 e-me-wa (mò e'wa), *n.* a *chief councillor*, a *prime minister*.
 e-mi, *n.* the *shea-tree*, its *fruit*, the *butter made of it*.
 è-mi, *n.* *breath*, *life*, *spirit*.
 e-mò, e-mu, *n.* *palm wine*.
 e-mu, *n.* *tongs*, *pincers*; *seizure*.
 e-na, *n.* *inversion of words or letters*; as, do mi babí, for babá mi dè.
 e-ni, *n.* a *mat*.

e-ni, *pron.* a *person*, one: eni ikpè, one who is *invited*; eni kán, some one, any one, the *only one*; eni kedži, a *companion*, *friend*, the *next person*; eni tí á dí tin, a *happy man*.
 e-nu, *n.* a *mouth, opening*: enu kòkoro, the *beak of a bird*; enu ikpa, the *mouth of a river*; enu òna, a *gate, door*; enu ošoro, *eaves of a house*; enu mi ra, *my appetite fails or is bad*; enu mi ši, *my appetite is good*; enu mi ya, *I am astonished*.
 eŋ-yiŋ, *pron.* ye, you: eŋyiŋ ná, eŋyiŋ ará nyiŋ, eŋyiŋ tikará nyiŋ, ye *yourselves*.
 e-raŋ, *n.* a *beast*, a *goat or sheep*; *meat*, *flesh*: e-raŋ nlá, a *cow*; e-raŋ fuŋ, a *kind of buffalo*; e-raŋ abekana, a *carnivorous animal*; e-raŋ ará, *man's flesh*.
 e-rán, *n.* the *temple of the face*.
 e-raŋ-ko (oko), *n.* a *wild beast*, a *brutish person*.
 e-raŋ-lá (nlá), *n.* a *cow*.
 è-re, *n.* a *bank*, *gully*, *mire*, *bog*.
 e-re-ke, *n.* the *check*, *jaw-bone*.
 e-re-riŋ, *num.* by *fours*.
 e-ri, *n.* *witness*, *testimony*: gbá . . . še e'ri, to *take as a pledge*.
 e-riŋ, *num.* four: e'riŋ di loguŋ (four from twenty), sixteen; e'riŋ di logogì, thirty-six.
 è-riŋ, *n.* (number of) *times*: li e'riŋ medži, twice.
 e-riŋ, *n.* *laughter*.
 e-riŋ-lá, *num.* fourteen.
 e-ro, *n.* *skill*, *contrivance*, *subtlety*.
 è-ro, *n.* *softness*, *gentleness*.
 e-rú, *n.* a *slave*; a *hoe* or *axe-handle*.
 e-rù, *n.* a *load*, *luggage*, *goods*.
 è-ru, *n.* *fear*, *awe*, *terribleness*.
 e-rú-bi-ri (òbiri), *n.* a *female slave*.
 e-rún, *n.* a *fragment*, a *crumb*, *splinter*.
 è-ruŋ, *n.* the *dry season*, *great heat*.
 e-sán, *n.* *payment*, *retaliation*, *revengeance*.
 è-saŋ, *num.* nine.
 e-se, *n.* a *row*, *order*.
 è-se, *n.* a *foot*, *track*, *course*.
 e-se-saŋ, *num.* nine by nine.
 è-sè-se, *n.* an *orderly manner*.
 e-si, e-siŋ, *n.* *shame*, *ridicule*; a *secret*.
 è-so, *n.* *carefulness*, *gentleness*.
 e-sòŋ, e-sùŋ, *n.* an *accusation*, a *suit at law*.
 e-šé, *n.* a *blow with the fist*; a *broken part*, *piece*; *slenderness*.
 è-še, *n.* *sin*, *guilt*: ešè e'dže, *blood guiltiness*; ešè o'ba, *treason*.
 e-še-na (ina), *n.* *coals of fire*.
 e-še-ri, *n.* *rancidity*.
 e-šij, *n.* a *horse*: guŋ ešij, to *ride on horseback*; *disgrace*.
 e-šij, *n.* a *spear*.
 e-šò, *n.* a *watchman*, *guard*, *police*.
 e-šò, *n.* *newly smelted iron*.

ẹ-ta, *n.* a bulb, tuber, ear of corn, coarse flour; extension; a sting.
 ẹ-ta, *num.* three.
 ẹ-ta, *n.* a fragment of a corpse brought home to the family, over which funeral rites are performed.
 ẹ-ta-la, *num.* thirteen.
 ẹ-taj, *n.* deceit, allurement: sê ẹtaj, to deceive.
 ẹ-tẹ, *n.* disgrace, reproach.
 ẹ-te, *n.* leprosy, scrofula.
 ẹ-te-ta, *num.* by threes.
 ẹ-ti, *n.* a failure.
 ẹ-tọn, *n.* a bough, branch.
 ẹ-tu, *n.* a kind of antelope.
 ẹ-tu, *n.* gunpowder.
 ẹ-tu, *n.* checkered cloth, a guinea-fowl; coolness; a propitiatory sacrifice.
 ẹ-wà, *num.* ten; mind, intentions.
 ẹ-wà, *n.* beauty, likeness: li ewà, to be beautiful.
 ẹ-wa, *n.* a jest, a joke.
 ẹ-wẹ, *n.* a kind of bean.
 ẹ-wẹ, *conj.* again, on the other hand.
 ẹ-wẹ-wa, *num.* by tens.
 ẹ-wi-ri, *n.* a bellows.
 ẹ-wọ, *n.* a company, caravan.
 ẹ-wọ, *n.* hail.
 ẹ-wọj, *n.* a thistle.
 ẹ-wọj, *n.* a chain, bondage.
 ẹ-wu, *n.* which pleases; a loose garment, shirt.
 ẹ-wu-ni, *n.* a pit covered with earth.
 ẹ-ya, *n.* a kind of panther.
 ẹ-ya, *n.* separation, contempt; a division, tribe.
 ẹ-yé, *n.* fitness, worthiness.
 ẹ-yi, *adv.* yes (used only by males to superiors).
 ẹ-yiṅ, *n.* a palm-nut; the eye-ball.
 ẹ-yiṅ, *n.* an egg.
 ẹ-yiṅ, *n.* praise, that which is celebrated.
 ẹ-yiṅ-ko-lo, *n.* little hills made by earth-worms.
 ẹ-yiṅ-nò-gi, *n.* starch made of maize.
 ẹ-yóṅ, *n.* toe-itch.

F.

fà, *v.* to scrape, shave, wipe, pluck; to prefer.
 fà, *v.* to draw, lead, crawl, creep, as a melon-vine; to shrink, as a raw hide; to abate: fà...li ẹtaj (see fà...lẹtaj).
 fà, *adv.* leisurely, freely, without restraint; exceedingly.
 fà ba-da. See ábada.
 fà-da, *n.* (at Iforin), the aristocracy, the aristocratic quarter of the town.
 fà-da-ka, *n.* silver.
 fà-dze-re, *n.* the dawn.
 fà-dzu-ro, *v.* to look sad.

fà-gbọj (agbọj), *v.* to shave the chin.
 fà-gun, *v.* to protract.
 fà-kpa, *v.* to withdraw, draw back.
 fà...là, *v.* to lick.
 fà...lê, *v.* to tighten, to string a bow.
 fà...lẹ-taj (li), *v.* to seduce.
 fà-mọ, *v.* to cleave, to adhere.
 fà...mọ-ra (arà), *v.* to embrace, to hug, to cleave to.
 fà-ra-hàn (fi arà), *v.* to become visible, to appear.
 fà-ra-kpá, *v.* to hurt, to wound.
 fà'-ra-mọ (fi), *v.* to adhere, to adjoin.
 fà'-ra-we, *v.* to compare, make a trial of powers, emulate.
 fà-ri, *v.* to shave the head.
 fà-rì, *n.* display, parade.
 fà-rò, *v.* to be sad.
 fà...sẹ-hiṅ (si chin), *v.* to draw back, withdraw, abstain; to shun, delay, withhold.
 fà-tẹ-lẹ, *n.* a small canoe.
 fà...tì, *v.* to draw aside.
 fà-tí-la, *n.* a lamp.
 fà-tu, *v.* to loosen, pull up by the roots.
 fà...ya, *v.* to tear, rend: ó fà mi sòkoto ya, it tore my trousers.
 fà-yọ, *v.* to draw out, extricate.
 fẹ, *adv.* long (in time), for ever.
 fẹ-bi-kpa (cibi), *v.* to famish, starve.
 fẹ-fe, *n.* boasting: sê fẹfe, to boast.
 fẹ-re, *n.* asthma.
 fẹ-re, *n.* a flute, pipe.
 fẹ-re, *v.* to sip.
 fẹ-re-se, *n.* a window.
 fẹ-si (fi esi), *v.* to reply.
 fẹ-ti (fi eti), *v.* to listen, hearken, regard. (Gen. 21, 12.)
 fẹ, *v.* to blow, fan: fẹ lóh, to blow away; fẹ ẹfẹ si, to find fault with.
 fẹ, *v.* to love, to wish, desire, to be willing; to woo, to marry, procure in marriage. (Gen. 21, 21.)
 fẹ, *v.* to breathe heavily, to puff, to distort the face, to frown; to enlarge: fẹ...li ẹfẹ (see fẹ lẹfẹ).
 fẹ-di. See fẹ idi.
 fẹ-dzẹ (idzẹ), *v.* to seek food.
 fẹ-dzẹ-fẹ-dzẹ, *n.* provender, food.
 fẹ-dzẹ-mọ (fi), *v.* to accuse.
 fẹ-dzú (odzú), *v.* to look angry, to frown.
 fẹ-dzu-fẹ-dzu, *adv.* frowningly.
 fẹ-fe, *v.* to be few, to be near.
 fẹ-fẹ (ẹfẹ), *v.* to find fault, to accuse.
 fẹ-fú, *v.* to betroth for or to.
 fẹ-hiṅ-ti (fi chin), *v.* to lean on, to trust in; to prop, support.
 fẹ-i dí, *v.* to investigate.
 fẹ-ka, *v.* to scatter, to strew.

- fẹ...kun**, *v.* to miss what is lost : mo fẹ iwe mi kun, *I miss my book.*
fẹ-lẹ, fẹ-lẹ-fẹ-lẹ, *v.* to be fine in texture, smooth, flat, thin.
fẹ...lẹ-fẹ (li efe), *v.* to accuse, find fault with.
fẹ...lo-dzu (li odzu), *v.* to choke.
fẹ-ni-fẹ-ni, *n.* dry pea-hulls.
fẹ...ní-ya-wo, *v.* to court, woo.
fẹ-nọ, *v.* to fan or winnow away, blow off.
fẹ-nu-ko (fi enu), *v.* to kiss.
fẹ-nu-si (enu), *v.* to reply, intermeddle.
fẹ-ra (ará), *v.* to be selfish.
fẹ-rẹ, *v.* to be light, as to weight.
fẹ-rẹ, adv. almost : fẹ-rẹ máh, with difficulty, scarcely.
fẹ-rẹ-fẹ-rẹ. See fẹfẹ.
fẹ-ri (ori), *v.* to cool the head, to rest ; to seek, inquire after.
fẹ-sí, *v.* to find fault with.
fẹ...sọ-na (si), *v.* to betroth : ó ti fẹ aya sọna, he has betrothed a wife.
fi, *v.* to make ; to place, put, apply to a purpose.
fi, *prep.* with, in, by, for, during : ó fi ida ́́a wọ, he smote them with a sword ; fi í ́́e baun, do thus with it ; fi orukọ oba, in the name of the king ; ́́ami wo li á ó fi mọ eyi? by what sign shall we know this? fi gbogbo odzọ, for or during the whole day.
fi, *v.* to swing, vibrate, wave, sling, incline to one side.
fi...ba-lẹ (ilẹ), *v.* to place on the ground, to put down ; to reject : fi agbọy bale, set the basket down ; mo fi okán bale, I laid my heart on the ground, i. e. I rested, was contented, satisfied.
fi...bọ, *v.* to put into, to put on, as a garment ; to dip, to soak : fi ọka bọ dí óúrọ, soak the corn till morning.
fi...bọ-mí (omi), *v.* to dip, immerse, soak in water.
fi...bu, *v.* to put on oath, to swear one ; to accuse.
fi...bá, *v.* to abuse, vilify, curse.
fi...da-lẹ (ilẹ), *v.* to throw, as a horse his rider.
fi-di-ba-lẹ (idi ilẹ), *v.* to sit down.
fi...dzá-fa-ra, *v.* to slight, to treat with disrespect.
fi...dzá-re, *v.* to justify, in a forensic sense.
fi...džẹ, *v.* to place in authority, to appoint.
fi...džẹ-bi (ebi), *v.* to condemn, to regard as guilty.
fi...džẹ-wọ ai-ye, *v.* to condemn to death.
fi...dži, *v.* to forgive, to remit sin, repeal a law.
fi...dži-yá (džẹ), *v.* to punish, to give up to misery.
fi...džó-na, *v.* to burn : fi igi džona, burn the wood.
- fi...džo-ye** (džẹ), *v.* to appoint to office.
fi...džo-ba (džẹ), *v.* to appoint one to be king.
fi-fá, *n.* a tearing, that which is torn or to be torn. See fi.
fi-fa-yọ, *n.* which is drawn out, extricated.
fi-fi, fiṅ-fiṅ, *n.* dimness, twilight.
fi-fi, *n.* a swinging, which swings, &c. : ẹbọ fiti, a wave-offering.
fi-fọ, *n.* which is broken. See fọ.
fi-fọ, *n.* which is washed. See fọ.
fi...fu, *v.* to give to, endow with.
fi-fú. See funfun.
fi...gbe, *v.* to give up to destruction, to destroy.
fi-gbo-na, *v.* to heal, to worm.
fi...gun, *v.* to put to the male.
fi...ha, *v.* to hang up, to suspend.
fi...hán, *v.* to shove, exhibit, reveal, betray.
fi...ká, *v.* to place or set upon.
fi...kọy, *v.* to add to : fi omiran kọy ọ, add another to it.
fi...kpẹ, *v.* to suppose, to pretend, to mean (Gen. 33, 8) : nwọy fi i kpẹ wolí, they supposed him to be a prophet ; ó fi ará rẹ kpẹ nkan, he pretended to be something great.
fi...lé-lẹ (ilẹ), **fi...lẹ, fi...si-lẹ**, *v.* to put down, leave, forsake : fi oye lẹ, to abdicate, resign office.
fi...lé-lọ-wọ, *v.* to deliver to.
fi...li-kpo, *v.* to substitute.
fi...lọ, *v.* to investigate, inquire, interrogate.
fi...mọ, *v.* to suspect, attach to, impute.
fi...mọ, *v.* to cause to know, to show, inform of.
fi...mu, *v.* to take hold of, grasp : fi ẹşẹ mu ilu (or ilẹ), to grow firmly, to be established, confirmed.
fi...mu-lẹ (ilẹ), *v.* to establish, confirm : ó fi ẹşẹ mn ilẹ wayi, he is now established.
fi-na, *n.* a leather string.
fi-na, fẹ-na (fẹ ina), *v.* to blow the fire, kindle.
fi...ní-lẹ. See fi-lé-lẹ.
fiṅ, *v.* to terminate, to be perfected ; to discover ; to engrave, embellish ; to be fine, nice : bó...lí abó fiṅ, to peel off the bark.
fiṅ, *v.* to fill with smoke, smother, suffocate.
fiṅ-dzu (odžú), *v.* to be neat, tidy, tasteful in regard to one's appearance.
fiṅ-fiṅ, *n.* which is carved, engraved, &c. See fiṅ.
fiṅ-fiṅ, *n.* dimness, twilight.
fiṅ-riṅ, *n.* a thread.
fi-o-fi-o, *adv.* very (high) : ilẹ ga fiṅfiṅ, the house is very high.
fi...ra-na. See fi...gbona.
fi-raj (oran), *v.* to aggress, to seek a quarrel.
fi...rẹ, *v.* to curse : firẹ, to be accursed.
fi-ri (fi and ri, to be), a complement of džú, to surpass, employed in the sense of more ; as, ó tóbi

- džù ònia firi (*he is great surpassing man*), *he is greater than man.*
- fi...rò, *v.* to twist, to sprain a joint.
- fi...rò. See fira.
- fi...ròj, *v.* to chew, to dip into sauce.
- fi...ru-bo, *v.* to sacrifice.
- fi...sán, *v.* to value: ó fi águtaj sán egbá, *he valued the sheep at two thousand (cowries)*; fi...sán owó kán, *to value at one cowry, i. e. to treat with contempt*; máh fi omò sán owó kán, *do not treat the child with contempt.*
- fi...sí, *v.* to add to, to contribute.
- fi...sí-lè, *v.* See fi...lé-lè.
- fi...sí-nò (inò), *v.* to keep or harbor in the mind.
- fi...sij or sij-sij, *v.* to conceal.
- fi...sò-lè (ilè), *v.* to dash down, to lay the foundation of a clay house.
- fi...sòj or sùj, *v.* to accuse, to sue.
- fi...sé, *v.* to appoint.
- fi...sé-èj, *v.* to ridicule, disgrace.
- fi...sé-fè, *v.* to ridicule.
- fi...sé-lè-ya, *v.* to set at naught.
- fi...só-fo, *v.* to waste.
- fi...sù, *v.* to deliver to.
- fi...sù-ra, *v.* to treasure up.
- fi-tì, *v.* to lean against; to suspend or postpone.
- fi-tì-la, *n.* a lamp.
- fi...tò-rè, *v.* to give, make a present.
- fi...wè, *v.* to compare; to wrap up.
- fi...wò, *v.* to put into, to clothe with, induce; to bait a fish hook.
- fi...ya na. See figbona.
- fi-ye-de-nò, *v.* to be patient under trials.
- fi-ye-sí, *v.* to attend to.
- fò, *v.* to be empty, wasted, lost; to feel bereaved.
- fò, *v.* to fly, jump, palpitate; to break away, as clouds: aijo fò mí, *I am alarmed*; fò soke, *to float.*
- fò-dzi-sòj (odzi), *v.* to accuse of adultery.
- fò-dzu-di (odzú), *v.* to be insolent.
- fò-dzú-kan-wò, *v.* to squint.
- fò-dzú-kepè, *v.* to wink to, give a hint.
- fò-dzú-si, *v.* to look at, attend to.
- fò-dzú-sò-na (sí òna), *v.* to look for, expect.
- fò-dzú-tì, *v.* to abash.
- fò-dzú-to, *v.* to oversee, superintend.
- fò-fo, *n.* foam.
- fò-fo, *v.* to be bright, glittering, radiant;—*adv.* brightly, radiantly.
- fò-ko-dza, *v.* to pass by, neglect. (Mat. 23, 23.)
- fò-lo-fò-lo, *n.* the lights, lungs.
- fò-re-si-gi, *n.* an ungrateful person, an ingrate.
- fò-ri, *v.* to be thin, empty, as an ear of corn.
- fò-ri-bà lè (ori ilè), *v.* to bow down, worship, submit.
- fò-ri-bo (ori), *v.* to plunge into.
- fò-ri-fun, *v.* to submit to. (Gen. 4, 7.)
- fò-ri-ti, *v.* to endure, persevere.
- fò-ro, *v.* to afflict, to be bitter against.
- fò-ya (aiya), *v.* to fear, to be discouraged.
- fò, *v.* to skin, flay.
- fò, *v.* to break, as a vessel; to ache, as the head.
- fò, *v.* to wash, cleanse; to speak.
- fò-dzu (odzú), *v.* to be blind.
- fò-hun (òhun), *v.* to speak.
- fò-kan-sí (fi), *v.* to set the heart on, to be in earnest.
- fò-kan-sin, *v.* to be devout, to serve in heart.
- fò-lè (ilè), *n.* to break into a house.
- fò...li-o-dzu. See fò...lodzu.
- fò...lo-dzu (li), *v.* to blind, put out the eyes of.
- fò-lu (ilu), *v.* to destroy a town.
- fò-na (ina), *v.* to take fire from the hearth.
- fò-na-hàj (fi), *v.* to show the road, direct, guide.
- fòj, *v.* to scatter, to sow; to be slender; to press, squeeze, choke; to blow a flute or trumpet, to kindle a fire.
- fòj-fòj, *adv.* soundly (sleeping).
- fòj-gbin, *v.* to sow seeds.
- fòj-ka, *v.* to scatter abroad, disperse.
- fòj-koj, *v.* to discharge menses.
- fòj-kpa, *v.* to choke.
- fòj-kepè (ikpe), *v.* to blow a trumpet.
- fòj-kepò, *v.* to crowd, as in a congregation.
- fòj...lò-ròj (li), *v.* to choke.
- fò-raj-mò (òran), *v.* to accuse, charge with.
- fòj-ru-gbin (iru). See fòjgbin.
- fò-wò-ba (fi), *v.* to touch, feel.
- fò-wò-ko, *v.* to go hand in hand, to embrace.
- fò-wò-kepè, *v.* to beckon to.
- fò-wò-ra-nu (ènu), *v.* to be silent under wrong or affliction.
- fò-wò-ta (fi), *v.* to search or seek for carelessly.
- fu, *v.* to grow, as a plant.
- fu, *fun*, *prep.* for, to, of, by, with, on account of: mu ù fu mí, *catch it for me*; sò fu wòj, *speak to them*; ó kòj fu omi, *it is full of water*; fu àrà rè li ó só c, *he did it of himself, or of his own accord*; ife fò nmi fu afé, *a reed shaken by the wind*; odzú rè wuwo fu òrun, *his eyes were heavy with sleep*; dzò fu ayò, *to dance for joy.*
- fú, fún, *v.* to give, to be white.
- fú, *adv.* quickly, at once, rapidly.
- fu-dza, *v.* to brag, to boast.
- fu-fu, fun-fun, *n.* whiteness, purity; boiled yams pounded.
- fu-ke-fu-ke, *adv.* violently (palpitating).
- fu-lè, *v.* to be soft, as corn.
- fu-lè-fu-lè, *adv.* softly.
- fu-lu-fu-lu, *n.* dry corn-husk.

fun. See *fu*. *Fon* alone, or as a syllable, is often pronounced *fun*.

fu-ra (ará), *v.* to be pale, to be suspicious, to do wickedly.

fu-ra, *n.* beer of grain and honey.

fu-ru, *adv.* silently, quietly.

fu-te-fu-te, *adv.* easily (torn).

fu-ye, *v.* to be light, as to weight; to be better, in sickness.

G.

ga, *v.* to be high, tall.

gā, *n.* a title.

ga-bau'! *interj.* wonderful!

gá-ba-si, *n.* the cast.

gá-fa-ra, *v.* an excuse: *še* gafara fu mi, excuse me; *še* gafara lodɔ wɔɔ, let them alone.

gá-fa-ra! *interj.* beware! take heed! (Gen. 24, 6.)

ga-ga, *adv.* closely (crowded).

ga-ga-lo, *n.* stilts.

ga-ga-ra, *n.* a large gawky animal.

ga-la, *n.* a kind of antelope.

ga-mu-ga-mu, *n.* a tomahawk, battle-axe.

gā-ni-gā-ni, *n.* a despiser.

ga'ni-ki, **ga'ri-ki**, *n.* a shield.

gan, *v.* to pierce, to stab; to sew coarsely; to cut bushes; to take by little at a time; to be upright, perpendicular.

gan, *adv.* firmly: *duro gan*, to stand firmly.

gān, *v.* to despise, revile.

gan-gan, *n.* a small quantity of sauce or the like.

gan-gan, *v.* to be perpendicular; overhead; *—n.* erectness, perpendicularity: *osan gan-gan*, midday.

gan-gan, *adv.* erectly, exactly, very.

gan-gan, *n.* a kind of drum.

gan-ran, *adv.* straight (onward).

gan-ran-gan-ran. See *gagara*.

ga-rí, *n.* farina.

gā-rí, *n.* a saddle.

gā-rí-ki, *n.* a shield.

gā-sa, *v.* to be tired out, much fatigued.

gá-sa! *interj.* wonderful! indeed!

gaup, *adv.* very (much).

gba, *v.* to slap, to sweep, to collect together, to float about: *gba fu*, to permit to remain at ease: *gba... lodzu* (li), to slap in the face.

gbā, *adv.* loudly (slapping); *—v.* to sound.

gbā, *v.* to take, to take away from; to receive, to hold, as a vessel; to assist, succor; to strain; to wrap up; to flourish; to consent: *gbā idáraya*, to recreate, amuse oneself; *gbā àye*, to be large, roomy; *fi odza gbā*, to gird, encircle with a band.

gbā-dí (idi), *v.* to encircle the loins or the hilt of a sword.

gbā-du-a, **gbā-du-ra**, *v.* to pray to God.

gbā... dū-lu-mo, *v.* to slander.

gbā-dza-mo, *n.* the barber's trade.

gbā-dzɛ (edzɛ), *v.* to let blood, to bleed, cup.

gbā-dzo (adzɔ), *v.* to assemble, to collect an assembly.

gbā-ɛ-ri-dzɛ, *v.* to bear witness.

gbā-gba, *n.* which is capacious, wide.

gbā-gban'di-di, *n.* a dry uncut gourd.

gbā-gba-ro, *n.* eaves of a house.

gbā-gbe (igbe), *v.* to forget.

gbā... gbó, *v.* to believe, to obey.

gbā-ge-de, *n.* a wall around a yard.

gbā-gun (ogún), *v.* to inherit.

gbā, *adv.* loudly, noisily.

gbāi-ye (gbā), *v.* to live, to be in the world.

gbā-ko, *adv.* exactly, fitly.

gbā-kpe (gba erukpe), *v.* to make mortar.

gbā... lá, *v.* to save, rescue.

gbā... là-ba-ra (li), *v.* to slap.

gbā... là-win (li), *v.* to credit, trust for goods.

gbā-lé (ilɛ), *v.* to sweep the house.

gbā-lɛ (ilɛ), *v.* to sweep the ground or yard.

gbā-lɛ, *v.* to spread over the ground, to extend, increase, flourish.

gbā... lɛ-dzɛ (li), *v.* to bleed or cup.

gbā... lɛ-ri-dzɛ (li), *v.* to bear witness for.

gbā... lɔ-dza (li), *v.* to gird (Ps. 18, 32), swaddle.

gbā... lɔh, *v.* to take away: *ó gbā mí lí asó lɔh*, he took away my cloth.

gbā... lɔ-wɔ (li), *v.* with one objective, to help, succor; with two, to deprive of, to take away from: *ó gbā mí lɔwɔ*, he assisted me; *ó gbā omɔ lɔwɔ mí*, he deprived me of my child.

gbā... lù, *v.* to dash or cast upon the shore, as waves: *ó gbā òkɔ lù okuta*, it cast the ship upon the rocks.

gbam-gbam, *adv.* tightly, compactly (tied up).

gbā... mɔ-ra (ará), *v.* to embrace, hug.

gbā... mu, *v.* to seize upon, to make a pretext of. (Luke 11, 54.)

gban-ga, *n.* a large room, hall, parlor.

gban-gba, *n.* publicity, which is exposed to public view.

gbā-ra, *v.* to boil slightly, parboil.

gbā... rò, *v.* to relate in behalf of one, to defend a cause: *gbā òran mí rò*, defend my cause.

gbā... sí-lɛ (ilɛ), *v.* to redeem by exchanging one thing for another. (Exod. 13, 13.)

gbā... sɔ-ɔ (si), *v.* to receive into friendship.

gbā... sé, *v.* to obey, observe a rule.

gbā-tì, *v.* to crowd after one.

gbā-wɛ (aiwɛ), *v.* to mourn, to fast.

gbà-ye (àye), *v.* to be broad, large, roomy.
 gbà...wô, *v.* to hire or rent a house.
 gbe, *v.* to be, to live, to abide at; to take up, raise; to make, cause, perform; to bear with one.
 gbé, *v.* to perish, to go to perdition.
 gbè, *v.* to be near, to help; to be difficult: kò gbè badžé, (it) is not hard to spoil.
 gbè-de (gbó), *v.* to understand a language.
 gbe-de-gbe-yo (gbà ède gbà yo), *v.* to interpret for persons speaking different languages.
 gbe...di-de, *v.* to cause to rise, to raise up.
 gbe...du-ro, *v.* to cause to stand, to uphold.
 gbe-džé, *v.* to remain quiet, to be undisturbed. (Ex. 23, 11.)
 gbe...ga, *v.* to raise up, exalt, magnify, to promote in rank.
 gbe-go (ago), *v.* to dwell in a tent, to tabernacle.
 gbe...ha, *v.* to hang up, suspend.
 gbe...kà, *v.* to set upon: gbe è kà ina, set it on the fire.
 gbe...ka-le, *v.* to set down, set before, establish.
 gbe-lé (gbà), *v.* to exact usury, to take interest.
 gbe...lé, *v.* See gbe...kà.
 gbe...le-bu (li), *v.* to lay crosswise.
 gbe...le-ke, *v.* to exalt, extol.
 gbe...lô-ran (li), *v.* to clear, acquit.
 gbe...mì, *v.* to swallow.
 gbe-ra-ga (arà), *v.* to exalt oneself, to be proud, vain.
 gbe-rè, *v.* to bid farewell.
 gbe-ri (orí), *v.* to lift up the head, take courage.
 gbè-ro (gbà), *v.* to consider, intend, consult, think, purpose.
 gbé...ro, *v.* to cause to stand, erect, build.
 gbe...rù, *v.* to lay upon. (Ps. 89, 19.)
 gbe...šan-le, *v.* to dash down.
 gbe...wáh, *v.* to bring.
 gbe...wò, *v.* to raise from the ground in order to judge of the weight.
 gbe-ya-wo (iyawo), *v.* to take a bride, to marry.
 gbe, *v.* to be dry; to sharpen, whet; to carve, hew; to cackle, as a hen.
 gbè-du, *n.* a kind of drum.
 gbè-du-gbè-du, *n.* an overflowing, a wide extent of water.
 gbè-džé. See gbadžé.
 gbè-hin (gbé chin), *v.* to follow; to be too late.
 gbè-džô (gbó), *v.* to hear a cause or suit.
 gbè-kan, *v.* to feel sore: arà mi gbèkan, my body is sore or aches.
 gbò-ke-lé, gbò-kan-lé (gbé), *v.* to trust in, to depend on: mo gbèkèlé wò, or mo gbèkan mi lé wò, I trusted in them.
 gbè-na-gbè-na (ona), *n.* a carpenter.
 gbèn-gbè, *adv.* widely (extending).

gbèn-gbè-gbèn-gbè, *n.* largeness or bulkiness.
 gbè-san (gbà), *v.* to take vengeance, to avenge.
 gbè-se (gbe), *v.* to step nimbly.
 gbè-šé (gbà), *v.* to sin.
 gbi-dža (gbà), *v.* to assume a quarrel, to defend.
 gbi-gba, *n.* which is received, &c. See gbà.
 gbi-gbe, *n.* which is exalted.
 gbi-gbè, *n.* which is dry, dryness; which is hewn.
 gbi-gbo-na, *n.* which is hot, heat.
 gbi-gbô, *n.* which is heard, hearing.
 gbi-hin (gbó), *v.* to hear news.
 gbi-ke (gbà), *v.* to accept a propitiation (applied to idols).
 gbi-kpe, *v.* to accept consolation, to take comfort, to be comforted.
 gbi-kpo (gbà), *v.* to take one's place, to be substituted for.
 gbi-le. See gbàle.
 gbi-mô (gbà), *v.* to consider, advise, consult.
 gbi-na (gbà), *v.* to be on fire, to catch fire, kindle, to glow.
 gbi-ni-kô, *v.* to fester, to be full of pus, to inflame.
 gbin, *v.* to breathe heavily.
 gbîn, *v.* to plant, sow.
 gbîn-gbi-ni-ki, *n.* bulk, bulkiness.
 gbi-ro. See gbero.
 gbi-yan-džá, *v.* to endure.
 gbi-te (ite), *v.* to accept worship or caressing.
 gbi-ye-lé (iye). See gbèkèlé.
 gbo, *v.* to bark as a dog; to rub: gbo šsin li arà, curry the horse.
 gbô, *v.* to be or grow old, to ripen, to be tough: gbô lôh, to wax old.
 gbo'-do-gí, *n.* the yaws.
 gbo-džú (odžú), *v.* to be bold, impudent.
 gbò-džú-gbà, *v.* to be bold, impudent.
 gbo-džú-lé, *v.* to be resolute, confident.
 gbo-džú-wò-ke (oke), *v.* to look up.
 gbo-gbo, *pron.* all, every: titi odžô gbogbo, all the day.
 gbo'-go-dô, *v.* to be clumsy;—*adv.* clumsily.
 gbò-hun (gbó), *v.* to hear: gbòhun! hear! an exclamation during a public address.
 gbò-hun-gbò-hun, *n.* an echo: gbòhun-gbòhun gbà, the echo sounds.
 gbo-ku (gbà), *v.* to be stale, rancid.
 gbo...le-nu (li), *v.* to contradict.
 gbo-lò-hun, *n.* a single word, just a word.
 gbòm-gbo, *v.* to be large, as a heap.
 gbo-mi-gbo-mi, *v.* to be large, as a surface.
 gbo-na, *v.* to be warm, hot, zealous, fervent.
 gbo-nu (enu), *v.* to resist a proposition.
 gbo-ngbo, *n.* root, bottom of a matter.
 gbò-ngbo ta, *n.* Malaghetta pepper.

gbō-ro, *n.* a kind of snare.
gbō-ro, *v.* to be narrow.
gbō-ro, *v.* to be wide.
gbō-runj (gbō orunj), *v.* to smell, lit. to hear a scent.
gbō, *v.* to hear, heed : gbō ti, to hearken.
gbō, *v.* to flourish, as a plant.
gbō-do (gbà edo), *v.* to dare, presume : ò gbōdo, kò gbōdo, no, not (emphatic).
gbō-gō-do, *adv.* (falling) with a crash.
gbō-hinj (ihinj), *v.* to hear news.
gbō-hunj (òhunj), *v.* to hear a voice, to hear. See gbòhunj.
gbō-kan-lé. See gbèkèlé.
gbō-kò (gbà), *v.* to be navigable.
gbōn, *v.* to be deep, great.
gbōn, *v.* to be wise, cunning ; to strike ; to bale out water.
gbōn, *v.* to shake ; to move to tears, to be in distress, to sling a stone, to cast, throw.
gbōn-gbōn, *n.* depth ;—*adv.* headlong.
gbōn-gbōn-gbōn-gbōn, *adv.* clumsily.
gbō-raj (òraj), *v.* to hear a cause, to hear.
gbō-rò, *n.* greens of squash-leaves.
gbō-rò, *v.* to be long and slender.
gbu-ro (gbō iro), *v.* to hear of.
gbu-ru, *adv.* violently (raining).
ge (Egba for ke), *v.* to cut.
gě, *n.* a kind of cloth.
ge-ge, *n.* a lot : še gege, to cast lots.
gè'-ge-le, *n.* a bank of earth, a furrow.
ge-gun, *n.* a curse.
ge-le, *n.* a handkerchief.
gè-le, *v.* to be elevated, raised above the surface.
ge, *adv.* exactly.
ge-de-ge-de, *n.* dregs, sediment.
ge-ge, *adv.* even so, well : gege bi, even as.
gè-gè, *n.* a wen.
ge-ne-ge-ne, *n.* dilatoriness : še genegene, to be dilatory.
ge-re-ge-re, *adv.* in a lambent manner, as flame.
gè-re-gè-re, *n.* descent, slope, or brow of a hill.
ge-sinj (gun ešin), *v.* to mount, to ride.
gi-di, a pleonasm in the Egba dialect : libisi ó ɲlòh gidi, *whither art thou going?*
gi-di-gi-di, *adv.* very much.
gi-di-gi-ni, *n.* tumult, uproar.
gi-ga, *n.* height.
gi-ga-gi-ga, *n.* great height ;—*adv.* loftily.
gi-gan, *n.* which is pierced or to be pierced.
gi-gan, *n.* which is despised. (Acts 19, 27.)
gi-gi, **gi-gi-lé** (ile). See gègè.
gi-gi-è-se, *n.* the heel.
gi-gò, *n.* which is slender ; which is puzzling.
gi-gò, *n.* which is stupid, awkward.

gi-gun, *n.* which is long ; which is to be ridden. (Acts 23, 24.)
gin-gin, *n.* a very little quantity or thing.
gi-ri, **gi-ri-gi-ri**, *adv.* closely, firmly, diligently.
gi-ri-gi-ri, *n.* a corn cob.
go-go, *n.* sharp points ;—*adv.* sharply, severely : ará mi hàn gogo, I am lean.
gò-ke (gun), **go-ri**, *v.* to go up, mount, ascend.
gon-go, *v.* to be sharp, acute.
go-ri. See goke.
go-ro, *adv.* shrilly.
gò, *v.* to be long and slender, to stoop, to hide.
gò, *v.* to puzzle, perplex.
gò, *v.* to be stupid, awkward.
gò-gò, *v.* a horse's mane ; a stick with a hook at the end, for plucking fruit from trees ; a child's play of lots.
gò-gò-wu, *n.* a sheet.
gò-gò, *adv.* sluggishly.
gò-mbò, *n.* a table-spoon.
gòn-gòn, *v.* to be prominent, as the eyes ; to be large, as a bird's beak.
gòn-gòn, **gòn-gòn-gòn-gòn**, *n.* a height, a steep.
gu. See gun.
gu-de-gu-de, *n.* cloudiness.
gù-du-gù-du, *n.* scrambling : še gùdugùdu, to scramble ;—*adv.* entirely. (Gen. 31, 15.)
gù-du-gù-du, *n.* a poisonous wild yam.
gu-fè, *v.* to belch.
gu-na (Nòrin), *n.* the esculent watermelon.
gu-nu-gu-nu, *n.* a buzzard.
gun, *v.* to climb, to ride ; to be long.
gun, *v.* to encamp ; to land, as a boat ; to pond, as water.
gún, *v.* to strike against, pound, stab, pierce : gungi (igi) fò, to be torn or broken, as a bush in travelling.
gun-lé (ilè), *v.* to land, to run aground.
gun-ròn, *v.* to recline.
gun-wa, *v.* to put on stately dress, to sit in state.
gun-ye (iyè), *v.* to be fledged, feathered.
gù-su (Hausa), *n.* the south.

H.

ha, *v.* to scrape, scratch, bruise.
há, *v.* to lock, to wattle, to be entangled, crowded, narrow.
há, an expletive auxiliary.
há, *n.* astonishment : há še wọn, they were astonished.
há! *interj.* denoting wonder.
ha-ha, *n.* a blade of corn, fodder.
ha-kuj (ekuj), *v.* to shut a door.
ha...la-ye (li), *v.* to throng, crowd.
há-lè (ilè), *v.* to boast.

há...mô, *v.* to lock up, imprison.
 ha...mô-ra (ará), *v.* to gird; to be armed, harnessed.
 hà-na, *n.* to be crazy, to act the madman.
 há-na-hà-na, *n.* roughness.
 há-ntā, *adv.* scrawnlily: ó rù liántā, he is very lean.
 ha-ntu, ha-ntu-ru (Hausa), *v.* to write.
 han, *v.* to scrape, to be worn out, as land; to scream.
 hāp, *v.* to appear, become visible; to draw out a nail; to hang up.
 hāp...lè-mò (li), *v.* to maltreat.
 ha-ri (ori), *v.* to do homage, to worship, to reverence; to share.
 hau! See hō.
 he, *v.* to pick up things scattered.
 he...sq, *v.* to collect news to tell, to pick up crude knowledge, to smatter.
 he-wu (owu), *v.* to grow grey-headed.
 hē, *adv.* yes (addressed by females to superiors).
 hēē, *n.* malignant envy.
 hē-le, *adv.* pantingly.
 hē-yi, *adv.* used for hē by males.
 hí-ha, *n.* narrowness.
 hí-hū, *n.* conduct, behavior.
 hō, *v.* to boil, ferment, lather, foam; to shout, roar, hoot at; to peel, strip: hó iho, to make a noise; ódzo ñhó bō, the rain is close at hand, lit. roaring to come.
 ho-kun, *v.* to shout, applaud.
 hō-lē, *v.* to salute by acclamation.
 hō, *v.* to be narrow; to peel or pare; to scratch; to move hastily; to retreat.
 hō, kō, *adv.* not: eyi hó! is it not this?
 hō! hō-hu! an exclamation of contempt or of opposition.
 hō-hō, *n.* a kind of crow.
 hōp. See hup.
 hōp, *v.* to itch, be irritable.
 hōp, *v.* to caw: kanakana dze, ó yó, á hōp, the crow has eaten, he is full, he caws.
 hōp-run, *v.* to snore.
 hú, *v.* to pull up by the roots, to disinter.
 hū, *v.* to moulder, rot; to be feeble; to germinate, come up, as a plant; to behave; to occur, to come into notice, to be notable, distinguished: lailai li ó hū, he flourished in ancient times.
 hu-ko (oko), *v.* to produce herbs, as the earth; to spring up.
 hu-kō, *v.* to cough.
 hu-mò, *v.* to meditate, devise, originate an idea or notion.
 hūp, *v.* to grunt.
 hū-wā (lwa), *v.* to behave, to conduct oneself.
 hu-yē (iyē), *v.* to be fledge, feathered.

I.

i, a prefix forming nouns of action, and occasionally other nouns from verbs; as, iba, a meeting, from ba, to meet. It is also used with the subjunctive mode.
 i, *pron.* he, she, it.
 i, *pron.* him, her, it.
 i, *adv.* not: odudua igba nlá medži, á de i sí, the universe is two large calabashes, which are shut and can not be opened.
 i-ba, *n.* the act of meeting, &c. (see ba); a hiding, an ambush; a coincidence, a lucky hit.
 iba, *aux. part.* should, ought, might, suppose that: iba še ònia, if he were a man; awa iba ti kpada, we might have returned; iba še! would that! if that!
 i-bā. See bà.
 i-ba, *n.* fever: iba ñsè ċ, he is sick of a fever.
 i-ba-de, *n.* fitness, accordance.
 i-ba-dí (idí), *n.* the hips or loins.
 i-ba-dze, *n.* a spoiling, corruption, injury.
 i-ba-dzo, *n.* a meeting with trouble, a difficulty.
 i-ba-fip. See bafip.
 i-bai-ye-dze, *n.* mischief, a stirring up of strife.
 i-ba-ka, *n.* a mule.
 i-ba-ka'si-ē, *n.* a camel.
 i-ba-kpa-de, *n.* a chance meeting.
 i-ba-le (ilè), *n.* quietness, contentment; the train or tail of a loose garment; a throwing or casting: ibalé oko, a stone's throw.
 i-ba'lo-gun, *n.* a military officer. See balogun.
 i-ba-lōh, *n.* accompaniment, attendance.
 i-ba-mò-le, *n.* an ambushcade.
 i-ba-nte, *n.* an apron.
 i-bā-ra, *n.* the passage of migratory birds: awodi lōh Ibara, the hawks are gone to Ibara.
 i-ba-re, *n.* friendship, alliance.
 i-ba-rō, *n.* consultation.
 i-ba-sò-kpò, *n.* a talking together, conference.
 i-ba-sò-run, *n.* a prime minister.
 i-ba-tan, *n.* a relative, kinsman.
 i-ba-wi, *n.* a judging, rebuke.
 i-be-dzi (bi edži), *n.* twins.
 i-be-kpe-dze, *n.* perjury.
 i-bè-re, *n.* an inquiry.
 i-bē, *adv.* that place, yonder, there: niibē, there; sibē, to there, yet; niha ibē, near there.
 i-bē-bē, *n.* entreaty, supplication.
 i-bē-kpe, *n.* a pawpaw.
 i-bē-re, *n.* a stooping; a beginning, commencement.
 i-bē-ru, *n.* fear, dread, a fearing.
 i-bē-ru-bo-dzo (ba odzo), *n.* fear and trembling.

i-bê-tê-lê, *n.* bribery.
i-bê-wô, *n.* a visitation, investigation.
i-bí, *n.* a place, this place, here: ibi gbogbo, every-where, every respect; ibi iyawo, a marriage; ibi oku, a burial; ibi dżoko, an abode; ni ibi ti, where.
ĩ-bi, *n.* evil, hurt; a question.
i-bí, *n.* birth: ogún ibí, birthright; ibí tẹ, travail comes on. (Gen. 35, 16.)
i-bi-ki-bi, *n.* any place whatever.
i-bi-lê (ilê), *n.* one home-born.
i-bf-lê (ilê), *n.* a native.
i-bi-mbí, *n.* the natural state, untutoredness.
i-bi-nô, *n.* vexation, anger, wrath.
i-bi-nô-džê (inô), *n.* sorrow, regret, vexation.
i-bi-ro-gbo-ku, *n.* a couch, a sofa.
i-bf-si, *n.* increase.
i-bo, *n.* the place in which, where: ni ibo, where? niha ibo, where away, in what place? ará ibo li iwô? a citizen of what place art thou? or whence art thou?
ĩ-bo, *n.* breadth; lot, sortilege.
i-bo-de (ba ode), *n.* custom-house at the gates of towns.
i-bo-dži, *n.* a den, pit, grave.
i-bo-džin, *n.* a shade.
i-bo-džo, *n.* a fearing, trembling for fear.
i-bo-džu (odžú), *n.* a veil; dissimulation.
i-bo-džu-wô, *n.* superintendence.
i-bo-mi-wôj, *n.* sprinkling, affusion.
i-bô-mo-lê, *n.* a concealing, concealment.
i-bô-ra (ará), *n.* a covering for the body.
i-bô-ri (ori), *n.* a covering for the head or top.
i-bô-sê (esê), *n.* a hoof.
i-bô-ni, *n.* a supporting of one's cause.
i-bôj, *n.* a gun.
i-bô'-ri-ša, *n.* idolatry.
i-bô-sê (esê), *n.* a stocking.
i-bô-wô (owô), *n.* a glove.
i-bu, *n.* abstraction of a part.
i-bu, i-bu-bu, *n.* breadth, diameter; an abyss, a channel; depth.
i-bu-ba, *n.* a hiding-place.
i-bũ-bu, *n.* crosswise, coastwise: ni ibũbu;—*adv.* crosswise.
i-bu-do, *n.* a camp, encampment.
i-bu-du-ro (ibi iduro), *n.* a stand, stand-point.
i-bu-džê (ibi idžê), *n.* a feeding-place, a manger.
i-bu-džo-ko, *n.* a habitation, abode.
i-bu-ke, *n.* a carver, engraver, carving.
i-bu-koj, *n.* a blessing: ibukoj fu li iwô, blessed art thou.
i-bu-kùj, *n.* a deficiency, remnant; disgrace, contempt.
i-bu-mô (ibi imo), *n.* a watering-place or trough.
i-bùj, *n.* a gift, present.

i-bu-ra, *n.* an oath.
i-bu-ru, *n.* wickedness, evil-doing.
i-bu-si, *n.* an addition, a blessing.
i-bu-wôj, *n.* a sprinkling, staining.
i-bu-yin, *n.* honor, reverence.
i-da, *n.* war, resin.
i-dá, *n.* which is created, which is natural; a division, part, point of time: ni ida ana, at this time yesterday; ida kerin, a fourth part; ida merin, four parts.
i-dâ, *n.* See dà.
i-da, *n.* a sword, cutlass.
i-da-a-sa, *n.* a scrap of cloth, a patch.
i-da-do, *n.* an island, a detached abode.
i-da-du-ro, *n.* detention.
i-da-dži (edži), *n.* half; a flaw in cloth.
i-da-džô, *n.* a collecting, a collection.
i-dá-džô, *n.* judgment, sentence of the judge.
i-dá-džô-lũ, *n.* condemnation.
i-da-gi-ri, *n.* an alarm.
i-da-gũ-de, *n.* cold cloudy weather.
i-da-guj-si-lê, *n.* which causes war.
i-dá-ho-ro, *n.* desolation.
i-da-huj, *n.* a reply.
i-da-ke, *n.* silence, quietness.
i-da-ke-džê, i-da-ke-ro-ro, *n.* quietness, a calm.
i-da-ko-dža, *n.* a passing over or by.
i-dá-ko-rô (ôko), *n.* an anchor.
i-dá-ko-ðe, *n.* mixture, fellowship, union.
i-da-ká-da, *n.* a bad breaking.
i-dá-kù-da, *n.* a bad bending.
i-da-me-dži, *n.* half.
i-da-me-rij, *n.* a fourth part, quarter.
i-da-me-ta, *n.* a third.
i-da-me-wa, *n.* a tenth.
i-dâ-mô, *n.* a mistaken opinion, heresy.
i-da-mo-ran, *n.* a plan, device, invention.
i-da-mu, *n.* confusion, perplexity.
i-da-na, *n.* a little portable furnace; a feast.
i-da-nde, *n.* redemption.
i-da-ni-la-ra, i-da-ni-lo-džu, *n.* disappointment, trouble.
i-dan, *n.* which is smooth, sleek; sleight of hand; a joint of grass; brightness; a piece sewed to the bottom of trouser legs: omô idan, a dunsel.
i-dan-ra-wô (ará), *n.* a trial of strength, exertion.
i-dan-wô, *n.* trial, temptation.
i-da-ra, *n.* goodness, beauty.
i-da-ran, *n.* transgression.
i-da-ra-ya, *n.* cheerfulness, liveliness.
i-da-ri-dži, *n.* forgiveness, pardon.
i-da-ro, *n.* anxiety, sorrow.
i-dá-ro, *n.* dross of iron, cinders.
i-dá-rôj-si-lê, *n.* which causes disease or pestilence.

- i-da-ru-da-kpò*, *n.* a confused mingling or mixture.
i-da-si, *n.* which is spared, a remnant, gleanings, officiousness.
i-da-si-lẹ̀, *n.* a beginning, cause; an ordinance or law.
i-da-še, *n.* a venture, risk, hazard.
i-dá-wò, *n.* consulting the gods or an oracle.
i-da-wọ̀, *n.* See idaro.
i-da-wọ̀-kpò, *n.* union, combination.
i-da-ye-da-ye, *adv.* now and then, occasionally.
i-de, *n.* bondage, bond; a binding; ni ide, bound.
i-de-bi-kpa (lá ebi), *n.* starvation.
i-de-hun, *n.* a bargain.
i-de-le, *n.* guardianship; family medicine.
i-de-na, *n.* a king's officer who has charge of the revenues of a district; a custom house; an obstruction in the road, a hindrance; a lying in wait, an ambuscade.
i-de-ni, *n.* bondage.
i-de-ri, *n.* a lid, a cover.
i-de-ti (idi eti), *n.* the bar of the ear.
i-de. See de.
i-de, *n.* brass.
i-de, *n.* a demijohn.
i-dẹ̀. See dẹ̀.
i-dẹ̀-kun, *n.* a snare.
i-dẹ̀-ti, *n.* failure, inability.
i-dẹ̀-wọ̀, *n.* a trial, temptation, snare.
i-dí, *n.* a bundle, sheaf, bunch; costiveness.
i-dí, *n.* the rump, buttock, hilt; a source, cause, reason: ri idi, to understand, to prove; wá idi, to investigate; so idi, to explain.
ì-dì, *n.* an eagle: idi babá akòsa, the eagle is the father of birds of prey.
i-di-dzi, *n.* a fright, an alarm.
i-di-gba-ró (dà), *n.* a remaining in a standing posture.
i-di-kpò (dà), *n.* union, combination.
i-di-le (ilẹ̀), *n.* kindred or race of the same stock.
i-di-lu (ilu), *n.* a mixing, a mixture.
i-di-nọ̀ (iwọ̀), *n.* anger, passion; costiveness.
i-din, *n.* a maggot, skipper: dè idin, to breed worms.
i-dì-rọ̀n (iron), *n.* a plaiting of the hair.
i-dì-rọ̀n (orọ̀n), *n.* a neck-tie.
i-dò, *n.* encampment, settlement, colonization; siege; the herb canna.
i-dò-dò, *n.* the navel; in the Iketu dialect, a room.
i-dò-gbo-lu, *n.* a stumbling-block.
i-dò-ko, *n.* an arriving at the farm; the name of a town.
i-dọ̀n, *n.* the bed-bug, chinch.
i-dọ̀n, *n.* sweetness, pleasantness.
i-du-gbo-lu. See idogbolu.
i-du-ro, *n.* a standing, the erect position.
- i-dza*, *n.* a blow.
i-dza, *n.* wrestling, fighting, war, strife: idza idzi, motion of the whirlwind.
i-dza-ba, *n.* trouble, annoyance.
i-dza-dan, *n.* fruit which the bats have gnawed.
i-dza-de-lòh, *n.* a going forth.
i-dza-du, *n.* scrambling, earnest contest.
i-dza-i-ya, *n.* fear.
i-dza-ká-dì, *n.* wrestling, struggling.
i-dza-kpa-ti, *n.* a pitched battle, contest; a snatching from the hand.
i-dza-lòh, *n.* the black ants called "drivers."
i-dza-nu, *n.* a bridle-bit; a club with an iron hook on the end used by kidnappers.
i-dzán-dza, *n.* small pieces.
i-dza-rọ̀, *n.* detection of falsehood.
i-dza-šan, *n.* a leathern guard on the left wrist to defend it against the bow-string.
i-dze, *n.* a race, competition, emulation.
i-dzẹ̀, *n.* a reel; the seventh day.
i-dze-dzi-la, *n.* twelve days ago.
i-dzẹ̀, *n.* an effect; a response, reply.
ì-dzẹ̀, *n.* feed, food, wad of a gun.
i-dzẹ̀-bọ̀, *n.* an altar.
i-dzẹ̀-ka, *n.* deep sleep, snoring.
i-dzẹ̀-re, *n.* the silk of maize.
i-dzẹ̀-ri, *n.* testimony, evidence.
i-dzẹ̀-rin, *n.* four days ago.
i-dzẹ̀-ta, *n.* three days ago.
ì-dzi, *n.* a whirlwind, a storm; fright, surprise.
i-dzi-gbo, *n.* a chief priest.
i-dzi-gọ̀-rọ̀n, *n.* a ravine, valley.
i-dzi-ka, *n.* deep sleep.
i-dzi-la, *n.* a famous or notorious person.
i-dzi-le, *n.* depth, mysteriousness.
i-dzi-mọ̀, *n.* See adziimọ̀.
i-dzi-na, *n.* depth (from the top of a height), distance, expenditure.
i-dzi-ni (oni), *n.* seven days hence.
i-dzin. See idzi and idzina.
i-dzi-še-kpa-lẹ̀ (ilẹ̀), *n.* the early afternoon.
i-dzo-wu, *n.* jealousy, envy.
i-dzo-ye, *n.* officer.
i-dzọ̀, *n.* an assembly.
i-dzọ̀, *n.* a day: idzọ̀ odun, new year's day; idzọ̀ bibi, birth-day; idzọ̀ gbogbo, daily.
i-dzọ̀-kán-lọ̀-gbọ̀n (li ogbọ̀n), *adv.* seldom, occasionally, now and then.
ì-dzọ̀-ni, *n.* eight days hence.
ì-dzu, *n.* wilderness.
i-dzu-re, *n.* a pattern. See akpedzure.
I-fa, *n.* one of the Yoruba idols.
i-fa, *n.* a round shawl, used for scooping out the pulp of green calabashes.
i-fa, *n.* gain, luck; abatement, cbbing.

i-fá-gi (igi), *n.* a drawing-knife.
i-fa-ni, *n.* the space of six days.
i-fa-roj (oroy), *n.* an iron instrument with which the bowstring is drawn.
i-fe, *n.* a cup; a whistling.
i-fe-fe, *n.* a reed.
i-fe-re, *n.* a flute, a pipe.
i-fe-ti-si (fi), *n.* attention to, obedience.
i-fé, *n.* love, will, desire.
i-fé, *n.* a belching, eructation.
i-fé-kú-fé (ki ifé), *n.* irregular desire, lust.
i-fé-ni, *n.* charity, philanthropy.
i-fé-še-dzi, *n.* forgiveness of sins.
i-fi-bu, *n.* who is cursed: iibu li ój, accursed is he.
i-fi-buu, *n.* a gift, present.
i-fi-dzi, *n.* pardon, remission.
i-fi-haj, *n.* a showing, revelation.
i-fi-mọ, i-fi-raj-mọ, *n.* suspicion, a fastening upon.
i-fo-le, *n.* a home-born slave.
i-fo-ri-fo, *n.* a flake, a spark of fire.
i-fo-ya, *n.* fear, dread.
i-fó, *n.* abundance; bowling.
i-fọ, *n.* cleansing; utterance.
i-fọ-kọ, *n.* shipwreck.
i-fọ-le (ilé), *n.* burglary.
i-fọ-lu (ilu), *n.* the destruction of a town.
i-fọj, *n.* a gut, bowels, tripe.
i-fọj, *n.* a severe eruptive itching of the hands.
i-fọj-fọj, *n.* a small honey-making fly.
i-fọj-kpọ, *n.* a crowd.
i-fuj, *n.* whiteness.
i-ga, *n.* height, stature.
i-ga, *n.* stretch, extension: na iga, to stand at full stretch, reaching up.
I-ga-na, *n.* a wall, a walled enclosure, the name of a town.
i-gaj, *n.* contempt, contemptuousness: i-gaj amado, the large wild boar.
i-gaj-gaj, *n.* a kind of yam.
i-gaj-gaj, *n.* largeness, hugeness.
i-gaj-rin, *n.* a mattock.
i-gaj-re, *n.* a pick-axe.
i-ga-ra, *n.* a robber, robbery.
i-gba, *n.* admittance, reception; beating upon; a gourd cut for use; time, opportunity: ni igba ti, in the time which, when; ni igba ná, then; ni igba kpikọ, many times; igba ori, the skull.
i-gba, *n.* the African locust-tree.
i-gba, *num.* two hundred.
i-gbá, *n.* tomato.
i-gba-dzà, *n.* a loin-girdle.
i-gba-dze, *n.* a large gourd.
i-gba-gbe, *n.* forgetfulness, oblivion.
i-gba-gbọ, *n.* faith.
i-gba-kọ, *n.* a ladle.

i-gba-ku-gba, *n.* any time: ni igbakugba, often
i-gba-la, *n.* salvation, deliverance: še igbala, to save.
i-gba-mu, *n.* seizure.
i-gba-ni, *n.* a span.
i-gbà-ni, *n.* ancient times: ará igbàni, ancients.
i-gba-ro-ko, *n.* the hip-joint.
i-gba-ti (eti), *n.* a border, edge.
i-gbe, *n.* a taking; forgetfulness. See igbagbe.
i-gbe-kun, *n.* a male captive.
i-gbe-le, *n.* usury, interest: še igbele, to exact usury.
i-gbe-ra, *n.* self-defence, vindication.
i-gbe-ri (gbe and ri), *n.* nearness.
i-gbe-rí (ori), *n.* position above the head. (Mat. 27, 37.)
i-gbe-ri-ko, *n.* a neighborhood, province.
i-gbe-ro, *n.* consideration.
i-gbe-se, *n.* debt, desert.
i-gbé, *n.* bush; figuratively, forces.
i-gbẹ-hij (igba), *n.* the lust, the afterpart, the end of a period.
i-gbẹ-ke-le, *n.* hope, assurance. See gbekẹle.
i-gbẹ-sin, *n.* a female captive.
i-gbí-mọ, *n.* a councillor.
i-gbín, *n.* a snail; an effort to remove anything.
i-gbo, *n.* a forest.
i-gbo, *n.* an assembly of priests, a sacrifice.
i-gbo-du, i-gbo-fa, *n.* a sacred grove.
i-gbo-i-ya, i-gbo-dzà, *n.* courage.
i-gbò-kun (gbà), *n.* a sail.
i-gbò-ro, *n.* bush-grown fallow land.
i-gbo-ro, *n.* a street.
i-gbo-ro-bo, *n.* the thumb.
i-gbo-še, *n.* after a while: ó dí igboše, let him wait a while, after a little; yí ó wáh ní igboše, he will come by and bye.
i-gbọ, *n.* hearing, attention, trust, obedience.
i-gbọ-kú-gbọ, *n.* credulity, one who is credulous.
i-gbọj-ra (arà), *n.* a shaking of the body.
i-gbọj-wọ, *n.* the elbow, a cubit: sọ ni igbọjwọ, to jog with the elbow.
i-gbọ-wọ (gbà), *n.* a pledge, token; a cubit.
i-ge-de, *n.* a mystery (superstitious).
i-ge-re, *n.* a fish-pot.
i-ge, *n.* a sitting, perching.
i-ge, *n.* the breast, chest.
i-ge-kpa, *n.* a bird-snare.
i-gi, *n.* wood, tree, stick, stalk, stem: igi imọ, snout.
i-go, *n.* a bottle.
i-gòj-go, *n.* a grub-worm: igòjgo ofoj, the wind-pipe.
i-goj-goj, *n.* tip, end.
i-gọ, *n.* perplexity: igọ igi, roots above the ground bracing the tree.
i-gon, *n.* the shin.

- i-gōd**, *n.* a corner, an angle.
i-guḡ, *n.* a vulture.
i-guḡ-wa, *n.* sitting in state, stateliness (of dress).
i-gu-sō, *n.* a tobacco pipe, a forked stick, an instrument of torture.
i-ha, *n.* the side, a part, portion, region : iha ikpḡ ilē, the ends of the earth ; iha inō, the inward parts ; ni iha ibē, in those parts ; iha ekpo, the husk of the palm-nut.
i-ha-ga-ga, *n.* a press, a crowd.
i-ha-hō, *n.* crust or burnt part at the bottom of the pot.
i-ha-le, *n.* poverty.
i-ha-ri, *n.* homage.
i-hip, *n.* place, this place, here, hither.
i-hip, *n.* narration, news, thing, reputation.
i-hō, *n.* noise, &c. See hó.
i-ho, *n.* a hole, pit, ditch : iho imc, the nostrils ; iho itēbo, a socket for a tenon, a mortise.
i-ho, i-hō-ho, i-hō-ri-ho, *n.* nakedness : ni ihōho, naked.
i-hō-kūn, i-hō-lē, *n.* acclamation.
i-hō, *n.* a district spared for hunting, a park.
i-hū-hu, *n.* down.
i-hu-lē (ilē), *n.* origin, rise.
i-ka, *n.* a finger.
i-kā, *n.* cruelty, obstinacy, wickedness.
i-ka-ka, *n.* a muscle (shell-fish).
i-ka-kī-ka, *n.* great wickedness.
i-ka-ndu, *n.* a large stinging ant.
i-ka-ni, *n.* a waist-band.
i-ka-ni-la-ra (kaḡ li), *n.* piercingness, or power of words.
i-kā-nō (inō), See ikā.
i-kan, *n.* cane with which chairs are bottomed.
i-kān, *n.* the white ant, a large species of termites.
i-kān, *n.* a kind of egg-plant.
i-kan-dzu, *n.* a hastener : ikanḡdu dzaiye, one who hastens to be rich.
i-kan-guḡ, *n.* extremity, remote corner.
i-ka-ra, *n.* a back yard ; a clam.
i-ka-si, *n.* respect ; that which is stale.
i-ká-wō, *n.* control, mastery : sé ikawō, to subdue.
i-ke, *n.* ivory ; a hump or hunch ; carving, sculpture ; a joint, a partition, a ring of bread ; an outcry.
i-ke-de, *n.* a proclamation : sé ikede afidzi, to proclaim the repeal of a law.
i-ke-le (ilē), *n.* a partition, a room.
i-ke, *n.* indulgence, devoted attention to.
i-ke, *n.* hoarseness.
i-ke-hip, *n.* the end, the last : ni ikēhip, at last.
i-ke-kup, *n.* a snare.
i-ke-na, *n.* large wood for the fire.
i-ki, *n.* thickness of a liquid, as soup.
i-ki, *n.* salutation.
i-ki-be, *n.* a sash, a band.
i-ki-ni, *n.* salutation.
i-ki-ri, *n.* wandering.
i-ki-we-dze, *n.* a wrinkle.
i-ko, *n.* palm-leaf fibres woven into cloth : iko-cti, a binding on the edge of cloth.
i-ko, *n.* a large tall basket in which peas are stored.
i-ko-džō, *n.* a gathering : ikodžy oko, harvest.
i-ko-guḡ, *n.* plunder, captivity.
i-ko-ko, *n.* a pot : ikoko taba, a tobacco pipe.
i-ko-ko. See ikoriko.
i-ko-lōh, *n.* a carrying away, captivity.
i-koḡ-ko-so, *n.* a kind of rat-trap.
i-ko-re, *n.* a harvest, a crop.
i-ko-ri-ko, *n.* grass ; a hyena.
i-ko-ro, *n.* bitterness.
i-kō-ro, *n.* a sky-light.
i-ko-ro, *n.* a perch (fish).
i-ko-ti, *n.* a hair-pin.
i-kō, *n.* a cold chisel, a tack ; a cough ; a skein ; doctrine. See kō.
i-kō, *n.* a messenger.
i-kō-džū-sí, *n.* a fringing on, moving or looking towards.
i-kō-kō, *n.* the inner corner of a thing, a secret place, privacy.
i-kō-kō-ro, *n.* a hook.
i-kō-ku-kō (ikō ki ikō), *n.* false doctrine.
i-kō-lē (ilē), *n.* the head man of a firm.
i-kōḡ, *n.* a squirrel ; mucus ; fulness.
i-kōḡ, *n.* a murmuring.
i-kōḡ-dō (ōdo), *n.* a freshet.
i-kōḡ-du, *n.* the end, as of a box.
i-kōḡ-ra, *n.* fatigue, satiety.
i-kōḡ-si-nō (inō), *n.* a gambling.
i-kōḡ-wō (owō), *n.* a handful.
i-kōḡ-wō-si-lē (ilē), *n.* an overflowing full measure.
i-kō-ra, *n.* a loud howling, a crying out.
i-kō-se (ese), *n.* a stumbling, a hindrance.
i-kō-se-bá, *n.* an unexpected event, a chance.
i-kpa, *n.* a path, foot-print, channel : ikpa òma, a road.
i-kpa, *n.* power, circumstances in life ; a part, a party ; a kick.
i-kpai-ya, *n.* fearfulness.
i-kpa-ka, *n.* a corn-floor, barn.
i-kpa-kan, *n.* a part.
i-kpa-ka-ra, *n.* a spacious back yard.
i-kpa-kō, *n.* the hollow on the back of the neck : yi ikpakō si, to flee from.
i-kpa-kpa, *n.* a prairie.
i-kpa kpō, *n.* a mingling, a mixture.
i-kpa-la-ra, *n.* hurt, injury.

i-kpa-lẹ-mọ, *n.* preparation : ikpalemọ oko, harvest.
i-kpa-na, *n.* a place : iwọ mbẹ ni ikpana mi, thou art in my place or seat.
i-kpa-ni, *n.* manslaughter, murder.
i-kpan-ka, *n.* a bargain as to price.
i-kpan-ko-ro ọ-mọ, *n.* a girl.
i-kpa-ra, *n.* suicide ; rust on metal.
i-kpa-rẹ, **i-kpa-runj**, *n.* destruction.
i-kpa-ri (ori), *n.* baldness.
i-kpa-rọ, *n.* a change, exchange.
i-kpa-sẹ (esẹ), *n.* a foot-print, a path.
i-kpe, *n.* a trumpet. See kpc.
i-kpe-dzẹ, *n.* an invitation to a feast.
i-kpe-dzi, *n.* an opening, interval, interstice, as between the teeth, or between threads of cloth.
i-kpe-le, *n.* a distant relation.
i-kpej-kpe-dzu, *n.* the eye-lash.
i-kpe-re, *n.* the small snail.
i-kpe-ti, *n.* a snare for beasts.
i-kpe, *n.* the shoot of maize or Indian corn ; a fish-scale ; a flat stick on which raw cotton is wound.
i-kpe, *n.* entreaty : še ikpe, to beseech.
ikpẹ-fọj, *n.* a bailiff : ikpẹfọj igbese, petty debts.
ikpẹ-kpẹ, a scale, as of a fish, a small shell : ikpẹ-kpẹ okun, a sea-shell.
ikpẹ-rẹ, *n.* a halter for a horse.
ikpẹ-rẹ, *n.* young people.
ikpi-lẹ, **ikpi-lẹ-še**, *n.* foundation, beginning.
ikpin, *n.* one's good genius ; a species of rough-leaved fig ; a division, etc. (See kpin) : ikpin ilẹ nini, a portion of an inheritance ; ikpin rẹ, his share.
ikpin-ka, *n.* distinction.
ikpo, *n.* place, stead, office, rank, condition ; fold, double : ikpo okú, the place of the dead, hades.
ikpò-mọ, *n.* mingling, mixture : ikpòmọ ènia, mingled people.
ikpo-runj, *n.* a parasol.
ikpọ, *n.* abundance, cheapness.
ikpọ-dzu, *n.* the greater part, majority.
ikpọj, *n.* thickness ; a wooden spoon. See kpoj.
ikpọj, *n.* irony : ranj ikpọj sí, to speak ironically of.
ikpọj-dzu, *n.* distress, adversity.
ikpọ-ri, *n.* the great toe.
ikpọ-si, *n.* scorn, contempt.
iku, *n.* end, termination.
ikú, *n.* death.
ikù, *n.* the gable of a house, end of a box.
ikù-du, *n.* a clay pit.
iku-dza-re (dže), *n.* the gathering of locust fruit.
iku-gbu, *n.* presumption.
iku-ku, *n.* the fist.
ikù-ku, *n.* a cloud, foy.

ikù-le (ilé), *n.* the gable of a house.
ikunj, *n.* the belly, abdomen ; a cavity, bowl.
ikunj-ra (arà), *n.* ointment for the body.
iku-sa, *n.* nearness.
ila, *n.* okra.
ilà, *n.* a cleaving, a cleft ; salvation, escape ; appearing, state, condition ; tattoo ; circumcision : ilà orun, sunrise, the east.
ila-gunj, *n.* first fruit of the season.
ilai-ya, *n.* boldness, courage.
ila-ka-ka, *n.* forcible impression.
ila-na, *n.* an ordinance : še ilana, to ordain.
ila-ra, *n.* envy ; freedom : še ilara, to envy.
ila-ri, *n.* a king's herald.
ila-sa, *n.* the okra leaf.
ila-sa-dò, *n.* a kind of herb.
ilẹ, *n.* a house : ilẹ abẹrẹ, a needle-case ; ilẹ àse, a kitchen ; ilẹ atọ, the bladder ; ilẹ ero, an inn ; ilẹ eiyẹ, a bird's nest ; ilẹ iso, a stable ; ilẹ oku, a tomb.
ile, *n.* a bird snare. See also lẹ.
ile-ke, *n.* which is above, an upper garment.
ilẹ-ko. See ileto.
ile-kọ, *n.* a pistol.
ile-ra (arà), *n.* strength, which is strong.
ile-ri, *n.* a promise, vow : še ileri, to promise.
ile-ru, *n.* a furnace.
ile-to, *n.* a village.
ilẹ, *n.* ground, earth (see lẹ) : ilẹ ini or nini, a possession ; ilẹ oku, a burying ground ; ilẹ oba, a kingdom ; ilẹ mọ, it is daybreak ; ilẹ sù, it is dark ; ilẹ niye, the earth ; ilẹ biri, a small piece of ground, a field.
ilẹ-dù, black soil, manure.
ilẹ-kẹ, *n.* a toad : ilẹkẹ ọkpọlọ, toad's eggs.
ilẹ-kpa, *n.* a grave, tomb.
ilẹ-kunj, *n.* a door-shutter.
ilẹ-še, *n.* the beginning.
ilo, **ilo-ro**, *n.* a porch.
ilò, *n.* a using, use : ohun ilò, a vessel.
ilo-ri, *n.* a whirling round.
ilo, *n.* an accusation, a charge. See lọ.
ilọh, *n.* See lọh.
ilọ-lọ, *n.* fetidness ; lukewarmness.
ilọ-ra, *n.* delay : še ilora, to delay, tarry.
ilọ-şọ, *n.* a squatting posture.
ilu, *n.* a gimlet ; a town. See lu.
ilu, *n.* a drum. See lù.
ilu-ke-dzi, *n.* a small village.
i-ma, *aux. part.* a sign of continued action. See ma.
imà-do, *n.* a kind of wild boar.
ima-le, *n.* a Yoruba proselyte to Mohammedanism.
ima-ra-du-ro (mu arà), *n.* continence, self-restraint.

i-ma-ti-ko, *n.* an instrument for drawing the bow-string.
i-me-le, *n.* idleness, indolence: *še imęle*, to be indolent.
i-mi, *n.* dung.
i-mí, *n.* a breathing.
i-mí, *n.* a shaking: *imí ędęn*, sighing, a sigh.
i-mi-lę, *n.* a shaking of the earth.
i-mi-si, *n.* breathing on, inspiration.
i-mo-dzo, *n.* a kind of rat.
i-mo-dun-dzu-ę, **i-mo-dzu-ę**, *n.* the fore-finger.
i-mo-re, *n.* gratitude.
i-mo-ru (*imu oru*), *n.* heat of the sun: *imoru ędzo*, the heat or middle of the day.
i-mo-ye, *n.* intellect, understanding. See *moye*.
i-mo, *n.* the nose.
i-mo, *n.* knowledge, interpretation, decision: *fi imo* *šokan*, to agree together.
i-mo-dze, *n.* the water ordeal.
i-mo-dzu, *n.* drunkenness.
i-mo-dzu, *n.* superior knowledge.
i-mo-dzu-mo, *n.* the dawn.
i-mo-le, *n.* light: *še imole*, to enlighten.
i-mo-le, *n.* a conspiracy.
i-mo-mo, *n.* the grass-wut.
i-mo-ni-nę, *n.* conscience.
i-mo-raj, *n.* a wise man.
i-mo-ta (*mo ta*), *n.* a having sold out.
i-mo-te-le, *n.* foreknowledge.
i-mu, *n.* sharpness, severity. See *mu*.
i-mu-ba, *n.* means, instrumentality.
i-mu-ku-ro, *n.* taking away.
i-mu-le, *n.* firmness, as to standing.
i-mu-na-mu-na, *n.* the fire-fly.
i-mu-ni-bi-nę, *n.* a provocation.
i-mu-nu, *n.* activity, in a cause.
i-mu-re, *n.* a flea.
i-na, *n.* a fire; a blossom; a louse. See *na*.
i-na, *n.* a whipping, a stripe or stroke with the whip.
 See *na*.
i-na-bi, *n.* a plant which blisters the skin.
i-na-ki, *n.* the chimpanzee, ape.
i-na-ku-na (*ki*), *n.* extravagance.
i-naj, *n.* sight, vision.
i-ne-dze-dzi, *n.* sides of the doorway.
i-ni, *n.* possession: *ini ęę kpę*, his possessions are great.
i-ni-la, *n.* greatness.
i-ni-la-ra, *n.* oppression.
i-ni-ra, *n.* freedom; difficultly, strait, need.
i-ni-raj, *n.* remembrance.
i-no, *n.* the inside, mind, womb; an indentation or bowl (Ex. 25, 34): *ino dįidęn*, pleasure (of mind): *še ino dęn si*, to be pleased with, delight in; *ino rere*, a good disposition; *še ino rere*, to be kind-

hearted; *ino badze*, to be displeased; *ino yę*, to pity; *ęęn ino*, the fulness of a thing (Ps. 50, 12); *ni ino*, in, within; *ino mi dęn*, I am pleased, happy; *ino dęn mi*, I am pained, grieved.
i-no-bi-bi, *n.* fretfulness.
i-no-dzu, *n.* a towel for the face, a handkerchief.
i-no-le (*ile*), *n.* inside the house.
i-no-se, *n.* a foot-towel.
i-no-wę, *n.* a hand-towel.
i-ra, *n.* a morass, a boy; a kind of horse. See *ra*.
i-ra-dę, *n.* compassion.
i-ra-kpa-da, *n.* redemption.
i-ra-le, *n.* lathing, laths.
i-ra-le, *n.* evening.
i-ra-na, *n.* a propitiation made for the dying.
i-raj, *n.* a sight, seeing; a generation, a race; resemblance.
i-raj-di-raj, *n.* successive generations, genealogy.
i-raj-se, *n.* a servant.
i-raj-wu, *n.* a cotton-spinner. (Pr. 44.)
i-ra-wę, *n.* a star.
i-re, *n.* play.
i-re, *n.* a going off, as a trap: a curse, an urging forward, haste.
i-re, *n.* goodness; well-wishing; gait of a horse.
i-re-de (*ode*), *n.* revelling, revelry.
i-re-gun, *n.* abuse, a curse.
i-re-ke, *n.* sugar-cane.
i-re-kę-dza, *n.* a passing over.
i-re-kpa, *n.* transgression.
i-re-kpe, *n.* a scrap or remnant of cloth.
i-re-ni, *n.* four days hence.
i-re-ra, *n.* pride.
i-re-ri, *n.* a being past harvest time.
i-re-ti, *n.* hope.
i-re, *n.* friendship, etc. See *ęę*.
i-re, *n.* a corn-lussel.
i-re-na, *n.* candle-snuffers.
i-re-ni-dze, *n.* a cheating, fraud.
i-ri, *n.* sight, etc. See *ri*.
i-ri, *n.* dew, mist.
i-ri-dzu, *n.* a steward.
i-ri-na, *n.* a sight, a spectacle.
i-ri-ndę, *n.* nausea.
i-rij, *n.* iron; a kind of rat-trap.
i-rij, **i-rij-le**, **i-rij-mi**, *n.* dampness, moisture.
i-rij, *n.* walking, etc. See *rij*.
i-ri-ra, *n.* hatred, an abomination.
i-ri-raj, *n.* See *irina*.
i-ri-ri, *n.* experience.
i-ro, *n.* a telling, etc. See *ro*.
i-rę, *n.* a stirring, etc. See *rę*.
i-ro, *n.* the chimpanzee.
i-ro-bi-no-dze, *n.* grief, trouble.
i-ro-gba, *n.* an assembly of the elders.

- i-rô-kû-rô**, *n.* an evil thought.
i-ro-na, *n.* a going in quest of.
i-ro-nô, *n.* consideration, thought.
i-ro-nô-kpi-wa-da, *n.* repentance.
i-ro-ra, *n.* pain, groaning.
i-rô, *n.* a relating, interpretation, &c. See rô.
i-rô, *n.* a fib; texture, the warp of cloth.
i-rô, *n.* an equal, a companion.
i-rô-gbô-ku, *n.* a couch.
i-rô-kpô, *n.* acting for an absent person.
i-rô-nô, *n.* abstinence from food, solemnity, pain in the stomach.
i-rô-nu, *n.* tenderness, compassion.
i-rôn, *n.* hair: iron gaungau, a bristle.
i-rôn, *n.* prayer by rote.
i-rôn, *n.* a being sick.
i-rôn-gân, *n.* barrenness.
i-rôn-gbôn, *n.* the beard.
i-rô-ra (arí), *n.* a bolster.
i-rô-ri (ori), *n.* a pillow.
i-ru, *n.* a rising, a fountain, an uproar, &c.
 See ru.
i-ru, *n.* seed of plants; kind, species, such: bi im eyi tí ô fê, such as (bi...ti) he loves.
i-ru, *n.* the tail; a gadfly.
i-ru-di, *n.* a bud.
i-ru-gbín, *n.* seed for sowing.
i-rú-ke-rú-do, *n.* a tumult, insurrection.
i-ru-ke, *n.* a cow's tail carried as a badge.
i-ru-ke-re, *n.* com-silk.
i-ru-kpe-kpe, *n.* veneration; vigorous growth.
i-ru-la, *n.* okra seeds.
i-ru-lu, *n.* a tumult, an uproar.
i-ru-mi, *n.* waves.
i-ru-mô (omô), *n.* seed, offspring.
i-rû-ru, *n.* a variety of kinds, any kind.
i-ru-ya, *n.* an emetic.
i-sa, *n.* flight, &c. See sa.
i-sá, *n.* a grave, a pit.
i-sâ, *n.* an attempt, &c. See sâ.
i-sa-bô-ti, *n.* an outer yard.
i-sa-ga-da-gba, *n.* a regular set-to in battle.
i-sa-ga-ti, *n.* a siege.
i-sa-lê, *n.* the lower part, bottom, below.
i-saj, *n.* retaliation, &c. See saj.
i-saj, **i-sa-ni**, *n.* nine days hence.
i-sâj, *n.* a sieve.
i-sâj-đuj (ôđún), *n.* harvest.
i-saj-sa, *n.* a deserter, a runaway.
i-sâ-se, *n.* a feast.
i-sê-lu, *n.* confection.
i-se-lê, *n.* an earthquake.
i-si, *n.* a new invention, a new cra.
i-si-mi, *n.* rest, the sabbath.
i-siñ, *n.* service.
- i-siñ-kù-siñ**, *n.* superstitious worship.
i-si-si-yi, *n.* this time, now.
i-so, *n.* a tying; an emission of wind; a producing of fruit: iso melokan, a little while. (Gen. 24, 55.)
i-so-ñiñ, *n.* a giving of law, a prohibition.
i-so-kô, *n.* a wooring-place.
i-so-kpa, *n.* a hard knot.
i-so-lu, *n.* a coupling.
i-so-rô, *n.* a hanging, a curtain.
i-so-yi-gi, *n.* marriage.
i-sô, *n.* a place, station, quarter of the town: isô ãgba, meeting-place of the elders.
i-sô-di, *n.* which is made, or caused to be.
i-sô-ka, *n.* a kind of bird snare.
i-sô-kù-sô, *n.* silly or evil talk.
i-sô-nu, *n.* the Mohammedan supper after the long fast.
i-sôñ, *n.* a fountain.
i-su-wa, *n.* goodness of a proposition or act.
i-sá, *n.* ebb-tide.
i-sá-dzû, *n.* former (time or state).
i-sá-na, *n.* a flint and steel.
i-sá-kpa, *n.* a kind of hibiscus.
i-saj, *n.* a flood; a vein, artery.
i-sá-sun, *n.* a sauce-pan.
i-sê, *n.* custom, fashion, character, &c. See sê.
i-sê-un, *n.* kindness: isêun ife, loving kindness.
i-sê, *n.* work, trouble, distress: isê àmi, a sign; isê așe, a miracle; isê ikpa, hard toil; isê isin, duty, service; isê oro, tornout; lgh sibi isê, go to work.
i-sê-ki-sê, **i-sê-ku-sê**, *n.* a wicked work.
i-sê-kpe, *n.* small fire-wood.
i-sê-kpo, *n.* a fold, a double.
i-sê-nô, *n.* abortion, miscarriage.
i-sê-ti, *n.* a hem.
i-si, *n.* paleness, fading.
i-si, **i-siñ**, *n.* a kind of indigenous fruit.
i-si-nu, *n.* appetite.
i-siñ, *n.* a tree and its fruit.
i-si-si, *n.* a fault, error of action.
i-sô, *n.* peevishness.
i-sô, *n.* slackness, as of a rope.
i-sô-de, *n.* patrol, police.
i-sô-kaj, *n.* concord.
i-sô-ra, *n.* watchfulness.
i-sô-ran, *n.* an offence, an offender, evil doer.
i-sô-te, *n.* enmity, rebellion, sedition.
i-su, *n.* a ball, a lump; the yam, &c. (see sù): iku oke, wild yam; isu okpe, palm-cabbage.
i-su-ra, *n.* treasure.
i-ta, *n.* a street; woof of cloth; pain, pungency; a setting sail, &c. See ta.
i-ta-do-gun, *n.* seventeen days.
i-tâ-fo (local), *n.* a table.

i-ta-lẹ, *n.* a worm which comes up from the ground and attacks people when asleep.
i-ta-lẹ-mọ, *n.* ancestors.
i-ta-mọ-ra, *n.* accoutrements for war.
i-ta-na, *n.* a flower, blossom.
i-tan, *n.* the thigh, a ham; kinship, tradition, completion, &c. See **tan**.
i-tan-kpa-ra, *n.* an ulcer caused by small-pox.
i-ta-ra, *n.* haste, hurry, zeal, anxiety.
i-ta-so-ri, *n.* which is poured on the head.
i-ta-şọ (aşu), *n.* a cloth stretched or hung as a curtain.
i-te, *n.* a throne, &c.
i-te-bọ, *n.* the underside of a roof; a tenant. See **iho**.
i-te-hin, *n.* a saddle-cloth.
i-te-lẹ, *n.* the log of a boat.
i-te-lẹ, *n.* foundation.
i-te-lẹ-se, *n.* a private sign (as a nod, wink, &c.) to attract attention.
i-te-ri-gbā, *n.* the lintel of a door.
i-te-se, *n.* the treadle of a loom.
i-ti, *n.* timber, a log.
i-ti, *n.* a bundle, sheaf, wisp; breaking, snapping in two.
i-ti-dzū, *n.* shame, modesty.
i-ti-se, *n.* a foot-stool.
i-to-ri, *n.* a share: *şe itori*, to share.
i'-to-rí, *n.* the cause, reason; therefore.
i-to-si, *n.* nearness: *mitosi*, near.
i-to-tọ, *n.* truth.
i-to-ye, *n.* merit, value.
i-to, *n.* straightness; a creek; old age, endurance, leading; spittle, &c. See **tọ**.
i-tọ, *n.* urine, &c. See **tọ**.
i-tọ-dzū, *n.* oversight, care, perseverance: *şe itọdzū*, to persevere, to oversee.
i-tọ-kọ, *n.* an oar, a rudder.
i-tọn-ri-raj, *n.* recovery of sight.
i-tọ-re, *n.* a gift: *itọre ọnu*, alms.
i-tọ-wọ, *n.* an earnest, anticipation.
i-tu, *n.* overthrow, eradication, &c. See **tu**.
i-tu, *n.* a sparrow.
i-tù, *n.* ease, relief: *itù ẹdọ*, consolation; *şe itù ará*, to rest.
i-tu-mọ, *n.* interpretation, sense, meaning.
i-tu-nọ, *n.* comfort, consolation.
i-tu-ra, *n.* ease from pain, refreshment: *itura ọdžọ*, the cool of the day.
i-wā, *n.* distribution. (1 Pet. 4, 10.)
i-wā, *n.* being, origin, list, duration of life, conduct, disposition, nature of a thing, presence (Gen. 43, 9): *iwā ikpa*, violence; *iwā buburu*, wickedness; *iwā titọ*, integrity, honesty; *iwā titu*, neckness; *iwā ibi*, *iwā ika*, mischief; *iwā mimọ*, holiness; *iwā ará*, brotherhood; *iwā Ọlorun*, the Godhead; *ọdžọ ọdún iwā rẹ*, the years of his life.

i-wa-dzẹ, *n.* gain, profit, seeking for food.
i-wa-dzū, *n.* the front, presence, before, brow.
i-wā-ku-wā, *n.* bad behavior, caprice.
i-wa-lẹ, *n.* a digger; figuratively, a man child, a son.
i-wa-na, *n.* a smith's poker.
i-wa-ra, *n.* haste, impatience: *şe iwara*, to hasten, hurry.
i-wa-şe, *n.* powder, fine grains; the menses.
i-wa-wi, *n.* an excuse, extenuation.
i-wa-ya i-dza, *n.* struggling, agony.
i-we, *n.* the kidneys.
i-wé, *n.* a book, a comparison.
i-we-dzẹ, *n.* a wrinkle.
i-we-dzẹ, *n.* a curl, a tress.
i-we-re, *n.* silliness, folly: *şe iwere*, to be foolish, to act foolishly.
i-we-ri, *n.* a head-band.
i-we, *n.* a frog; fineness of grain or of threads.
i-we-fa, *n.* a eunuch.
i-wo, *n.* a horn.
i-wó, *n.* the thrush in children.
i-wò-dọ, *n.* a ford.
i-wo-ro, *n.* a heathen, an idolater.
i-wo-ye, *n.* foresight, providence.
i-wo-yi, *n.* the present time, now.
i-wọ, *pron.* thou.
i-wọ, *n.* the navel, crookedness; husk of certain seeds; a horn.
i-wọ, *n.* poison put in food; entering, &c. See **wọ**.
i-wọ, *n.* suitability, form; a fish-hook.
i-wọ-dzọ, *n.* a gathering together, an assembly, crowd.
i-wọ-fa, *n.* a pawn servant.
i-wọ-ni, *pron.* those.
i-wọn, *n.* scarcity of food, &c.; a long neck, as of a gourd.
i-wọn, *n.* a measure of quantity or distance, size: *iwọn fadaka*, a piece of silver, as money; *ni iwọn bí*, so long as; *iwọn ẹnia*, as many people as.
i-wọn-wọn, *n.* the iguana; a bundle.
i-wọn-yi, *pron.* these.
i-wọ-ra, *n.* greediness.
i-wọ-si, *n.* contempt, spite: *şe iwosi si*, to insult.
i-wọ-şọ, *n.* a ball of thread, wound up ready for weaving.
i-wù, *n.* a choice, preference, &c. See **wn**.
i-wu'-ka-ra (akara), *n.* leaven.
i-wu, *n.* a thing.
i-ya, *n.* the armpit.
i-ya, *n.* loss, poverty, suffering: *dze iya*, to suffer; *emirin dze ni kò tò iya*, the bite of a sandfly is not so sharp as poverty.
i-yā, *n.* mother, mistress of a servant.

i-ya-fin (afin), *n.* a queen, mistress of a house.
i-ya-gbà, *n.* a midwife.
i-ya-kò, *n.* a mother-in-law.
i-ya-kpa, *n.* separation, a sect.
i-ya-lá, i-ya-nlá, *n.* a grandmother.
i-ya-là-se, *n.* a female cook.
i-ya-le (ilé), *n.* the mistress of the house (that is, the first wife).
i-ya-ḷe-ta, *n.* about eight o'clock in the forenoon.
i-ya-lo-de, *n.* a wise woman.
i-ya-nu, *n.* wonder, astonishment.
i-yân, *n.* boiled yam pounded.
i-yân, *n.* denial, contradiction, a question in dispute, &c. See yân.
i-yan, *n.* famine.
i-yan-dze, *n.* a cheat, imposition.
i-yan-dzú, *n.* exhortation, perseverance, constraint.
i-yan-fe, *n.* See ayanfe.
i-yan-gbè, *n.* dryness, that which is dried.
i-yan-gbo, *n.* chaff.
i-yan-ran, *n.* an oven.
i-yan-rin, *n.* sand: iyanrin didè, quicksand.
i-ya-ra, *n.* activity, nimbleness: ará iyara (eyi ará), the body itself.
i-ya-ri, *n.* vivacity.
i-ya-tò, *n.* difference, separation.
i-ya-wò, *n.* a bride: ibi-iyawo, a wedding.
i-ya-wu, *n.* a sledge-hammer.
i-ye, in composition, *this, self, very.* See iyékuru.
i-yé, *n.* mind, understanding.
i-yè, *n.* life, &c. See yè.
i-ye, *n.* number, value, price: sọ iye, to value, set a price on; a reed; in composition, mother, as, iyekan.
i-ye-bi-ye, *n.* great price, preciousness.
i-ye-kan, *n.* a mother's relative.
i-yé-ku-ru (iye), *n.* the very dust.
i-ye-me-dzì, *n.* doubt: sè iyemedzì, to doubt.
i-ye-ni, *n.* which is intelligible.
i-ye-nò, *n.* sense, understanding.
i-ye-re, *n.* black pepper.
i-yé, *n.* fitness, comeliness; a feather: akpa-iyé, a wing.
i-ye, *n.* dust of worm-eaten wood.
i-ye-fun, *n.* flour.
i-ye-gbè, *n.* a kind of trousers.
i-ye-ka, *n.* the very branches, natural branches of a tree.
i-ye-wò, *n.* investigation.
i-ye-wu, *n.* a chamber.
i-yin, *n.* praise.
i-yi-sò, *n.* a pin to turn the weaver's beam.
i-yo-dzú (iye), *n.* the natural face. (James 1, 23.)
i-yo-kun, *n.* the remainder, the rest.

i-yò, *n.* salt, the flood tile (see yò): ɪyò oibó, sugar.
i-yò-nò, *n.* compassion.
i-yò-nu, *n.* trouble.
i-yòñ, *n.* coral, pearl.

K.

ká, *v.* to gather, to reap, to pull a tooth; to fold, to roll; to fail.
ká, *prep.* around, on;—*adv.* around.
kà, *v.* to count, to read; to regard, respect; to set or place upon.
kà (kì á), *adv.* not. See Gram. § 179.
kà, *adv.* presumptuously.
ka-ba-ka-ba, *adv.* roughly, unevenly.
ka-bi-ye-sì! (kì á), *let us reverence!* an exclamation as the king approaches.
kà-dun (òdun), *v.* to be the space of a year.
ka-fo, *n.* tight-legged pantaloons.
ka-gba, *v.* to hang or be entangled in.
ka-hun. See kanj.
kain-kain-kà, *n.* chaff of millet.
ká-ka, *n.* which is strong, stiff.
kà-ka, *adv.* instead of, otherwise; presumptuously.
ka-kan-fo, *n.* a military general.
ká-ka-ra, *n.* a muscle-shell.
ka-ka-ra-ka, *adv.* strongly, stiffly.
ká-ki-ri, *adv.* abroad, wanderingly.
ka-ko, *v.* to curl, to twist.
ka-kò, *v.* to be stiff.
kà . . . kòñ, *v.* to add to.
ká-la-mò, *n.* a pen to write with.
ka . . . la-ra (li), *v.* to enfold, entangle, as a net.
ká . . . le-hin (li), *v.* to pull a tooth of.
kà-ḷe (ilè), *v.* to set down, to deposit, to establish;—*adv.* around, abroad.
ka-lòh (kì á lòh), *v.* let us go to follow!
ka . . . mò, *v.* to surround, to enclose.
ka-na-ka-na, *n.* a crow.
kà-na-kà-na, *n.* a sting.
kà-nò, *n.* to be cruel, harsh.
kà-nu, *v.* to be sorry, to grieve, mourn.
kan, *adv.* at once, quickly.
kan, *v.* to be sour, morose, painful, opposed to; to bore.
kán, *num.* one: awon kán, certain ones; miran kán, others; owó kán, the last cover; isè kán, the last action;—*adv.* precious. (Ps. 22, 20.)
kán, *v.* to drip, drop, as water: to pluck, nip, to take off, as a ring.
kàn, *v.* to knock upon, nail, touch; to gore, as an ox.
kan-dzú, *v.* to hasten.

kaŋ-ga, *n.* a well.
 kaŋ-gi, *n.* to be difficult, callous.
 kaŋ-guŋ, *n.* to be the last, at the end.
 kaŋ-kaŋ, *adv.* hastily.
 kãŋ-kaŋ, kãŋ-ri kaŋ, *n.* soft fibres used instead of sponge.
 kaŋ-ki, *n.* tight pantaloons.
 kaŋ-kuj (ɕkuj), *v.* to knock at the door.
 kaŋ...la-ra (urá), *v.* to piece, as words.
 kaŋ...mõ, *v.* to nail or fasten to: kaŋmõ agbelebu, to crucify.
 kaŋ-mõ-le, *v.* to stick fast, as in mud.
 kaŋ-mu-kaŋ-mu, *adv.* sweetly (flavored).
 kaŋ-ra (urá), *v.* to be morose, peevish.
 kãŋ-ri (ori), *v.* to nail a cut-off head to a tree; to touch the head with a sacrifice.
 kaŋ-ri, kaŋ-ri-kaŋ-ri, *adv.* far distant.
 kaŋ-ruŋ-kaŋ-ruŋ-fê, *n.* a long time.
 ka-ra, *n.* a gland.
 ka-rá, *adv.* loudly.
 ka-ra-wõŋ, *n.* a conch-shell.
 kã-ri (ori), *v.* to set on the head.
 ka-ruŋ, *num.* fifth.
 kã-saŋ, *n.* sarsaparilla.
 kã-se, *v.* to walk leisurely; to terminate.
 ka-sí, *v.* to be stale.
 ka...sí, *v.* to place upon, to impute, to respect:
 kò kã ɔro Ọloruŋ sí, he does not regard the word of God.
 kã-si-ŋkaŋ? (kã á sí), *what's the matter? is anything amiss? kò si ŋkaŋ, there is nothing! ó sí ŋkaŋ, there is something.*
 ka-ša, *adv.* proudly (walking).
 kã-ša, *v.* to introduce a new fashion; to recite the names of the gods.
 ka-ta-ka-ta, *adv.* scatteringly, staggeringly.
 ka-ta-ri, *v.* to be in the zenith, overhead.
 ka-ti, *adv.* (not) at all, (none) whatever.
 kauŋ, *n.* trona, carbonate of soda (from the Great Desert).
 kauŋ-kauŋ, *adv.* sweetly (scented); quietly.
 ká-we, *v.* to wind.
 kã-we (iwe), *v.* to read.
 kã-wõ (owõ), *v.* to count money.
 ka-wõ (owõ), *v.* to abstain from things prohibited; to assort; to grasp, rule over.
 ka-wõŋ. See karawõŋ.
 kã-wú (owú), *v.* to reel, wind; to walk to and fro.
 ke, *v.* to cry out; to cut, chop.
 ke-de, *v.* to be scarce, infrequent.
 ke-dê (ôle), *v.* to proclaim aloud.
 ke-de-re, *adv.* clearly (seeing).
 ke-dze, *num.* seventh.
 ke-dzi, *num.* the second, the next.
 kô-fe-ri (Arab.), *n.* an unbeliever, a heathen.

ke-gi (igi), *v.* to cut or chop wood.
 ke-ke, *n.* a stick on which carded cotton is wound for spinning.
 ke-ke, *n.* ring of metal, &c., when struck.
 ke-kê, *n.* child's play of lots; a custom-house, a ticket or check.
 kô-kê, *adv.* clamorously.
 ke'-ke-ke, *n.* littlewess, a little one.
 ke-ke-lu-ke, *n.* which is full-breasted, as a bird.
 kô-ke-re, *n.* smallness.
 ke-kepê, *v.* to call, to call upon.
 kô...le-gá-ke (li), *v.* to tickle.
 ke-lo, *adv.* how many?
 kô-ni-ú, *n.* a lion.
 ke-re, *v.* to be little.
 ke-re-o-wú, *n.* cotton-seed.
 kô-ri (ko), *v.* to grow dirty, to be filthy.
 ke'-ro-ra (irora), *v.* to cry out for pain, to groan.
 ke-si, *v.* to visit.
 ke-ti, ke-ti-ri, *n.* to be benumbed, asleep, as the foot.
 ke-tõ, *v.* to call upon, to cry to.
 ke-wu, *v.* to read.
 ke, *v.* to indulge, cherish, as a child or wife; to set a snare.
 kê, *v.* to extend, to grow worse, as a sore; to be hoarse; to glow.
 ke-dzõ, *num.* eighth.
 ke-ɕe-do-guŋ, *num.* fifteenth.
 ke-ɕe-dõ-gbõŋ, *num.* twenty-fifth.
 ke-fa, *num.* sixth.
 ke-gãŋ (ko), *v.* to despise.
 ke-gbe, *v.* to associate with.
 ke-hiŋ, *v.* to be last, to follow.
 ke-hiŋ-da-sí, *v.* to turn the back on, to forsake.
 ke-ke, *n.* cuckling, as of a hen; a black squirrel.
 ke-ke, *n.* a wheel of any kind, a distaff.
 kô-ke, *n.* profound silence.
 kô-ke, *adv.* slowly, gradually.
 ke-ke-kpa, *v.* to be dumb, quiet.
 ke-kê-ru, *n.* a wagon, cart.
 ke-kõ (kõ), *v.* to learn, study.
 ke-le, *adv.* gently.
 ke-le-ke-le, *n.* a spy, vanguard;—*adv.* gently.
 ke-le-ká, *n.* calico.
 ke-re, *n.* a kind of mat.
 kô-re, *n.* a simpleton.
 ke-re-de, *v.* to be weak, infirm.
 ke-rin, *num.* fourth.
 ke-rin-lá, *num.* fourteenth.
 ke-saŋ, *num.* ninth.
 ke-ta, *num.* third.
 ke-te-ke-te, *n.* an ass.
 kô-wa, *num.* tenth.
 ke-yõŋ, *n.* the toe itch.

ki? *pron.* what? *ki li eyi?* what is this? *odzó ki odzó, any day whatever.*

ki, *conj.* that: *ki iwọ́ ki ọ́ lóh, that thou go; ki... to, ki... teni, before; ki ó to lóh, before he goes; kī á to lóh, before we go.*

ki, *v.* to be thick, as oil or bushes; to run, to press down.

kí, *v.* to salute.

kī, *v.* to press, load, as a cart.

kī, *adv.* not.

kí-bi-ti, *adv.* in a small compass.

kī-bi-tī, *adv.* in a large compass.

ki... bọ-mi (oni), v. to press into the water, to immerse.

ki-dzi-ki-dzi, *adv.* tremulously (shaking), with quivering.

ki-dzi-kpa, *n.* a kind of coarse cloth.

ki-gbé (ke), v. to cry aloud.

ki-ki, *n.* salutation.

kī-kī, *adv.* only: *kiki wura, pure gold.*

ki-ki-ni, *n.* a small particle or bit.

ki-kọ́n, *n.* that which is full: *kikọ́n oni, a freshet, a flood.*

ki-kun, *n.* which is hard, loud.

ki-kun-ki-kun, *adv.* hardly, loudly.

ki-lọ́, *v.* to warn, caution, threaten.

ki... mọ-lẹ́, *v.* to press to the ground.

ki-ni, *n.* a thing, something.

ki... ni-be-nde, *v.* to strike with the fist.

kí-ni-dze-be', adv. no! not at all!

ki-ni-ki-ni, *adv.* neatly, accurately.

ki-ni-si, *n.* a carpet.

ki'ni-ú. See *kemiu.*

ki-nla? *pron.* what is it?

kiṅ-kiṅ, *n.* a very little portion.

kiṅ-riṅ, *v.* to rub, to curry.

ki-re-dze, *v.* to twist, entangle, as thread.

ki-ri, *v.* to wonder, stroll.

ki-ri, ki-ri-ki-ri, *adv.* about, wanderingly.

ki-ri-bi-ti. See *kibiti.*

ki'ri-mọ́, *v.* to press one, to insist on, to apply closely to work.

ki'ri-kpa, *n.* which is dry and hard.

ki-roṅ (iṛoṅ), v. to pray by rote.

ki-saṅ (kọṅ isan), v. to be nine days.

ki-ta, *v.* to be three days.

ki-ún, *n.* a very little.

ki-we-dze, *v.* to wrinkle.

ki-wọ́-bọ́ (ọwọ́), v. to thrust the hand into.

ki-yaṅ, *adv.* at once.

ki'ye-si, *v.* to notice, look, attend to: *kiyest ará, take care of yourself.*

kī... yó, *v.* to cram full.

ko, *v.* to gather, collect; to grow hard; to take up, as a load; to strike two hard substances together:

ko ámi, to mourn; ko írira, to hate; ko fu, to deliver to; ko wọ́j to mi wáá, bring them to me.

kò, *v.* to meet, confront: *bí ó lè kò, if possible, if it may be.*

kò, *adv.* not: *kò sé kpé, if, suppose that.*

ko-bi-ko-bi, *adv.* thickly (breaking out).

ko'-bi-ta, *n.* riding shoes with spurs.

ko'... dà-nọ́, *v.* to take up and throw away.

kò-dé-de, *adv.* no wonder! no doubt!

ko... dźọ́, *v.* to collect, heap up.

ko-dzu-dza, *v.* to resist, withstand.

kò-fi-ri, *v.* to spy, to happen to see.

ko-guṅ (ogun), v. to inherit, to take property.

ko-ki-ki, *v.* to magnify, extol.

ko-ko, *n.* a knot, protuberance, vein: *koko ọwá, the knuckles; koko ẹsẹ, the ankle.*

kò-ko, *adv.* very much.

kò-ko, *n.* the tania, root and plant.

kò-ko-rò, *n.* a worm, an insect.

ko-ko-se ẹ-se, *n.* the ankle.

ko... kpò. See *ko... dzo.*

ko-lé (ilé), v. to steal from or plunder a house.

kò-le-ra (arà), v. to be feeble, infirm.

kò... lẹ-ru (li), v. to despoil, to rob.

kò-lo-bá, *n.* a mattock.

kò-lo-bo, *n.* an oil-pot, a lamp-filler.

ko... lo-dzú (li), v. to confront.

kò-lo-fiṅ (li), n. a lawless person.

kò-lo-lo, *v.* to stutter.

ko... lóh, *v.* to take away, carry off, lead captive.

ko... lọ-na (li), v. to meet, encounter.

ko... lọ-nọ́ (li), v. to discourage, alarm.

ko-mo-kun, *n.* the muscle between the breasts.

ko-ní-ba-bá, *n.* a fatherless child.

ko... ni-be-nde, *v.* See *ki... ni beṅde.*

ko... ni-dza-nu, *v.* to hold in with a bridle.

ko-ni-gba-gbe, *v.* one who is not forgetful; also a proper name.

kon-ko-to, *n.* a play-god of children, a kind of dove.

ko-re (ere), v. to gather, to reap.

kó'-ri-kò, *n.* grass.

kò'-ri-kò, *n.* the hyena.

ko'-ri-ra, *v.* to hate, abhor.

ko-ro, *v.* to be bitter, spiteful.

ko-ro, *adv.* very, entirely: *okuta là dźalẹ́ koro, the stone split to the very bottom.*

kò-ro, *n.* a smelting-pot, crucible.

ko-ro-ko-ro, *n.* a small brass bell.

ko'-ro-wo, *n.* a ditch.

ko-so, *n.* a kind of drum.

ko-sun (kun), v. to paint red.

ko-ti, *v.* to collect around; to encounter.

ko-to, *n.* a hole, pit, ditch: *koto aiya, the pit of the stomach; koto dźigonroṅ, a deep ravine; koto òke, a valley, glen.*

- kō**, *v.* to learn, teach ; to build, to lay one thing on another (Gen. 21, 14) ; to dig earth into heaps ; to mark, tattoo, write ; to flash ; to call, crow, shout ; to entangle : kō okun, to make a rope.
- kō**, *v.* to be not : euni kō, it is not I ; iwō li oḅa kō? art thou not a king?
- kō**, *v.* to refuse, reject, rebel ; to hang up, to deter.
- kō**, *adv.* not.
- kō-bi**, *n.* tall projecting gables of a royal palace ; hence, a projection.
- kō-dza**, *v.* to pass by, to omit, to be beyond : ó fò soke odzú rē kōdza rēre, it is above far out of his sight.
- kō-dzu-dza-si**, *v.* to resist, oppose.
- kō-dzu-si**, *v.* to face, to attend to.
- kō-gba** (ogba), *v.* to build a fence.
- kōi-kōi**, *v.* indirectly, suspiciously.
- kō-kan**, *num.* one.
- kō-ka-ra**, *v.* to howl aloud.
- kō-kō-ro**, *n.* a hook, a key, a bird's beak : kōkōro gun, the iron pin with which a weaver turns the warp-beam.
- kō-kō-sō**. See kōḅkōsō.
- kō-kù**, *n.* green color.
- kō-kun**, *n.* to make a rope.
- kō-lā**, *v.* to tattoo, to circumcise.
- kō-la**, *n.* the small goorah-nut.
- kō-le** (ilē), *v.* to build a house.
- kō-le**, *v.* to make hills or beds of earth.
- kō...lē** (ilē), *v.* to renounce, forsake.
- kō-lō-fij**, *n.* a secret place, closet.
- kō-lō-kō-lō**, *n.* a beast commonly called the fox, the *casra*.
- kō-lu**, *v.* to assault, to smite.
- kō-ni**, *v.* to teach.
- kō...ni-ya-wō**, *v.* to refuse a betrothed bride.
- kō-no** (ono), *v.* to dread, to stand in fear of.
- kōḅ**, **kōḅ-rin**, *v.* to sing.
- kōḅ**, *v.* to fill, to be full, to feel heavy : owó kōḅ mi, my hands are heavy (Ex. 17, 12) ; omij kōḅ mi, I am sleepy.
- kōḅ**, **kùḅ**, *v.* to hum, murmur, grumble, begrudge.
- kōḅ'-kō-sō**, *n.* a sieve of palm-leaf.
- kōḅ-roḅ**, *n.* the bed of a stream.
- kōḅ-sa**, *v.* to fall or pounce upon.
- kō-ri-si**, *v.* to move towards.
- kō-ro**. See kōḅroḅ.
- kō-sē** (esē), *v.* to trip, to stumble.
- kō-sē-ba**, *v.* to meet by chance.
- kō-ti**, *adv.* heavily, reluctantly.
- kō-we**, *v.* to write.
- kpa**, *v.* to kill, extinguish ; to cut in two ; to crack a nut ; to beat upon, as rain ; to rub, as in polishing ; to peel off bark ; to beat in playing a game ; to relate a parable ; to break up fallow land ; to set up a tent ; to betray ; to hatch ; to make one drunk ; to cease, knock off : cbi kpa mi, I was hungry ; kpa ódzobo, to make a loop or button hole.
- kpa**, *adv.* at once, suddenly.
- kpa!** *interj.* wonderful!
- kpa...dā**, *v.* to turn, return.
- kpa-dā**, *adv.* again, in return.
- kpa...dā-nō**, *v.* to lose.
- kpa...de**, *v.* to shut, close ; to meet with ; to help.
- kpa-de-gun** (ogun), *v.* to meet in battle.
- kpa-de-lù**, *v.* to come in collision.
- kpa-dé-ru**, *v.* to meet together.
- kpa...dže**, *v.* to devour, destroy utterly ; to forget the day of the month.
- kpa-fā**, *n.* a butcher's bench.
- kpa-fē-fē** (afēfē), *v.* to take the air.
- kpa-fō** (afō), *v.* to wallow in mire.
- kpa-gō** (agō), *v.* to pitch a tent.
- kpa-hin-ke-ke** (ehin), *v.* to gnash.
- kpa-ka** (oka), *v.* to thresh corn.
- kpa-ka-dza**, *v.* to adjust one's wrapper.
- kpa-ki-kpa-ki**, *adv.* very (sound in health).
- kpa'-ki-ti**, *n.* a kind of mat.
- kpa-ko**. See akpako.
- kpa-kpa**, *n.* a prairie, a pasture.
- kpa-kpa**, *n.* self.
- kpa-kpa**, *adv.* violently (trembling) ; slammingly.
- kpa-kpa-la**, *adv.* in a shrivelled state, from drying or parching.
- kpa-kpē** (akpē), *v.* to clap the hands.
- kpa...kpō**, *v.* to mingle, to confound or confuse ; to be very abundant.
- kpa...kú**, *v.* to kill.
- kpa-ku-ta**, *n.* a small stewpan.
- kpa-la**, *adv.* with difficulty or with much effort.
- kpa-lā** (ila), *v.* to separate from, divide.
- kpa-lai**, *adv.* by no means.
- kpa-la-ka**, *n.* a fork, as of a stick, or between the fingers.
- kpa...lā-nu** (li), *v.* to make sorry.
- kpa-la-kpa-la**, *n.* which is rough, as a road.
- kpa...la-ra** (li), *v.* to hurt, wound.
- kpa...lā-rē** (li), *v.* to fatigue.
- kpa...la-sē**, *v.* to command, give orders.
- kpa-le** (ilē), *v.* to rub a dirt floor, to plaster.
- kpa-le-mō**, *v.* to set a house in order.
- kpa-le-mō**, *v.* to prepare ground, to prepare.
- kpa...lē-nu-mō** (li), *v.* to put to silence.
- kpa...lē-rin**, *v.* to make one laugh.
- kpa...lē-taj**, *v.* to outwit, deceive.
- kpa-li**, *n.* lids of a book.
- kpa...lo-dzo**, *v.* to intimidate.
- kpa...lo-kpe**, *v.* to fool, to puzzle one.
- kpa...lo-se**, *v.* to paint, color or stain.

kpa-lò (alo), *v.* to propose riddles.
kpa...lòh, *v.* to sail along the coast.
kpa...lò-kan-dà (li òkay), *v.* to convince one; to change or convert him.
kpa...mò, *v.* to keep, preserve; to hide: kpa-mò, to be hid; kpa enu mò, to be silent; kpa oko mò, to gather in a crop; kpa...mò kuro, to withhold; fi ará kpa-mò, to restrain oneself, refrain.
kpa-mò-le, *n.* a viper.
kpa-mò-ra, *v.* to endure, bear.
kpa-ndu-kú, *n.* an uncut gourd.
kpa-ni, kpa-ni-a (nia), *v.* to kill a person, to murder.
kpa-ni-kpa-ni, *n.* a murderer.
kpa...ni-ye, *v.* to confuse.
kpa...ni-ye-dà, *v.* to persuade; to change one's mind.
kpa-nsa, *n.* See kpa-ndukú.
kpa-nsa-i-lè, *n.* a grave.
kpa-nsa-ga, *n.* adultery, an adulteress.
kpa-nti-ri, *n.* a bramble.
kpañ-huñ, *adv.* at one blow, at once.
kpa-ra (ará), *v.* to hurt oneself; to anoint oneself.
kpa-rá, *n.* the plate or timber laid on the top of the piazza posts.
kpa-rá, *adv.* with a sudden noise.
kpa-ra...dà, *v.* to turn around; to change; to disguise oneself.
kpa-ra-mò, *v.* to restrain oneself, to keep close, to be humble.
kpa-re, *v.* to fade away, put out, destroy.
kpa-ri, *v.* to finish, come to an end; to conclude from premises; to be bald-headed.
kpa-ri, *n.* the jaw-bone.
kpa'-ri-dà, *v.* to turn a thing about, to change its course.
kpa-ri-wo (ariwo), *v.* to make a noise.
kpa-ro, *v.* to exchange, barter; to change the character or purpose.
kpa...ro-ro, *v.* to still a commotion or a storm.
kpa-ru-bo, *v.* to kill a sacrifice.
kpa-runj, *v.* to rub out, to destroy, consume, abolish.
kpa-sá, kpa-šan, *n.* an oyster.
kpa-šan, *n.* a whip.
kpa-şé (aşé), *v.* to command, enact.
kpa-şi-kpa-ro, *v.* to exchange, barter.
kpa-ta, *v.* to prepare, make ready.
kpa'-ta-ki, *n.* which is chief, principal.
kpa'-ta-kò, *n.* a wooden shoe, a hoof.
kpa-ta-kpa-ta (ototo), *adv.* entirely, altogether.
kpa-ti, *v.* to be forcible, violent.
kpa-ti-kpa-ti, *adv.* forcibly, violently.
kpa-ti-re, *n.* a switch, twig.
kpa-to, kpa-to-to (atoto), *n.* to make a noise.

kpé, *conj.* that, to wit.
kpé, *v.* to complete, perfect; to last long: owò kpé, the money is right; iwà rẹ kpé, his character is perfect.
kpè, *v.* to call, to invite, to assemble: fi...kpè nkay, to esteem.
kpè-dzò, *v.* to call an assembly, to assemble.
kpe-ge-de, *v.* to be right, proper.
kpe-na (ena), *v.* to call an assembly, to assemble.
kpe-kpe-le, *n.* a bank of earth in a room to sleep on.
kpe-re, *adv.* only.
kpe-ri, *v.* to mean, to say.
kpé...ro, *v.* to drill soldiers, to form a line.
kpè-se (kpa), *v.* to prepare.
kpe-te (kpa), *v.* to intend, to think of doing, devise.
kpè, *v.* to stay long at a place, to last long.
kpè'-hín-dà (kpa), *v.* to turn the back on.
kpè-ka (kpa), *v.* to shoot forth branches.
kpè-kè-kpe-kè, *n.* which is streaked, speckled.
kpè-kunj, *v.* to terminate, come to an end.
kpè-kpe, *adv.* gently (striking).
kpè-kpé, *n.* a slip of wood, a shelf, an altar; a bird-snare; a shell.
kpè-kpe-kunj (òkunj), *n.* a sea-shell.
kpè-kpéi-ye, *n.* a duck.
kpè-le, *adv.* gently.
kpè-le-be, *v.* to be flat.
kpè-le-kpé, *n.* a kind of wild dog.
kpè-lu, *conj.* also;—*prep.* with, in: kpèlu ayò, with joy; kpèlu ẹ́şé, in sin.
kpè-lu-kpè-lu, *adv.* moreover, besides, yea.
kpèñ-şan, *n.* a crushing: şe kpèñşan, to crush.
kpè-re, *v.* to be soft;—*adv.* gently.
kpè-rẹ, *adv.* suddenly.
kpè-rẹ-kpè-re, *adv.* (tearing) into rags or pieces; very much.
kpè-se, *adv.* gently, easily.
kpè-se-kpe-se, *n.* gentleness of conduct or disposition.
kpè-se-mò (kpa), *v.* to restrain the feet, slacken one's pace.
kpè-te-lè, *n.* level ground, a plain.
kpè-te-kpè-re, *adv.* comfortably.
kpè-te-kpè-te, *n.* mud, mire.
kpi, *adv.* entirely, wholly.
kpi-danj (idanj), *v.* to perform sleights of hand, to juggle.
kpi-dzè (kpa), *v.* to pull or cut grass for feed.
kpi-kpa, *n.* which is to be slain.
kpi-kpé, *n.* perfection.
kpi-kpò, *n.* much, abundance.
kpi-lè-şe, *v.* to commence.
kpi-mò (kpa), *v.* to counsel, suggest.
kpi-nu, *v.* to bargain, purpose, conclude, resolve.

kpɪŋ, *v.* to share, divide; to terminate.
 kpɪŋ-i-ya, *v.* to divide, separate.
 kpɪŋ-huŋ (òhun), *v.* to conclude a bargain or agreement.
 kpɪŋ-kpɪŋ, *adv.* fast or tightly, closely.
 kpɪŋ-lɛ (ilɛ), *v.* to terminate.
 kpɪŋ-ya, *v.* to divide, separate.
 kpi-taŋ (kpa), *v.* to relate traditions, to recount old events.
 kpi'-wa-dà (kpa... dà), *v.* to reform, repent.
 kpi'-ye-dà, *v.* to change the mind.
 kpi-yɛ (kpa), *v.* to plunder.
 kpo, *v.* to knead.
 kpò, *v.* to smelt.
 kpò'-huŋ-re-re, *v.* to cry aloud, bewail.
 kpo-kpo-ndo, *n.* a large wild bean.
 kpo'-kpo-rò, *n.* a corn-stalk.
 kpoŋ-šɛ, *n.* a nut of which snuff-boxes are made.
 kpò-ri, kpò-ri-ri (ori), *v.* to whirl around.
 kpo-riŋ (irin), *v.* to smelt iron ore.
 kpo-ro-kpo-ro, *adv.* talkatively.
 kpo-si, *n.* a coffin.
 kpo-tu-tu (kpa), *v.* to feel cold.
 kpo-we (kpa), *v.* to speak a parable.
 kpo, *v.* to vomit.
 kpò, *v.* to be abundant, great, common, cheap: kpò si, to multiply or increase.
 kpò, *v.* to turn from, to separate, turn away. (Gen. 14, 8.)
 kpò, *adv.* in common, together.
 kpo-kò, *n.* a kind of calabash.
 kpò-mò, *v.* to be mixed, mingled.
 kpòŋ, *v.* to be red, to be ripe; to sharpen, whet; to flatter, make much of: kpòŋ rusurusu, to be brown.
 kpòŋ, *v.* to carry on the back; to dip up.
 kpòŋ-gá, *n.* sticks placed across a grave to prevent the earth from falling in.
 kpòŋ...lò-dzu (li), *v.* to afflict, torment, oppress.
 kpòŋ-mí (omi), *v.* to draw or dip water.
 kpòŋ-mu, *v.* to whet, sharpen.
 kpòŋ-šò, *v.* to ripen, as corn.
 kpòŋ-ti (oti), *v.* to brew.
 kpo-si, *v.* to increase.
 kpo-si-lé, kpo-so-de (ilé, ode), *v.* to be busy in and out.
 kpo-tò-kpo-tò, *v.* mud, mire.
 kpù, *adv.* precipitately.
 kpu-kpa, *v.* to be red;—*n.* redness: kpu-kpa ɛvin, the yolk of an egg.
 kpu-kpò. See kpi-kpò.
 kpu-rò (kpa irò), *v.* to fib.
 kpu-tu, *adv.* well, foamingly lathering, as soap.
 kú, *v.* to die, to wither, to terminate, to come short; to be blunt or dull.

kù, to sift, to run here and there, to thunder mutteringly: kù èkuru, to throw dust.
 ku-bu-si, *n.* a blanket; peaty earth.
 ku-dòŋ, *v.* to be fond of, to love.
 ku'-du-ru, *n.* the globular form; bread of bean-flour.
 ku-fe-ku-fe, *n.* braggadocio.
 ku-gbè, *v.* to perish.
 ku-gbɛ, *v.* to die in the bush: o kugbɛ! may you die in the bush!
 ku-gbu, *v.* to charge furiously; to be presumptuous.
 kù-hu, *adv.* loudly shouting.
 ku-kpa, *v.* to be very busy.
 ku-ku, *adv.* rather.
 kù-ku, *n.* a corn-cob.
 ku'-ku-mò, *n.* a tuwè.
 ku-ku'-ndu-ku, *n.* the sweet potato.
 ká-ku-ru, *n.* shortness.
 ku'-ku-te, *n.* stem or boll of a tree.
 ku-mbu, *n.* a coney (hyrax).
 ku-mò, *v.* to cleave to, as dust.
 kù-mò, *n.* a cudgel.
 ku-na, *v.* to be smooth, fine, as thread or meal.
 kuŋ, *v.* to burn, to enkindle.
 kùŋ, *v.* to remain, to luck; to daub, paint, anoint; to be busy here and there: kùŋ si dɛdɛ, to be near, at hand.
 kuŋ-kuŋ, *v.* to purr.
 kuŋ-kuŋ, *adv.* loudly, aloud.
 kuŋ-le (ilé), *v.* to plaster a house.
 kuŋ-lɛ, *v.* to kneel.
 kuŋ...si-lɛ, *v.* to spare, to give up.
 ku-ro, *v.* to get out of the way: kuro ni, kuro ninò, from, from in; ó dɛdɛ kuro ní ilé, he went out of the house.
 ku-ru, *v.* to be short.
 ku'-ru-ba, *n.* a pail, a bucket.
 ku-ru-hà, *n.* the cry of a hen when she sees a hawk.
 ku'-ru-kù, *n.* fog, mist, cloud.
 ku'-ru-má! *adv.* no, not at all!
 ku-sa, *v.* to make a bold attempt.
 ku-sa-ta, *n.* a compound or block of houses.
 ku-si, *v.* to torment.
 kù-tà, *v.* to find dull sale, to sell a thing slowly.
 kù-tu-kù-tu, *n.* very early in the morning.
 ku-ye, *v.* to be forgetful.

L.

lá, *v.* to lick; to dream.
 là, *v.* to split; to wade; to appear; to pass through, escape, be safe; to be rich: là imò, to devise.

lā-ba, *n.* a leathern bag, satchel.
 la-ba-la-ba, *n.* a butterfly.
 la-ba-mò-lẹ, *n.* robbers, kidnappers.
 la-bẹ (li), *prep.* under, beneath: á sùn labẹ igi, *we slept under a tree.*
 la-bu-lā-bu, *n.* fresh ashes.
 là-dì (idi), *v.* to explain, to prove.
 la-dì-ro, *n.* a beer-strainer.
 la'-du-gbo, *n.* a large earthen pot.
 là-dzá (idzá), *v.* to reconcile, to pacify.
 là-dzá, *v.* to pass through, traverse.
 là-dzó (edzó), *v.* to settle a dispute.
 la-ga, *n.* the brow-band of a bridle.
 la-gba, *n.* a horse-whip.
 la-gba-mọ, *n.* the brow-band of a bridle.
 la-gba-ra (li), *v.* to be strong.
 là-gi (igi), *v.* to split wood, to saw into boards.
 la'-go-go (lù), *v.* to ring a bell.
 là-gun (ogun), *v.* to sweat, perspire.
 lai (li ai), *a prefix*, implying not having, without: as, laiḅeru, *without fear, fearless*; à ma fi fu ni lai-gbówó (li ai gbà), *he gives to us without money.*
 laf, laf-laf, *adv.* ever, for ever.
 laf-laf, *n.* oldness, ancientness: ile lailai, *a very old house.*
 lai-kpe, *adv.* soon, quickly.
 lai-ku-ku, *adv.* not rather.
 lai-le-wu (li), *v.* to be without danger, safe, secure.
 lai-lẹ-sẹ (li), *v.* to be free from sin, sinless.
 lai-lo-wó (li), *v.* to be destitute of money, moneyless.
 lai-ní, *adv.* and *prep.* in need of, without: ọ lóh laini bata, *he went without shoes.*
 lai-ní-dí (idi), *adv.* without cause: ọ ba mi wi lainidí, *he reproached (ba...wi) me without cause.*
 lai-sẹ (sẹ), *adv.* without sinning or being in fault: nwoy kpa à laisẹ, *they killed him without sin*, i. e. *without his being guilty of offence.*
 lá-ka-ka, *v.* to strive to do a thing.
 lá-ka-lá-ka, *v.* to hop on one leg.
 lá-ki-ri, *n.* patience, clemency.
 lá-ki-sẹ, *adv.* however.
 lá-ko-ko (li), *adv.* punctually, at the time: lakoko ná, *then.*
 lá-ko-tan, *adv.* finally, in short.
 la-ko, *v.* to gain a prize, to win a race.
 lá-kpa-ta, *n.* a kind of fried cake (masa).
 la-kuf-e-gbé, *n.* a kind of rheumatism.
 là-lā, *n.* trouble, annoyance.
 la-lá (alá), *v.* to dream.
 là...lọh, *v.* to go through.
 la..lọ-na, *v.* to ordain, decree, enact.
 là-mọ (imọ), *v.* to devise.
 la-mọ-ran (la imọ ọran), *v.* to plan, advise, propose.

la-na (li), *adv.* yesterday.
 là-na (ọna), *v.* to open a road; to propose, decree.
 là-nú (li), *v.* to be merciful.
 la-ra (li), *prep.* on, in, from: gbesan mi lara ọta mi, *avenge me on my enemy*; lara igi tutu, *in the green tree*; gbe wọj lara mi, *take them from me*, i. e. *deliver me.*
 la-ra (li), *v.* to be stout of body, bulky, fat.
 là-ra, *n.* the castor-bean.
 là-re (li), *v.* to be tiresome.
 là-ri, *v.* to prove, make manifest.
 la-riy (li), *prep.* in the midst of, amongst: larin kán, *once, before or previously.* See lẹrin kíj.
 là-san (li), *adv.* in vain, vainly: ọnia lāsán, *trifling people.*
 la-sẹ-ràn, *v.* to cause infection, to be infectious.
 la-ti, *prep.* from, often followed by a pleonastic verb; as, ọ mu ù lati oko wál, *he brought it from the farm*; lati ọdọ, *from*, when the object is a person; lati ọwọ, *by the hand of, by*; ọ ran à lati ọwọ maleika, *he sent it by the angel.*
 la-to-ri (lati ori), *conj.* because of.
 la-wa-ni, *n.* a belt, a girdle.
 la-wu, *adv.* all's well: alaḅa kò wà? *is it peace?* lawu, *it is.*
 la-wu, *adv.* very (white).
 la-ye, *v.* to be spacious, roomy.
 la-yè (li), *v.* to be alive;—*n.* a living animal.
 lẹ, *v.* to be strong, hardy, healthy; to be more than, above, overhead: mu mi lẹ, *make me strong*; owó lẹ ọta, *the money is three (cowries) too much*; ọ gbe nibẹ ló ni idọ nẹwa, *he stayed there more than ten days.*
 lẹ, *v.* to lay upon; to appear; to drive, pursue; to blister.
 lẹ, *prep.* on, upon: fi ló ilẹ, *put it on the ground.*
 lẹ, *v.* is able, can, may.
 le-bí (li, to have), *v.* to be hungry.
 lẹ-gun (ogun), *v.* to prevail in battle, to beat back the enemy.
 le-ke (li ọke), *prep.* above;—*adv.* up.
 le-ke (li ọke), *v.* to be above, to be prominent, exalted.
 le-ke-le-ke, *n.* an egret.
 le-kpa (ikpa), *v.* to follow, pursue.
 le-lẹ, le-ilẹ, *v.* to be satisfied, at ease;—*adv.* down, on the ground: kò lelẹ, *to be troubled, perplexed*, with ọkan, *heart*, or ará, *body*, for the nominative.
 le-ra (ara), *v.* to be strong, healthy.
 le-re (ire), *v.* to hasten, urge forward.
 lẹ-re (li), *v.* to be profitable.
 le-ri (lù ori), *v.* to promise, lit. to strike the head (forehead, with the hand).
 le-ri (li ori), *prep.* on, upon.

le...sɔ-nɔ̄, *v.* to drive away in theft.
 lɛ...sɛ, *v.* to compel: ɔ le mi sɛ ɛ̄, he compelled me to do it.
 le-ti (li, to have), *v.* to be obedient, docile.
 le-ti (li, on), *prep.* by.
 le-wu (li), *v.* to be grey-haired.
 lɛ, *v.* to be sluggish, lazy.
 lɛ, *v.* to be evening; to lay one thing lightly on another, to engraft, transplant: aɛ̄ lɛ, it is evening (nearly dark).
 lɛ̄, *v.* to replenish, to patch; to be elastic, pliable; to be strong, as the wind.
 lɛ̄, for milɛ̄, *adv.* down, on the ground.
 lɛ̄-ba (li), *prep.* by, at, &c.; by the side of, applied to things near the ground.
 lɛ̄-bɛ̄, *n.* anything narrow and flat, a fn.
 lɛ̄-bu-lɛ̄-bu, *n.* new ashes.
 lɛ̄-hɛ̄, *adv.* well, that's right.
 lɛ̄-hiŋ (li), *prep.* and *adv.* after, behind, outside: ɔ̄ mbɔ̄ lɛ̄hiŋ wa, he is coming behind us.
 lɛ̄-hiŋ-lɛ̄-hiŋ, *adv.* backwards.
 lɛ̄-kán, *adv.* once, first: lɛ̄kɔd̄zi, secondly; lɛ̄mɛ̄-d̄zi, twice; lɛ̄mɛ̄ta, lɛ̄kɛ̄ta, &c.
 lɛ̄-lɛ̄, *n.* which is yielding, elastic, as air.
 lɛ̄-rin-kán. See lɛ̄kán.
 lɛ̄-rɔ̄, *v.* to be skilful.
 lɛ̄-ru (li), *v.* to be terrible, dreadful: ibi yi lɛ̄ru tó! how dreadful is this place!
 lɛ̄-sɛ̄-sɛ̄, lɛ̄-sɛ̄-ɛ̄-sɛ̄, *adv.* in a row, in regular order.
 lɛ̄-sɛ̄-karj-ná, *adv.* immediately.
 lɛ̄-sɔ̄-lɛ̄-sɔ̄, *adv.* carefully, strictly.
 lɛ̄-wu, *n.* down at the foot of palm leaves, used for tinder.
 li, euphonic for ni, to be, to have, to say. See ni.
 li-bi-si? (ili), *adv.* where?
 li-bo? (li), *adv.* where?
 li-d̄zɛ̄-ta (li), *adv.* three days ago.
 li-kpo (li), *prep.* for, instead of.
 li-le, li-le-li-le, *n.* which is hard, violent, strong.
 li-li, *n.* a kind of porcupine.
 li-li-lí, *adv.* by littles, scatteringly.
 lɔ̄, *v.* to use; to bend, to be elastic: lɔ̄ gbó, to wear out; lɔ̄...ni mim̄ɔ̄, to use sacredly, to sanctify. (Ex. 20, 8.)
 lɔ̄-bo-tú-d̄zɛ̄, *n.* the physic-nut (enrcans).
 lɔ̄-de (li), *adv.* outside.
 lɔ̄-di (li), *adv.* contrarily.
 lɔ̄-do (li), *adv.* below.
 lɔ̄-d̄zi-d̄zi, *adv.* suddenly, abruptly.
 lɔ̄-d̄zo (li), *v.* to be timid, cowardly.
 lɔ̄-d̄zo-d̄zu-m̄ɔ̄, *adv.* dully.
 lɔ̄-d̄zú (li), *v.* to be attentive, observant: ɔ̄raŋ mi lod̄zú, my affairs are prosperous, in good condition.
 lɔ̄-d̄zú, *prep.* before, in the presence of.

lɔ̄-d̄zú-karj-ná, *adv.* immediately.
 lɔ̄-d̄zú-rɛ̄-re, *adv.* favorably, graciously.
 lɔ̄-ke (li), *adv.* above, up, on, beyond.
 lɔ̄-ki-ti, *n.* a false-bottomed vessel for straining potash.
 lɔ̄-ni (li), *adv.* to-day.
 lɔ̄...ni-mi-m̄ɔ̄, *v.* See lɔ̄.
 lɔ̄-ri (li), *prep.* on, upon.
 lɔ̄-ri, *v.* to whirl.
 lɔ̄-ru (li), *adv.* by night.
 lɔ̄-sɔ̄, *v.* to squat like a dog, to crouch.
 lɔ̄-ti-t̄ɔ̄ (li), *adv.* truly.
 lɔ̄-t̄ɔ̄ (li), *adv.* truly, verily.
 lɔ̄-yún (li), *v.* to conceive, be pregnant.
 lɔ̄, *v.* to play a stringed instrument.
 lɔ̄, *v.* to be lukewarm.
 lɔ̄, *v.* to engraft, to transplant; to wring, to grind; to be twisted, crooked, contrary; to wrest the meaning of one's words; to cry lost goods; to investigate, compare.
 lɔ̄-dɔ̄ (li), *prep.* by, with, among. (Gen. 24, 40.)
 lɔ̄-dɔ̄-dun (li), *adv.* yearly.
 lɔ̄-d̄zɔ̄-d̄zɔ̄ (li), *adv.* daily.
 lɔ̄-fɛ̄, *adv.* early in the morning.
 lɔ̄-gaŋ (li), *adv.* instantly, immediately.
 lɔ̄h, to go, used adverbially in the sense of off, away: gbe ɛ̄ lɔ̄h, take it away, pleonastic after d̄zú, very; as, dara d̄zú lɔ̄h, very good.
 lɔ̄-huŋ (li), *adv.* yonder.
 lɔ̄-kɔ̄-karj (li), *prep.* towards, opposite to.
 lɔ̄-kpɔ̄-k̄ɔ̄, *v.* to grow, fill up, as an ear of corn.
 lɔ̄-lá (li), *adv.* to-morrow.
 lɔ̄-l̄ɔ̄, *adv.* lately.
 lɔ̄...lɔ̄-rɔ̄ŋ, *v.* to strangle, choke.
 lɔ̄-ra (li), *v.* to be slow, to linger.
 lɔ̄-rɔ̄ (li), *v.* to be rich.
 lɔ̄-rɔ̄ (li), *v.* to be eloquent.
 lɔ̄-san (li), *adv.* by day, at noon.
 lɔ̄-sɔ̄ (li), *v.* to be adorned, ornamented.
 lɔ̄-tɔ̄ (li), *v.* to be distinct, separate, different.
 lɔ̄-wɔ̄, *prep.* from: yi ɔ̄ b̄re r̄ɛ̄ lɔ̄wɔ̄ nyin, he will demand it of or from you; á sɛ̄ ɛ̄ lɔ̄wɔ̄ mi, it was done by me.
 lɔ̄-wɔ̄-lɔ̄-wɔ̄. See lɔ̄lɔ̄.
 lɔ̄-wɔ̄-wɔ̄, *adv.* lukewarmly:—*n.* lukewarmness.
 lu, *v.* to bore, to scuttle; to be discovered.
 lú, *v.* to mingle, adulterate.
 lù, *v.* to strike, knock; to make a move, as in chess; to beat a drum, to play a stringed instrument: sá lù, to flee against. (Ex. 14, 27.)
 lù...bɔ̄-lɛ̄, *v.* to beat down, destroy.
 lù...d̄za, *v.* to break into, as a house.
 lu-ha, *v.* to be difficult, abstruse.
 lu-kò-ro, *v.* to hint or insinuate against one.

lù...kpa, *v.* to smite fatally, to slay.
 lu-ḷe (ilè), *v.* to strike down;—*adv.* down.
 lu-lu, *adv.* entirely (burnt up).
 lu-mò, *v.* to be hid.
 lú-ru, *n.* powder of dried leaves, for sauce.
 lu-wè, *v.* to bathe, to swim.

M.

ma, an auxil. particle, conveying the idea of continued action.
 mā, *adv.* very, truly, well: o mā ṣeun, you are very kind; eṣiṣ mā sare, the horse runs rapidly.
 ma-de-ko-so, *n.* a strolling beggar, who tells news for a living.
 má-di-mi-lò-ruṅ (máh di mi li orun), *n.* a drop-sical person.
 ma-do-fuṅ, *n.* white leather.
 má-dža-la, *n.* flakes of burnt grass which fly through the air.
 ma-dže-re, ma-dže-we, *n.* a saddle-girth.
 ma-dže-si, *n.* a child.
 má-dže-mu (máh), *n.* a covenant.
 ma-ga-dži, *n.* an heir, especially the first-born.
 máh, *adv.* not: emi kò lè ṣe máh wi, I must speak.
 ma-ha-ru, *n.* the hovel of a wild beast.
 ma-ká-lu, *n.* a forked stiek.
 ma-ka-ri, *n.* compasses, dividers.
 ma-lā-džu, *n.* a kind of rat.
 ma-lei-ka (Arab.), *n.* an angel.
 ma-lù', *n.* an animal of the cow kind: akò malù, a bull; abò malù, a cow; omò malù, a calf.
 ma-mò-dža, *v.* to guess, conjecture.
 ma-na-ma-na, *n.* a kind of snake.
 ma-na-ma-ná, *n.* lightning.
 má-ra-du-ro (mu ará), *v.* to restrain oneself.
 ma-raṅ-ma-raṅ, *adv.* in a bright dazzling manner.
 ma-ra-ruṅ, *num.* the whole five, by fives.
 ma-ri-ma-dže, *n.* a person who has no regard for kinds of food.
 ma-ri-wò, *n.* strips of palm leaf, a garland.
 ma-sa, *n.* a kind of pancake.
 ma-so, *adv.* only, even.
 ma-ša-la-še, *n.* a mosque.
 ma-še-gbiṅ, *n.* a kind of antelope.
 mā-ta-ká, *n.* a smith's hammer.
 ma-te, *n.* a kind of snare.
 ma-tò, *n.* which is sacred, not to be touched;—*interj.* hands off!
 ma-wò (mu áwo), *v.* to assume the form or nature of.
 ma-ya-fi, *n.* a sash, belt.
 ma-ya-mi, *n.* a hunter's bag for bullets, &c.

mbè, *v.* to be.
 mbè, *adv.* for nibè, there.
 mbi, *conj.* or.
 me-dže, *num.* seven.
 me-dže-dže, *num.* by sevens, the seven.
 me-dže-dži, *num.* the two, both.
 me-dži, *num.* two: me-dži me-dži, a pair.
 mē-lo? *adv.* how many? many (Acts 24, 10): iye eḡbèraṅ mélo? how many thousands?
 mē-lo-kánj, *pron.* some, certain ones.
 mē-lo-mē-lo, *adv.* how much more.
 mē-ro (mu èro), *v.* to consider, meditate.
 me-te (mu), *v.* to reflect, consider.
 mē-do-guṅ, *num.* sixteen.
 me-džāṅ-me-džāṅ, *adv.* with a spring, in an elastic manner.
 me-dže-džò, *num.* the eight, by eights.
 me-džò, *num.* eight.
 me-fa, *num.* six.
 me-fe-fa, *num.* the six, by sixes.
 me-gbè, *n.* a mealy yam or potato.
 me-ne, *n.* a kind of broom-grass.
 me-re-riṅ, *num.* the four, by fours.
 me-riṅ, *num.* four.
 mē-rò (mò), *v.* to be skilful.
 me-še-ri (mu), *v.* to be rancid.
 me-ta, *num.* three.
 me-ta-lò-kaṅ, *n.* which is trine.
 me-te-ta, *num.* the three, by threes.
 me-wa, *num.* ten.
 mē-wa (mò), *v.* to be a judge of beauty.
 mí, *pron.* me, my.
 mí, *v.* to breathe: mí sí, to inspire; mí heḷe, to pant.
 mī, *v.* to shake; to swallow.
 mí-e, *pron.* See mirap.
 mi-mò, *n.* cleanness, purity, holiness.
 mi-mu, *n.* sharpness.
 mi-raṅ, mi-re, *pron.* another, other.
 mo, *pron.* I.
 mo-džu-ku-ro (mu), *v.* to be inattentive, to connive at, to impute not.
 moi-moi, *n.* a kind of cake.
 mo-kuṅ (mu), *v.* to receive strength, grow strong.
 mò-re (mò), *v.* to be grateful.
 mo-ru (mu), *v.* to be sultry.
 mo-ye (mò), *v.* to be perceiving, intelligent, discreet.
 mọ, *v.* to drink, to suck; to build or form of clay.
 mọ, *v.* to be light (as day), to shine, to be clear, clean, holy; to adhere.
 mọ, *adv.* again; after a negative, more.
 mọ, *v.* to know, to understand; mò sí is employed as a substitute for the verb to mean; as, ki li á kè mò eyi sí? what does this mean? ḡ ḡ mò mí bí á tí ba mò eyi sí, it puzzles me as to what this means.

mọ-di (odi), *v.* to build a wall.
 mọ-du-mọ-du, *n.* brains, marrow.
 mọ-dze (adže), *v.* to try by water ordeal.
 mọ-dzú (odzú), *v.* to be tame.
 mọ-dzu-mọ, *v.* to be light in the morning, to dawn.
 mọ-kan-lá, *num.* eleven.
 mọ-kpa-ra (ará), *v.* to get drunk.
 mọ-kun, *v.* to be lame.
 mọ-le, *v.* to build a house.
 mọ-lẹ (ilẹ), *adv.* to the ground.
 mọ-lẹ, *v.* to conspire; to shine.
 mọ-lẹ-wu, *n.* the grape-vine.
 mọ-ra (ará), *adv.* closely, near to one.
 mọ-ran (mọ), *v.* to know the law as to disputes,
 to be wise.
 mọ-tí (mu), *v.* to drink spirits.
 mọ-tí-mọ-tí, *n.* a drunkard; a gnat called "the
 drunkard."
 mọ-tí-mọ-tí, *adv.* closely joining, hard by.
 mọ-tí-yó, *v.* to get drunk.
 mu, *v.* to drink, to suck, to absorb.
 mū, *n.* rice.
 mú, *v.* to catch, to hold; to be sharp; before an
 accusative and verb, to cause; as, ó mú mi duro,
 he caused me to stand, he upheld me; mú òna
 kpon, go your way.
 mù, *v.* to sink, to disappear, as in a crowd.
 mu...ba, *v.* to fit or adapt to; to employ as a
 means.
 mu...be-ru, *v.* to make afraid.
 mu...dže, *v.* to devour, as a wild beast does.
 mu...dži-na, *v.* to heal a wound.
 mu...džú-tó (odžú), *v.* to see to, attend to.
 mu...gọ, *v.* to fool one.
 mu...ka-le, *v.* to spread, as famine or pestilence.
 mu...kọn, *v.* to fill.
 mu...kpa-dá, *v.* to bring back, restore.
 mu...lá, *v.* to save.
 mu...la-ra-dá (li), *v.* to heal.
 mu...lé, *v.* to strengthen.
 mu-lẹ (ilẹ), *v.* to stand firmly, to confirm.
 mu-nú, *v.* to be active, fiery.
 mu-ra (ará), *v.* to prepare oneself, make ready.
 mu...rọ-lẹ, *v.* to tranquillize.
 mu-su-lu-min' (Arab.), *n.* a Mohammedan.
 mu...šẹ, *v.* to bring to pass, to fulfil.
 mu...wáh, *v.* to bring, to fetch.
 mu...wọ, *v.* to bring in, introduce, entertain a
 guest.

N.

n, *adv.* See nn.
 na, *adv.* already, now.
 ná, *pron.* that, the same, the.

ná, *v.* to spend money.
 nà, *v.* to flog; to stretch, extend.
 na-dža (òdža), *v.* to trade, traffic.
 na-ga (iga), *v.* to stretch in reaching up.
 na-gu-dù, *n.* a kind of trousers.
 na-hun (òhun), *v.* to extend the voice, to speak
 aloud.
 na-mai, *n.* a ring with which the bow-string is
 drawn.
 na-na, *n.* madam.
 na-ni, *v.* to be careful of, to make much of.
 nan, dan? *interrog. interj.* ch?
 na-ro, *v.* to stand erect.
 na-sá-ra (Arab.), *n.* a Christian.
 nà...sílẹ, *v.* to let down from above, to lower.
 na-wo (owó), *v.* to spend.
 na-wo-na-wo, *n.* a spendthrift.
 nà-wọ (owó), *v.* to extend the hand, to pass from
 hand to hand.
 ndan, *adv.* not. See nan.
 ndau, nda-wo, *adv.* no.
 nde, *v.* to arise, get up.
 ndže, *adv.* then, therefore.
 ne. See na.
 ne-ga. See naga.
 ni, *v.* to be, it is, it was.
 ní, *prep.* in, on, at: ni bi, whereas, that whereas.
 ní, *v.* to have, to own; must.
 ní, *v.* to say.
 ní, *v.* to load a canoe or ship.
 nì (eni), *pron.* one, person, us, that, the.
 ni-bai, ni-ba-yi, *adv.* there, yonder.
 ni-bẹ (ibẹ), *adv.* there.
 ni-bi, ni-bi-yi, *adv.* here, hence.
 ni-bi-kan, *adv.* somewhere.
 ni-bi-ki-bi, *adv.* wherever.
 ni-bi-ti, *adv.* where, whence.
 ni-bo, ni-bo-ti, *adv.* where, whence.
 ni-bo-mi-ran, *adv.* elsewhere.
 ni-bu, ni-bū-bu, *adv.* crosswise.
 ni-dá-ye-dá-ye, *adv.* now and then.
 ni-dí, ni-dí-tí, *prep.* about, concerning.
 ni-dže-fa, *adv.* six days ago.
 ni-dže-rin, *adv.* four days ago.
 ni-dže-ta, *adv.* day before yesterday.
 ni-džọ-gbo-gbo, *adv.* every day, daily.
 ni-džọ-kan-lọ-gbọn, *adv.* seldom.
 ni-gbà, ni-gbà-tí, *adv.* when, while.
 ni-gba-gbo-gbo, *adv.* always.
 ni-gba-ku-gba, *adv.* at any time, often.
 ni-gbà ná, *adv.* then, at that time.
 ni-gba-ni, *adv.* anciently, in old times.
 ni-gban-gba, *adv.* publicly, openly.
 ni-gba-wo? *adv.* when?
 ni-gba-yi, *adv.* now, at this time.

ni-gbẹ-hiṅ, *adv.* afterwards, hereafter, at last.
ni-gbo-se, *adv.* by and by, after a while.
ni-ha, *adv.* near, alongside, about.
ni-hiṅ', **ni-hiṅ-yi**, *adv.* here, hence.
ni-hò-ho, **ni-hò'-ri-ho**, *v.* to be naked.
ni-kan, **ni-kan šo-šo**, *adv.* alone, singly, only.
ni-ke-hiṅ, *adv.* at last, lastly.
ni-kò, *adv.* Sec nkò.
ni-kò-kò, *adv.* in private, secretly.
ni-kpa, **ni-kpa-tí**, *prep.* by, concerning, as to, according to.
ni-kpa-se (ese), *prep.* by (means of).
ni-kpe-kun, *v.* to have an end, to terminate.
ni-kpò, *prep.* instead of, in the room of.
ni-kpọṅ, *v.* to be thick, as a board.
ni-ku-sa, *prep.* near, close to.
ni-lá (nlá), *v.* to be large.
ni-lai-lai, *adv.* anciently.
ni...la-ra (li arí), *v.* to annoy, vex, press, as a job of work.
ni-lẹ (ni), *adv.* on the ground, down.
ni-lọ-lọ, *adv.* lately, recently.
ni-nà, *n.* extent, extension.
ni-ni, *adv.* quite (cold): tutu nini, to flourish, as a plant. (Ps. 92, 14.)
ni-ni, *n.* a hail-stone.
ni-ni, *n.* property, possessions; an owner.
ni-nò, *prep.* inside, within, among, in.
ni-raṅ, *v.* to remember.
ni-sa-lẹ, *prep.* below, beneath.
ni-si, *v.* to be concerned about, to care.
ni'si-si, **ni'si-si-yi**, *adv.* now.
ni-sà-dzu, *adv.* before, formerly.
ni-ti, **ni'ti-tí**, *prep.* in that, for that, for, concerning, in, of, from.
ni'ti-kpé, *conj.* as to, in regard to that.
ni'to-ri, **ni'to-ri-tí**, *conj.* because, for, for the sake of;—*prep.* for, concerning.
ni-to-ri-ná, *adv.* therefore, wherefore.
ni'to-si, *prep.* near.
ni'tò-tò, *adv.* in truth, truly.
ni-wà (ni), *v.* to be amiable, of a good disposition.
ni-wà-dzu, *prep.* and *adv.* before.
ni-wo-yi, *adv.* now.
ni-wọṅ, *adv.* moderately; at the time of.
ni-wọṅ-bí, *adv.* inasmuch as.
ni'-ye-nò (iye inò), *v.* to be intelligent.
ni-yiṅ, *v.* to be praised, honorable.
nlá, *v.* to be great: igi nlá, a large tree.
nlá nla, *n.* greatness.
nn, *adv.* no.
nò, *v.* to be lost; to wipe;—*adv.* off, away.
nò...nò, *v.* to wipe off, blot out, brush away.
nọṅ-yi, *v.* to rest a little.
nsó, *v.* to go on, proceed.

nwọṅ, *pron.* they.
nwọṅ-yi, *pron.* these.
nyin, *pron.* you.

N.

n, an auxiliary prefix, denoting an action which is or was in being at the time alluded to in the proposition; as, ó nta, he is selling.

n, *pron.* I.

n gbà! *interj.* take it!

n gbò! *interj.* hark! hear.

nkán (ohun kán), *n.* a thing, something.

nkay-ki'-ṅkan, *n.* a trifling thing.

nkò, *v.* to be not: ó nkò, it is not he; ó ri í nkò? (he saw it is-it-not or did-he-not) did he not see it?

nsó. See nsó.

nyin, *pron.* you.

O.

o, *pron.* thou.

ò, a word of assent: tọ mi wáh, come here; **ò**, yes, or I will.

ò, *pron.* he, she, it, that; used without the tone-mark after li, tí, and other particles; as, emi li o de (I it-is that came), I came.

ò, *adv.* not.

ò, *aux. part.* shall, will.

o-bi, *n.* a parent; a female, of cattle.

ò-bí, *n.* the kola or goorah nut.

ò-bi-ri, **ò-biṅ-ri** (òbo ònia), *n.* a woman.

o-bò, *n.* a hint, private information.

ò-bo, *n.* pudendum muliebri.

o-bo-tu-dze, *n.* physic-nut (curcans).

o-bò, *n.* a foster-parent, a nurse.

o-bò, *n.* a roller for ginning cotton.

o-bu, *n.* which is insipid, stale; a rotten egg.

o-da-le, *n.* a breaking down: ke odale, to break down.

o-de, *n.* the outside, out of doors.

o-dé, *n.* a small bat.

o-dé, *n.* a parrot.

o-dí, *n.* malice, wrongfulness: odi si, opposition, perverseness.

o-dí, *n.* a town wall, breastwork; a dumb person.

o-dí-dé. See odé.

o-dí-dí, *n.* a bunch, cluster; the whole.

o-dí-nò, *n.* a passionate person.

o-do, *n.* a division, section, party, district.

o-dò, *n.* a mortar for pounding things in.

ò-do, *n.* water in a body, as a river or pond.

o-dò-dí, **o-dò'-ro-dí**, *adv.* never, not at all.

o-do-do, *n.* truth, righteousness, justice.
o-do-dó, *n.* scarlet color.
o-do-gí, *n.* scrupula.
O-du, *n.* the companion of Ifa.
ò-du, *n.* a boiler, caldron.
O-du-a, O-du-du-a, *n.* heaven and earth; the goddess, Nature: Odudua, igba nlá meḍíí à de ì sí, heaven and earth, two large calabashes shut not to be opened.
o-dzé, *n.* sap of plants.
o-džé, *n.* lead.
o-dži, *n.* a reviving, revival.
ò-dži, *n.* forty; adultery.
o-dži-a, *n.* gum, resin.
o-dži-dži, *n.* an electrical fish.
o-dži-dži, o-dži-džij, *n.* a shadow, shade.
ò-dži-dži, *num.* by forties;—*n.* suddenness.
o-dži-gbe-se, *n.* a debtor.
o-dži-gboj, *n.* the outer corner of a house.
o-dži-ya, *n.* a sufferer, one oppressed.
o-džo, *n.* cowardice, a coward.
ò-džo, *n.* rain: òdžo otí, new weak ale.
o-džo-bo, *n.* a loop.
o-džò-džo, *n.* ague.
o-džo-džú-le, *n.* every house.
o-džo-džu-mo, *n.* every day, daily.
o-džo-gaj, *n.* a kind of scorpion.
o-džo-gún, *n.* an inheritor.
o-džo-ro, *n.* one who cheats at play, a cheat.
o-džo-wu, *n.* a jealous person.
o-džò-ye, *n.* a ruler, officer.
o-džó, *n.* the space of a day: ondžé odžó, daily bread; comp. odžó.
o-džò-rop, *n.* an iron mace.
o-džu, *n.* a sore, a scar.
o-džú, *n.* the eye, face, appearance, edge, as of a knife or sword; an opening: odžú òna, the middle of the road, the road, a gate; odžú rẹ wáh ilẹ, he came to himself (after being insane); odžú alá, a dream; odžú aiyẹ, the sky; odžú owó, the principal (money), as distinguished from interest; odžú orun, sleep; odžú ori, the grave; odžú agbara, a gutter, a wide street; odžú sama, a cloud; gbe odžú akọ, to cock a gun; gbe odžú àbo, to half cock a gun.
o-džu-gba, *n.* a companion, an equal.
o-džu-goj, *n.* the shin.
o-džú-kan-ná, *n.* immediateness.
o-džú-kò'-ko-ro, *n.* covetousness: še odžúkòkoro, to covet.
o-džu-kpo, *n.* a skylight in the palace where the king takes the air.
o-džu-kpoj, *n.* trouble, perplexity.
o-džu-la-fe-ní, *n.* a time-server, an eye-servant.
o-džu-le (ilẹ), *n.* a doorway.
o-džu-lu-mó, *n.* an acquaintance.

o-džu-mó, *n.* morning, dawn.
o-džu-nlá, *n.* a covetous person; envy, greediness.
o-džu-ran, *n.* dream, a vision.
o-džu-rè-re, *n.* favor, grace: še odžurèrè, to favor.
o-džu-ri, *n.* an eye-witness.
ò-džu-son, *n.* a fountain.
o-džu-šà-džu, *n.* partiality.
o-džu-tí, *n.* shame, modesty.
o-džu-wá, *n.* a sharer, distributor.
o-fe, *n.* a parrot; a dexterous fellow.
o-fe-re, *n.* the morning star; about three o'clock in the morning.
o-fi, *n.* a loom, lit. a swinger.
o-fi-dži, *n.* forgiveness.
o-fij, *n.* a law, prohibition.
ò-fij, *n.* a pit.
ò-fo, *n.* loss, calamity, emptiness, desolateness.
o-fó-fo, *n.* a busy-body, tale-bearer.
ò-fo-ro, *n.* a kind of squirrel.
o-fū-ru-fū, *n.* the firmament, space.
o-gbi-fo, *n.* an interpreter.
o-gbi-gbí, *n.* a kind of owl.
o-gbo, for gbogbo, *pron.* all.
o-gbó, *n.* old age; a kind of wildcat.
o-gbo-do, *n.* a young or green yam.
o-gbo-džu, *n.* a daring man.
o-gbo-gbo, *n.* a mallet.
o-gbo-ló-gbo, *n.* ancientness, old age.
o-gbo-ní, *n.* a sort of free-masonry; a respectable elderly man.
o-gbu-fo. See ogbifo.
o-ge, *n.* a fop, dandy.
o-ge-de, *adv.* only.
o-ge-de-gbe, o-ge-de-mgbe, *n.* headlongness: li ogedemgbe;—*adv.* headlong falling.
o-gí, *n.* an old dog, an old bachelor.
ò-gí, *n.* starch of maize.
o-gi-dan, *n.* a leopard.
o-gi-dí-gbo, *n.* a kind of drum.
o-gi-ri, *n.* a yard wall.
o-gí-rí, *n.* a gallop, a rush of a crowd.
o-gó, *n.* glory, vaunting.
ò-go, *n.* a person sitting at one's door daily to shame him into the payment of a debt.
o-go-do, *n.* the young of cattle, a calf, colt.
o-go-du-gbẹ, *n.* dropsy.
o-go-dže, *num.* one hundred and forty.
o-go-dži, *num.* forty.
o-goj-go, *n.* the ostrich.
ò-go-tí, *n.* See ògo.
o-gu-fe, *n.* a wether.
o-gu-lú-tu, *n.* a clod of earth.
o-gu-na, *n.* a coal of fire.
o-gun, *n.* war, an army, a battle.
Ó-gún, *n.* the god of blacksmiths and of soldiers.

o-gún, *n.* an inheritance;—*num.* twenty.
 ô-gún, *n.* a chair.
 ô-gùn, *n.* perspiration.
 ô-gun, *n.* medicine, poison, a charm.
 o-gùn, *n.* a round pole, foot-stalk of a wine-palm leaf.
 o-gu-ro-do, *n.* a standing upright.
 ô-gu-rô, *n.* palm-wine.
 o-gu-sô, *n.* a tobacco-pipe.
 ôh! the usual reply to a salutation. See ô.
 o-ho! a word of exclamation.
 o-hun, *n.* a thing: ohun ilo, a vessel, utensil; ohun iní, property, possessions; ohun ona, a tool, instrument; ohun osh, a domestic animal.
 ô hun, *n.* the voice, speech, a sound.
 o-hun-kô-hun, *n.* any thing whatever.
 o-i-bô, e-i-bô, a-imbô, *n.* a white man.
 ô-ka, *n.* a ring.
 ô-kán, *n.* one covry.
 ô-kan-ai-ya, *n.* the breast, chest.
 ô-ke, *n.* top, hill, height, mountain: ôke orun, heaven.
 o-ke-lé, *n.* a package of salt.
 ô-ke-lé, *n.* a bit, a morsel.
 o-ke-re, *n.* distance, far off, aloof.
 ô-ke-tê, *n.* a bale of goods, a wallet; a rat.
 o-kê-hij-dâ, *n.* renunciation, forsaking.
 o-kê-lê-ndzê, *n.* a kind of lizard.
 o-kî, *n.* failure to fire (as a gun), or to cut (as a dull knife).
 ô-ki, *n.* flattery, compliments.
 o-ki-ki, *n.* fame, rumor.
 o-ki-ki-ri, *n.* hardness, difficulty; a knot.
 o-ki-ri-bi-ti, *n.* the area of a circle.
 o-ki-ri-kpa, *n.* dryness and hardness, as of leather: okirikpa adza, an old dog.
 ô-ki-ti, *n.* a sunset, a headlong fall.
 ô-ki-ti, ô-ki-ti o-gún, *n.* a white-ant hillock, a heap.
 o-ki-ti a-ro, *n.* a potash-strainer.
 o-ki-ti è-be, *n.* a hill for planting yams, corn, &c.
 o-ko, *n.* a farm: oko ale, afternoon's farm work; oko eru, bondage, slavery.
 o-kô, *n.* a stone.
 o-ko-bô, *n.* a eunuch; a liar.
 o-kô i-bon, *n.* the lock of a gun.
 o-ko-to, *n.* a kind of snail.
 ô-kô, *n.* a name.
 o-kpe, *n.* a puzzle, ignorance; a simpleton.
 o-kpe-kpe, *n.* a youth.
 o-kpin, *n.* an end, boundary.
 o-kpin-lê (ilê), *n.* boundary of land, ends of the earth.
 o-kpo, *n.* the place of audience in the palace; a raised place to sleep on.

o-kpô, *n.* a post; a widow: okpô oko, a mast.
 o-kpo-kpo, *n.* an avenue outside a town gate.
 o-kpo-ro, *n.* which is common, usual.
 o-kú, *n.* a corpse, the dead, state of death, insipidity.
 ô-kú, for aikú, *n.* a salutation.
 o-ku-ku, *n.* the woof of cloth.
 o-kú-nà (ôna), *n.* an old overgrown road.
 o-kun, *n.* strength, ability.
 o-kùnj, *n.* a rope, a string: okùnj tigrin, twine.
 ô-kun, *n.* the ocean.
 ô-kun, ô'-kun-kun, *n.* darkness.
 o-kun-fa, *n.* an attraction, encouragement.
 o-kun-ra, *n.* anything rotten.
 o-kun-rôj, *n.* illness.
 o-ku-ru-ro, *n.* an ill-natured person.
 o-ku-ša, *n.* ale of millet.
 o-ku-ša-le, *n.* worn-out land.
 o-kú-šu, *n.* refuse from dyeing wats.
 o-ku-ta, *n.* a stone, a boulder.
 o-ku-ye, *n.* one dull of memory.
 ô-la, *n.* the cloth-moth.
 o-lâ, *n.* that which saves, saving, salvation.
 ô-lê, *n.* a roof.
 ô-le, *n.* a thief, theft.
 o-li-fa, *n.* which has or pertains to Ifa; which is advantageous.
 o-lo-bô, *n.* one who hints, or gives a caution.
 o-lo-di, *n.* which is walled, fortified.
 o-lo'-do-do, *n.* a righteous person.
 O-lo-du-mâ-re, *n.* the Ever righteous, a name of God.
 o-lô-dzô, *n.* a stranger.
 o-lo-dzu, *n.* oneself, an owner.
 o-lo-dzu-kan, *n.* a one-eyed person.
 o-lo-fin, *n.* a lawgiver.
 o-lo-fo-fo, o-lo-fo-ro. See ofôfo.
 o-lo-gbo, *n.* a cat.
 o-lô-gbô, *n.* the king's traditionist or chronicler.
 o-lo'-gi-ni, *n.* a cat.
 o-lo-go, *n.* who is honorable, glorious.
 o-lô-go, *n.* one who duns, a dun.
 o-lo'-gon-še, *n.* a sparrow.
 o-lo-gun, *n.* a physician.
 o-lô-hun (li), *n.* a man of influence.
 o-lo'-ki-ki, *n.* who is famous.
 o-lô-kun, *n.* which has strings; a rope-maker.
 o-lo'-ku-rôj, *n.* a sick person.
 o-lô-lâ, *n.* a professional tattooer.
 ô-lo-lô, *n.* a stuttering, stammering.
 o-lo-ni. See oni.
 o-lo-ŋkâ. See oŋkâ.
 o-lô-re, *n.* a benefactor: olôre oye, one who is gracious, benevolent.
 o-lo-ri, *n.* a head man, chief, captain.
 o-lo-rî, *n.* a great man's wife.

o-lō-rin, *n.* a singer.
 o-lo-ri-o-ri, *n.* all sorts, variety.
 o-lo'-ri-ša, *n.* an idolator.
 o-lo-ro, *n.* which is venomous.
 o-lō'-ru-kọ, *n.* who is distinguished, famous.
 o-lo'-šu-mā-re, *n.* which is curved.
 o-lō-tō, o-lō-ti-tō, *n.* a just person.
 o-lo-wō, *n.* who is rich.
 o-lō-ye, *n.* who is wise, prudent.
 o-lō-ye, *n.* an officer, a noble.
 o-lo-yo, *n.* the yellow monkey.
 o-lọ, *n.* powder of any kind.
 o-lá, *n.* a chief, an owner : olá ofin, a lawgiver or owner.
 o-lù, *n.* a hammer.
 o-lu-bọ, *n.* who maintains or feeds ; who beats a mud floor.
 o-lú-bu-kọ, *n.* who adds, or blesses.
 o-lu-da-nde, *n.* a redeemer, ransomer.
 o-lu-dā-re, *n.* who is justified.
 o-lu-fẹ, *n.* who loves, or is beloved.
 o-lú-fi-sọ, *n.* an accuser, plaintiff.
 o-lu-fọ'-kaj-sí, *n.* a devout or devoted person.
 o-lu-fu-ni, *n.* a giver.
 o-lú-gba-lá, *n.* a savior.
 o-lu-gbà-nì, *n.* a helper, deliverer.
 o-lu-gbe, *n.* who lifts up, or raises.
 o-lu-gbón-gbò, *n.* a smooth round block on which cloth is fulted.
 o-lu'-gbo-ro, *n.* a cudgel.
 o-lu-gbó, *n.* a believer.
 o-lu'-ko-lo. See abiku.
 o-lu'-ko-re, *n.* a reaper, crop-gatherer.
 o-lu-kọ, o-lu-kọ-nì, *n.* a teacher.
 o-lu-kpa, o-lu-kpa-nì, *n.* a murderer, an executioner.
 o-lú-kpa-mọ, *n.* a preserver.
 o-lu-kpa'-ra-mọ, *n.* one who is long-suffering.
 o-lú-kpi-lẹ-sẹ, *n.* a beginner, author.
 o-lu-kpin, *n.* a shaver, divider.
 o-lú-kpon-dzá, *n.* one who is poor, distressed.
 o-lu'-ku-lù-ku, *pron.* each, every.
 o-lu-mó, *n.* a builder.
 o-lu-mọ-ran, *n.* a wise man.
 o-lú-ran-lọ-wọ, *n.* a helper.
 o-lu-ran-sẹ, *n.* a sender.
 o-lu-rẹ, *n.* a comforter.
 o-lu-rẹ-rọ (irọ), *n.* a sheep-shearer.
 o-lu-sin, *n.* a server, worshipper.
 o-lú-šā-rò, *n.* a thoughtful person.
 o-lu-še, *n.* a doer, actor.
 o-lu-še, *n.* a victor, conqueror.
 o-lu'-še-tan, *n.* an enemy, a hater.
 o-lu-šọ, *n.* a watcher : olušo agutan, a shepherd.
 o-lu'-šọ-gba (ogba), *n.* a gardener.

o-lu-tan, *n.* a relative, a kinsman.
 o-lu-tọ, *n.* a director ; one who brings up a child, a nurse.
 o-lu'-tọ-dzú (odzú), *n.* a guardian, a keeper.
 o-lu-wá, *n.* a lord, master, owner.
 o-lu-wá-rẹ, *n.* an individual, a person.
 o-lu-wò, *n.* a priest.
 o-lu'-wo-dzú, *n.* one who respects persons.
 o-mi, *n.* water : omi kikan, foul water.
 o'-mi-dán, *n.* a young chicken ; a maiden.
 o-mi-dze, omi-odzú, *n.* a tear.
 o-mí-ran, *n.* a giant.
 o-mí-rán, *pron.* other, another, the other.
 o-mi-rin, *n.* the throat ; swallowing with ease.
 o-mi-to-ro, *n.* broth.
 om-ni-ra, *n.* a free person.
 o-mu, *n.* the grass-nut.
 o-nde, *n.* an amulet tied to the body.
 o-ndẹ-rẹ, *n.* a parrot.
 o-ndzẹ, *n.* food.
 o-ni, *n.* this day, to-day : oni oloni, this very day ; ó de lí oni, he came to-day.
 o-ní-ba-ta, *n.* the owner of a shoe, a shoe-maker.
 o-ní-bo-de, *n.* a custom-house officer.
 o-ní-bu-sí, *n.* one who blesses.
 o-ni-dá, *n.* a creator, maker.
 o-ní-da-dzọ, *n.* a judge.
 o-ní-da-lá-re, *n.* a justifier.
 o-ni-dá-mọ-ran, *n.* an adviser, proposer.
 o-ni-da-nde, *n.* a redeemer.
 o-ni-dan-wo, *n.* a tempter.
 o-ní-di-kaj, *n.* a child who has one parent free and the other a slave.
 o-ní-fá-ra-rọ (fi), *n.* a supporter, backer.
 o-ni-fa-ra-we, *n.* an imitator, emulator.
 o-ní-fe-fe, *n.* a proud person, boaster.
 o-ni-fọ, *n.* a washer.
 o-ní-gàn, *n.* a catechumen of an idol.
 o-ni-gbá-dza-mó, *n.* a barber.
 o-ní-gba-gbọ, *n.* a believer.
 o-ni-gba-nì, *n.* a helper, savior.
 o-ní-gbe-se, *n.* a debtor.
 o-ni-gbọ-wọ (gbà), *n.* a surety.
 o-ní-ha-lẹ, *n.* who is poverty-stricken.
 o-ni-ka, o-ní'-ka-nọ (inọ), *n.* one who is cruel.
 o-ni-ke-ke-re, *n.* one who has little of a thing : ejiyin onikekekere igbagbo, ye of little faith.
 o-ní-ke-re, *n.* a small person.
 o-ní-ki-ri, *n.* a wanderer.
 o-ni-kọ (iko), *n.* one who is troubled with a cough.
 o-ni-kpa, *n.* one who takes part in a transaction, a participator, sharer.
 o-ní-kpẹ-lẹ, *n.* one who is gentle, courteous.
 o-ni-kpin, *n.* he who appoints our lot, the disposer of events.

o-ni-ku, *n.* one who is mortal.
o-nf-ku-kpa-ni, *n.* a betrayer, traitor.
o-ni-là, *n.* who is tattooed or circumsized.
o-nf-là-dzà, *n.* a peace-maker.
o-nf-le-ra, *n.* who is healthy.
o-nf-lọ-ra, *n.* who is slothful.
o-ni-na (ina), *n.* which is fiery.
o-ni-ni, *n.* a possessor.
o-ni'-nọ-ni-bi'-ni, *n.* a persecutor.
o-ni-nọ di-dòṅ (inó), *n.* a good-natured person.
o-ni-nọ fu-fu, *n.* a pure-hearted person.
o-ni-nọ ti-te, *n.* a meek person.
o-nf-re-ra, *n.* who is proud.
o-nf-re-lẹ, *n.* who is humble.
o-nf-rò-bi-nọ-dzẹ, *n.* who is broken-hearted.
o-ni-ro-ra, *n.* who is pained, in sorrow.
o-ni-rọṅ, *n.* which is hairy.
o-ni-ru, *n.* one who is similarly endowed.
o-nf-rú-ru, *n.* variety, various kinds.
o-nf-sa-dzú, *n.* who is modest, bashful.
o-ni-sà-dzú, *n.* who is partial.
o-nf-še-gun, *n.* a doctor.
o-ni-še, *n.* a worker.
o-ni-si, *n.* an author or inventor of a thing.
o-nf-si-ti, *n.* a powerful or eloquent speaker.
o-nf-šo-gun, *n.* a doctor, physician.
o-nf-sò-wo, *n.* a trader.
o-nf-šo-na, *n.* a mechanic.
o-ni-ti-wọṅ, *pron.* any one, lit. their person.
o-nf-tu-bu, *n.* a jailor.
o-ni-wa, *n.* who has a disposition or character; a circumstance: *oniwa iwa*, all circumstances or conditions.
o-nf-wā-si, **o-nf-wā-su**, *n.* a preacher.
o-nf-we-re, *n.* which wriggles, a wriggler.
o-nf-wọ-ra, *n.* a greedy person.
o-ni-ye, *n.* one who has a good memory.
o-nọ, *n.* prehension of danger, dread.
oṅ, *pron.* him, her, it.
oṅ, *conj.* and.
oṅ, *pron.* he, she, it.
oṅ-fe, *n.* one who is charitable.
oṅ-gbẹ, *n.* thirst: *oṅgbẹ gbẹ mi*, I am or was thirsty.
oṅ-ka, *n.* one who counts, a counter.
oṅ-là, *n.* that which saves, a saver.
oṅ-ná, *pron.* himself, that.
oṅ-ro-ro, *n.* one who is austere.
oṅ-še, *n.* a messenger.
o-rà, *n.* a purchaser.
o-re, *n.* a bulrush, a mat of rushes.
o-re, *n.* a watch-tower, a watching from a tower.
ò-re, *n.* goodness, kindness: *òre oṣẹ*, grace.
o-re-re. See *okpokpo*.
o-re, *n.* the porcupine.

o-ri, *n.* the head, top; a kind of pigeon; shea butter: *ori amọ*, *n.* butter.
o'-ri-ka (ika), *n.* the end of the finger.
o-ri-ke, *n.* a joint of the limbs.
o-ri-lẹ, *n.* a family, race, nation, tribe: *orilẹ ède*, a nation.
o-rin, *n.* a tooth-brush made of a root bearing the same name.
ò-rin, *n.* a song, a tune.
o-ri-so, *n.* a stall, a tying-up place.
o'-ri-sọṅ, *n.* a spring, a fountain.
o'-ri-sá, *n.* an idol.
O'-ri-sá-ko (oko), *n.* the farm-god.
O'-ri-sá-nlá, *n.* a name of Obatala.
o-ri-še á-lu-fá (iše) *n.* priest's work, the priestly office, priesthood.
o-ro, *n.* honey; a stick to stir ale with; provocation, difficulty, hardness, fierceness.
O-ro, *n.* the god of civil government, the executive of the state deified.
o-ró, *n.* venom of reptiles; torture, torment: *šišẹ oró*, to be tormented.
ò-ró, *n.* the erect posture, erectness; the indigenous mango.
o-ro-bo, *n.* good luck, fortune.
o-ro-mbo (óró ambó), *n.* an orange, lime, lemon.
o-ro-re, *n.* pimples on the face.
o-ró-ro, *n.* bitterness, gall.
o-ró-ro, *n.* oil: *fi ami oróro yan*, to anoint.
ò-rọ, *n.* morning.
o-rọ-nu, *n.* which is tender.
o-ru, *n.* heat, steam.
o-rù, *n.* a pitcher, jug.
ò-ru, *n.* night.
o-ru-ba, *n.* an oil-pot.
o-ru-ga ndzọ, *n.* midnight.
o-ru-gu-du, *n.* a short thick bottle.
o'-ru-ka, *n.* a ring.
o-ru-kọ, *n.* a name; a he-goat.
o-ru-lé (ilé), *n.* a roof.
o-ruṅ, *n.* sleep: *oruṅ kọṅ mi*, I am sleepy.
ò-ruṅ, *n.* the sun: *òruṅ là*, the sun rises; *òruṅ wọ*, the sun sets; *še-òruṅ*, the large red setting sun.
o-rùṅ, *n.* a smell, a scent.
o-se, *n.* paint.
o-sé, *n.* the hippopotamus.
o-siṅ, *n.* which is tamed, a domestic animal, cattle.
ò-sin, *n.* the left, the post of honor: *òsin yama*, the south.
o-še, *n.* a smacking of the lips for sorrow; the club of Sangó. See *ose*.
o-še-še, *n.* meat of the first quality.
o-si, *n.* misery.
o-si še, *n.* a poor or miserable person, a pauper, a wretch.

- o-šo, *n.* a witch, sorcerer: šc ošo si, to bewitch.
 o-šo-nó, *n.* an ill-natured person.
 o-šu, *n.* the new moon, a month.
 o-šu-kpa, *n.* the moon.
 o-šu-mā-re, *n.* a rainbow, semicircle.
 o-šu-me-re, *n.* a lily.
 o-šu-šu, *n.* a grove, thicket: kpa ošú, to form a grove, to stand in a grove.
 ô-šu-woj, *n.* a measure, a weight.
 o-tā, *n.* a seller.
 o-te, *n.* the corner of a house.
 o-ti-to, *n.* truth: otito idi, the true cause or reason.
 o-to-lo, *n.* a kind of antelope.
 o-to-ši. See ošise.
 ô-tô, *n.* truth.
 o-ton-kpan-yan, *n.* one who creates disturbance.
 o-tu, o-tu-tu, *n.* cold, a cold in the head.
 o-tu-mô, o-tu'-di-mô, *n.* a covenant-breaker.
 o-we, *n.* a proverb, a parable; plumpness.
 o-we-re, *n.* struggle, effort, wriggling, writhing.
 o-wi-wí, *n.* an owl.
 o-wo, *n.* a horn.
 ô-wo, *n.* a boil.
 o-wó, *n.* courtesies, money: šc owó, to make money.
 ô-wo, *n.* trade, traffic: šc ôwo, to trade.
 o-wó-bo-de, *n.* tax, customs.
 o-wo-kan-ai-ya, *n.* the bosom.
 o-wó-šę (išę), *n.* wuges.
 o-wá, *n.* cotton, thread; jealousy.
 ô-wü-rô, *n.* morning.
 o-wu-šu-wu-šu, *n.* fog, gloomy weather.
 o-ya, *n.* that which separates, a comb.
 o-ye, *n.* a number: li ariñ mélo? how often? uwoj kô li oye gbà, they set no number (of times).
 o-yé, *n.* understanding, intellect: oyé ye mi, I understand; kô li oyé, he has no sense.
 ô-ye, *n.* a title of honor, office: dzé ôye, to hold an office.
 o-yi, *n.* giddiness: oyi nkpa mi lôh, I am dying of vertigo.
 o-yi-bó, o-i-bó, *n.* a white man.
 o-yin, *n.* a honey-bee, honey: oyiñ igan, wild honey; oyiñ alugbe, bees in a hive.
 o-yo, *n.* a small owl.
 o-yún, *n.* pregnancy; a hand-saw: li oyun, to conceive, to be pregnant.

O.

- o, *pron.* thou.
 ô, *pron.* he, she, it.
 ô, *adv.* not.
 ô, *aux. part.* shall, will.
 o-ba, *n.* a king; father, sire: Oba Ogó, God.
 o-ba-kan, *n.* a father's kinspeople.

- o-ba-le, *n.* prostration.
 O-bán-gi-dzì, *n.* the Lord, the Almighty.
 O-ba-ta-lá, *n.* the originating god (an androgyne), the generative principle.
 o-ba-ra, *n.* cord, pack-thread.
 o-bé, *n.* a knife.
 o-bé, *n.* sauce, hash, soup.
 o-bę-do, *n.* green scum on water (lemna); hence, green color.
 o-bô, *n.* a baboon.
 o-bô, *n.* coarse white cloth.
 ô-boj, *n.* a filthy person, sloven.
 o-boj-boj', *n.* an umbrella; a beetle (insect).
 o-bô-ro, *n.* which is plain (not marked).
 o-dá, *n.* drought, dearth, need; old ale: odá da nyin? do you need anything?
 ô-da, *n.* war.
 o-da-dzá (dá odzá), *n.* one who is shameless.
 o-dan, *n.* an inconsistent story; a vain talker.
 o-dán, *n.* a species of fig-tree.
 ô-dan, *n.* a prairie.
 o-de, *n.* a hunter: de ode, to hunt for; ohun ode, prey.
 o'-de-de, *n.* a piazza.
 o-di-a-kpa-sa, *n.* a remnant of cloth in the loom.
 o-dô, *n.* presence of a living being: li odo, si odo, ti odo; see lođo, sođo, tođo: lati odo, from.
 o-dô, *n.* the young of domestic animals: odô agutan, a lamb.
 o-dô-dun, *n.* every year, yearly: li ododun li á ri í, we see it every year.
 o-doj, o-dun, *n.* cloth of palm-leaf fibres.
 o-dún, *n.* a year.
 o-dzá, *n.* a band, a girth; that which is broken off.
 ô-dza, *n.* a market, merchandise.
 o-dže-hun, *n.* a glutton.
 o-džô, *n.* time, a day: odžô ale, afternoon; odžô ibi, n. birthday; odžô idžo, assembly-day; odžô iwá, the day of being, the creation, beginning of the world; odžô isi, a notable day, an epoch.
 ô-džo, *n.* a place of settlement, lodging-place: so... li ôdžo, to set or place. (Gen. 1, 17.)
 o-džo-džo, *n.* every day, daily.
 o-džô-džo-džô, *n.* many days, old times.
 o-džo-ka-riñ, *n.* noon.
 o-fa, *num.* one hundred and twenty.
 ô-fá, *n.* an arrow, a pledge, a pawn; the state of being in pawn.
 ô-fe! an exclamation of those who carry a corpse through the street.
 o-fé, *n.* gratuity, gratis.
 ô-fe, *n.* the dawn, a gentle breeze.
 o-fę-re, *n.* the being nearly, the being almost.
 o-fin, *n.* a pit to catch a thief or beast, pit-fall.
 o-fô, *n.* a squabble, palaver.

ò-fò, *n.* mourning for the dead.
 o-fò, *n.* the neck.
 o-ga, *n.* who is exalted, a hero : Oga Ogo, the Most High ; oga óriša, the chameleon.
 o-gan, *n.* a thorn, a cock's spur : yo ogan, to put forth spurs.
 o-gán, *n.* an instant ; the hillock of the white ant.
 ò-gan, *n.* the large wild boar ; a vain boaster.
 o-gan-dzó, *n.* midnight : oganzó medže, great darkness.
 o-gan-ran, *n.* a straight course.
 o-gbā, *n.* a garden, a fence.
 ò-gba, *n.* equality, a balance, an equal.
 o-gban-gan, *n.* a hand-bell.
 o-gbè, *n.* a wound : nwoy gbā ogbè de inó, they were cut to the heart, vexed ; ogbè inó, internal hemorrhage.
 o-gbè-lè (ilè), *n.* dry land : arí ogbèlè, ikú abenu gbòro, dry-land thunder, death with a wide mouth, a riddle, meaning a gun.
 ò-gbò-dò, *n.* a dare, defiance, challenge ;—interj. no !
 o-gbò, *n.* a precipice, a depth, a deep ditch ; the extreme end ; bristles of a turkey-cock.
 ɔ-gbò, *n.* wisdom, cunning : o fi ogbò ɔ́ ɛ́, he did it wisely.
 o-gbò, *num.* thirty.
 ò-gbò, *n.* gauze.
 o-gbò-gbò, *adv.* wisely.
 o-gbò-kò-gbò (ogbò ki ogbò), *n.* subtlety, dishonest dealing.
 ò-gè-dè, *n.* the banana.
 o-gè-gè, *n.* the cassava.
 o-gè-rò, *n.* which is gentle, soft.
 o-gè-yi, *n.* cold gloomy weather.
 o-gò, *n.* a club, a rod ; a package (of salt).
 o'-gò-dò, *n.* a clay-pit, a pit.
 o-gò-dzó, *num.* one hundred and sixty.
 o-gò-fa, *num.* one hundred and twenty.
 o-gò-rin, *num.* eighty.
 o-gò-run, *num.* one hundred.
 o-gò-ta, *num.* sixty.
 o-han, *adv.* yes.
 o-hè, *n.* a stupid person.
 ò-hun, *n.* that place, the place beyond : li òhun, there, yonder.
 o-kā, *n.* Guinea corn, the large red millet (sorghum) ; any kind of corn.
 ò-ka, *n.* name of a disease : òka ikú, the death struggle.
 o'-ka-ndž-ú-a, *n.* avarice, a miser.
 o-kan, *num.* one, the same : kè okan, to agree, coincide.
 ò-kan, *n.* the heart, reins. (Ps. 16, 7.)
 o-kan-lá, *num.* eleven.

o-ké, *n.* a sack.
 O'-ké-re, *n.* a proper name of a man.
 o-kè-re, *n.* the squirrel.
 o-ko, *n.* a husband : okò iyawò, a bridegroom.
 o-kó, *n.* a hoe ; the shoulder-blade : okó asa, a stirrup.
 ò-ko, *n.* a canoe, boat, ship, trough, shuttle ; a spear : nwoy ba ti òko lóh, they went by ship.
 o'-kò-kan, *n.* the direct line ; the direction towards or opposite to.
 o-ko-kan, *num.* one by one, each one.
 o-ko-la-ya, ò-ko-lo-bi-ri, *n.* a married man.
 o'-kò-ri, *n.* a man.
 o-kò-šè, *n.* one who refuses to do a thing.
 o-kpa, *n.* a staff, a pole : okpa ikpo, a travelling-staff.
 o-kpa-gun, *n.* an ensign, a banner.
 o-kpai-mbó (okpè anibó) *n.* the pine-apple.
 o-kpa-kò, *n.* a pole to push a canoe.
 o-kpá-la-ba, *n.* a bottle, a vial.
 o-kpa-lai, *n.* a squabble, a dispute.
 o-kpè, *n.* the oil-palm.
 o-kpè, *n.* thanks : dà okpè, šè okpè, to thank.
 o-kpè-lè, *n.* a messenger of Iſa.
 o-kpè-re, *n.* a canoe, a boat.
 o-kpò, *n.* abundance, a multitude, much.
 o-kpò-ló, *n.* a frog.
 o-kpò-lò-kpò, *n.* abundance.
 o-kpò, *n.* a bowl.
 o-kpò-wòm, *n.* an innumerable swarm.
 ò-kun, *n.* an insect (Iulus) ; a stupid person.
 o-la, *n.* to-morrow.
 ò-lá, *n.* honor, authority, majesty.
 o-lá, *n.* wealth, safety.
 o-lá-dzá, *n.* a peace-maker.
 o-la-ra, *n.* an envious person.
 o-lè, *n.* laziness, one who is lazy.
 o-lè, *n.* a fetus, embryo.
 o-lè-lè, *n.* a kind of cake.
 o-lò, *n.* a mill-stone.
 o-lò-dzá, *n.* an executioner.
 o-lò-gan-ran, *n.* a kind of cricket.
 o-lò-gbā, *n.* a gardener.
 o-lò-gbò, *n.* a wise person.
 o-lò-kan, *n.* which has, or pertains to, a heart : òlòkan mimó, one with a holy heart.
 o-lò-kò, *n.* a spearman.
 o-lò-kò, *n.* a master or owner of a ship.
 o-lò-kpa, o-lò-kpa-ga, *n.* a staff-bearer, a bailiff, policeman.
 o-lò-la, *n.* an honorable or official person.
 o-lò-mu e-ko (omu), *n.* a maiden nearly grown.
 o-lò-na (ona), *n.* a mechanic.
 o-lò-na (ona), *n.* the owner or overseer of a road.
 o-lò-re, *n.* a giver.

o-lò-rò, *n.* a rich man, an eloquent man.
 O-lò-runj (ò lí orun), *n.* God, a name never applied to the inferior gods, or 'órisá.
 o-lò-sá, *n.* a licensed robber, i. e. a land privateer.
 o-lò-tan, *n.* a distant relative.
 o-lò-te, *n.* a rebel, a seditious man.
 o-lò-tí, *n.* a brewer, a liquor-dealer.
 o-lò-tò, *n.* a rich or distinguished person; a citizen.
 o-mò, *n.* a child, servant, offspring; a kernel: o-mò agbo, a babe; o-mò alaale, children of a king, princes; o-mò ale, a bastard; o-mò èhin, a follower, a disciple; o-mò olo, a body-servant; o-mò ogun, a soldier; o-mò kewn, a scholar, school-child; o-mò odázi, pupil of the eye; o-mò okú, an orphan; o-mò oju, a smith's hammer; o-mò odó, a pestle; o-mò šika, a key.
 ó-mó-bi-ri (obiri), *n.* a girl, daughter.
 o-mò-dán, *n.* a young woman.
 o-mò-dè, *n.* a child.
 o-mò-din, *n.* the little finger, little toe.
 o-mò-dò, *n.* a rivulet.
 o-mò-đun, *n.* tender leaves of a tree.
 o-mò-ko-ko, *n.* a potter.
 o-mó-kon-ri (ykonri), *n.* a boy, a son.
 o-mò-le (ilé), *n.* the house-lizard.
 o-mò-lo-đzu (li), *n.* a grand-child.
 o-mò-ni-ke-đzi, *n.* another person, another.
 o-mò-nò-ya (inò iyá), *n.* a brother or sister by the same mother.
 o-mò-ri (ori), *n.* a lid, as of a pot.
 o-mó-se (ese), *n.* a toe.
 o-mò-tí, *n.* a drunkard, tippler; a kind of ant.
 o-mu, *n.* the female breast, udder; breast milk; a flat stick to divide the woof.
 o-na, *n.* mechanic's work, carving, decoration.
 ò-na, *n.* a road, a channel; a president of any department of government: as, òna lwefa, the chief of the Eunuchs; òna Isokun, the chief of the Council of Twenty-two.
 o-ni, *n.* a crocodile.
 o-nò, *n.* apprehension, fear of results.
 o-rá, *n.* fat, fatness: orá egungun, narrow.
 o-rá, *n.* a purchase, a purchaser.
 ò-ran, *n.* a matter, a cause, an affair: fi òran lóh, to appeal.
 o-re, *n.* a friend.
 o-ré, *n.* a switch, a small whip.
 ò-re, *n.* a gift, present, offering: ò-re ànu, charity, alms.
 o-re-ke-se, *n.* a small cowry-bag made of grass.
 o-re-re, *n.* salt.
 ò-re-re, *n.* convulsions.
 o-ri, *num.* eighty.

ò-ri, *n.* diarrhœa: òrin edže, dysentery; òrin nše è, he is sick of diarrhœa.
 o-rò, *n.* euphoria.
 ò-rò, *n.* a kind of rope.
 o-rò, *n.* equivocation, deceit.
 o-rò, *n.* wealth; clay; a ghost, a fairy.
 ò-rò, *n.* a word, conversation: òrò ikòkò, a dark saying (l's. 49. 4); òrò idžinle, a mystery.
 o-rò, *n.* the neck.
 o-runj, *n.* a bow, the sky, heaven, the invisible world, hades: orun akpadi, hell; òke orun, heaven.
 o-rún, *num.* one hundred.
 o-run-la, *n.* dried okra.
 O-sa, *n.* name of the lake at Lagos.
 o-sá, *n.* flight, retreat: sá osá, to flee from.
 ò-sa, *n.* a space of time: òsa agogo kán, the space of an hour.
 o-sá, *n.* robbery.
 o-sán, *n.* daytime.
 o-sán, *n.* an esculent fruit.
 o-san-gan-gan, *n.* midday.
 o-san-han, *n.* the straightforward direction.
 O-san-hin, *n.* the god of medicine.
 o-se, *n.* the sabbath, a holy-day.
 o-se-ge, *n.* very wide cloth.
 o-sin, *n.* an osprey.
 ò-sin, *n.* domestic animals, cattle.
 o-sò, *n.* much talk, exaggeration, complaining.
 ò-sun, *n.* a common pot-herb.
 o-sán, *n.* a bow-string, a cord: ošán ènia, a long lean person.
 o-se, *n.* soap; a kind of crane.
 o-si-gi, *n.* grains of maize boiled.
 o-sin, *n.* one who makes a mistake.
 o-šo, *n.* decoration, show: še li óšo, to adorn.
 ò-šo, *n.* an iron digger; thorns in a pitfall.
 o-šon-šon, *n.* a rat-trap; a hard kind of wood.
 o-šò-rò, *n.* drippings of rain from the eaves of the house, a cascade: ošòro adire, a young chicken; ènu ošòro, eaves of a house.
 o-ta, *n.* an enemy, adversary: ota òkan, a deadly foe.
 o-ta, *n.* a bullet, shot.
 o-tán, *adv.* all right, very well.
 o-ta-o-lò-đza, *n.* an executioner.
 o-te, *n.* enmity, rebellion.
 o-te-se, *n.* a private informer.
 o-tí, *n.* ale, beer, spirituous liquor.
 o-tò, *n.* difference, separateness: ènia á ma ya lí oto, men are different; ya si oto, separate or withdraw from.
 o-tò-kò-lu, *n.* the whole population.
 o-tò, *n.* holy water in the idol houses, &c.
 o-tò, *n.* the right hand side or direction; second, as to rank.

- o-toŋ-lá, *n.* the day after to-morrow.
 o-to-to, *n.* the whole, totality.
 o-wá, *n.* the foot-stalk of a wine-palm leaf.
 o-wa-ra, *n.* which is scattered, a shower of rain.
 o-wa-ri-ri, *n.* a trembling.
 o-wẹ, *n.* a company invited to do a piece of work, an accomplice, abetting: ọ d́Ẹ ọlẹ lẹ ọwẹ, he aided the thief.
 o-wẹ-re, *n.* the small intestines.
 o-wẹ-re, *n.* a kind of perch.
 o-wọ, *n.* a broom.
 o-wọ, *n.* the hand; a flock, caravan, assortment: ọwọ ina, flame; ọwọ tẹ, to attain to.
 ọ-wọ, *n.* honor, respect.
 o-wọ-dọ-wọ, *n.* hand to hand, tradition.
 o-wọ lẹ, *n.* time (for doing a thing), opportunity.
 o-wọp, *n.* retaliation, recompense.
 o-wọp, *n.* a black snake, said to eject venomous spittle.
 o-wọp, *n.* scarcity, dearness, as to price; a wicked person.
 ọ-wọp, *n.* a pillar, a column.
 o-ya, *n.* hire, wages.
 O-ya, *n.* the Niger (the wife of Sàngó).
 o-yā, *n.* a creature like a hedge-hog.
 O-yé, *n.* the harmattan-wind.
 O-yọ-mi-si, *n.* the elders of Oyo.

R.

- ra, *v.* to perish, dissipate; to ache slightly.
 rá, *v.* to rub upon; to crawl, to struggle.
 rà, *v.* to buy; to lay one thing on another, to tie together, to lath a house; to rot, to moulder; to soar around, to hover near, as a hawk.
 ra-bi-tá, *n.* a piece of scarlet cloth.
 ra-dí, *v.* to recompense, retaliate.
 ra-dọ (ẹdọ), *v.* to be peevish, splenetic; to pity.
 ra-dọ-bò, *v.* to hover, as a hen; to shelter.
 ra-dzo, *v.* to go a journey, travel.
 ra-gan-bí (rẹ agàn bí), *n.* a child born after the mother has been long barren.
 rà-huŋ (òhuŋ), *v.* to murmur, grumble.
 ra-huŋ-ra-huŋ, *v.* perplexity: ẹc rahuhrahuh, to be perplexed.
 ra-ko, ra-ko-ro, *v.* to crawl, creep, as an insect.
 ra...ku-na, *v.* to crumble.
 ra-le (ilẹ), *v.* to lath.
 ra-lẹ (alẹ), *v.* to be evening.
 ram-ram, ra-mu-ra-mu, *adv.* loudly, harshly (crying or roaring, as a lion).
- ra-na (ina), *v.* to warm or dry at the fire.
 ra-ndzú (ni odzú), *v.* to look sternly or fiercely.
 ra-nti (ni cti), *v.* to remember.
 ran, *v.* to twist, to spin, to sew; to send; to help; to grow slowly; to endure: ran ikpo, to speak ironically; ran lóh, to appoint; ran ni si wa, send to us.
 ran, *v.* to communicate, as fire or infectious disease, to shine, burn; to cut, wound.
 ran...le-ti (li), *v.* to remind.
 ran...lo-dzu (li), *v.* to dazzle.
 ran...lo-wọ (li), *v.* to help.
 ran...lu, *v.* to sew small pieces of cloth together.
 ran...ni-ran, *v.* to remind.
 ran...ni-še, *v.* to send on business.
 ran-še, *v.* to send a messenger.
 ran-šo, *v.* to sew cloth.
 ran-wu, *v.* to spin cotton.
 ra-ra, *adv.* at all.
 ra-rá, *adv.* loudly.
 ra-re, *v.* to linger in sickness.
 rau-rau, *adv.* entirely.
 re, *v.* to shed off, to moult.
 rẹ, *v.* to spring or go off, as a trap.
 rẹ, *v.* to go; to be good;—*adv.* well.
 re-bi (ebi), *v.* to journey, travel.
 re-de-re-de, *adv.* foolishly.
 re-di (idi), *v.* to wag the tail.
 re-fin (ru ofin or efin), *v.* to break a law.
 rẹ-fin, *v.* to smoke, as a chimney.
 re-ke, *adv.* in a high degree.
 rẹ...kp-dza, *v.* to cross over, to pass beyond, to surpass;—*adv.* much, surpassingly: rẹ mi kọdza, to pass by me. (Mat. 26, 42.)
 ré-kú, *v.* to kill, as a trap.
 re-ra, *v.* to be proud.
 re-re, *adv.* far, at a great distance.
 rẹ-re, *n.* goodness;—*adv.* in a goodly manner, well.
 re-ri, *v.* to be past harvest time, entirely gathered.
 re-ru, *v.* to be entirely out of sight, gone.
 re-ti, *v.* to expect, hope; to pick the car.
 re, *v.* to dye, to soak.
 rẹ, *v.* to cut, shear, to skim milk; to stick or adhere, to be friendly; to suit, agree.
 rẹ, *v.* to be weary, heavy of heart, humbled; to comfort or quiet; to shed leaves, fade, wither, to be sad; to increase or multiply.
 rẹ, *pron.* his, her, its, thy; him, thee.
 rẹ...dze, *v.* to cheat.
 rẹ-ge (rẹ), *v.* to set a snare.
 rẹ-kpọ, *v.* to agree, accord.
 rẹ-le, for ra-le, *v.* to lath.

re...lê (ilê), *v.* to bend down, decline; to humble, abase: re-lê, to be humble.
 re...mò-lê, *v.* to cut down, mow.
 re-re, *adv.* closely: lé...re-re, to pursue; re-re odžú, an eye-servant.
 re-rin, *v.* to laugh: re-rin wesi, to smile.
 re-ròj (ironj), *v.* to shear, to trim the hair.
 re...si-lê. See ré...lê.
 re-yin (oyin), *v.* to take honey from the hive.
 ri, *adv.* heretofore.
 ri, *v.* to be, to have; to see, to seem, to find; to be defiled.
 ri, *v.* to sink, to drown, to hide, to plant a tree or a post in the ground; to pass threads through the sley.
 ri-di (ilí), *v.* to understand or ascertain the nature of a matter.
 ri...gbā, *v.* to receive.
 ri-ki-sí, *v.* to plot against, to conspire;—*n.* a plot.
 ri-ndò, *v.* to be nauseated.
 ri-ndò-ri-ndò, *n.* strength of stomach.
 rin, *v.* to water, to be wet; to press to the earth, as a weight.
 rinj, *v.* to laugh.
 rin, *v.* to walk, wander, sail; to tickle: òkò ná mà rin, that ship sails well or rapidly.
 rin...lê-dò (li), *v.* to make sick at the stomach, to nauseate.
 ri-ran, *n.* a sending; brightness. See ran.
 ri-ran, *v.* to see, to see a vision or wonder.
 ri-re. See re.
 ri-ri, *n.* seeing, sight; which is seen or to be seen, a sight. See ri.
 ri-ri, *adv.* slightly (trembling).
 ri-ri, *adv.* greatly (trembling).
 ri-ri, *n.* a sinking. See ri.
 rinj-rin, *adv.* (weighing) heavily.
 ri-ro, *n.* See the root, 'ro.'
 ri-ru, *n.* a swelling, a sprout of a vegetable, an issuing forth: riru omi, waves.
 ri...sá, *v.* to flee from, to shun.
 ro, *v.* to tell, to relate; to sound, to strike, as a clock; to cut weeds from the ground, to till; to drip or drop, as water; to pain, to throb; to stand erect; to excite: ro kalê, to publish abroad.
 rò, *v.* to stir, to think, meditate, intend; to trouble.
 ro-džò (ełžò), *v.* to give account of, to answer for.
 ro-džú (odžú), *v.* to delay.
 rò-džú, *v.* to look sad, to be perplexed.
 ro-gun, *v.* to drain off, distil.
 ro-hij (ihij), *v.* to tell news, to relate.
 ro-ki-ro-ki, *adv.* brightly (red).
 ro-ko (oko), *v.* to till, to farm.
 ro-le (ilé), *v.* to succeed by inheritance to the headship of a family, to inherit property.

ro...lo-džú, *v.* to be or seem difficult.
 rò-na (òna), *v.* to open a road, to spy; to meet by appointment.
 ro-nò (inò), *v.* to meditate, to be solemn.
 ro-nò-kpi-wā-dā, *v.* to repent.
 ro-ré, *n.* a pustule, a pimple.
 ro-ro, *adv.* with a fine red color.
 rò-ro, *n.* a door-mat of twigs.
 rò-ro, *v.* to be austere, harsh.
 rò, *v.* to slacken, to wither; to scrape together, to collect into a mass.
 rò, *v.* to turn from a course or position, to yield or give place, to bend or break at the edge; to gush out, to rush, to sprain; to explain, to translate.
 rò, *v.* to cool, ease, mitigate; to be soft; to rain; to swing, to suspend on a thing, to lean; to urge, press, insist on; to fabricate from any raw material, as iron, leather, or ivory.
 rò-be-re, *v.* to explain at length, by relating the facts of the case.
 rò-bí, *v.* to travail.
 rò-džò (òdžò), *v.* to ruin: ròdžò sí, to sprinkle water on.
 rò-džò, *v.* to wither.
 rò-džú (odžú), *v.* to persevere, to bear patiently, to try.
 rò-džú, *v.* to be tame, gentle, as an animal.
 rò...gba-ká, *v.* to surround, beset.
 rò-gbò-kú, *v.* to lean on the elbow, recline.
 rò-gun, *v.* to lie in wait, to set a watch for; to produce, as yams.
 rò-ke-ke, *v.* to make active preparations for some public enterprise; to make an uproar or tumult.
 rò-kin, *v.* to relate traditions.
 rò-kòj, *v.* to rebel.
 rò-kpo (ikpo), *v.* to take the place of another.
 rò-kpò, *v.* to mix, mingle.
 rò-le, *v.* to cease, to be tranquil.
 rò-mò, *v.* to hang or lean upon.
 rò-ndòj, *v.* to be pale.
 rò-nò, *v.* to fast, to be solemn.
 ròj, *v.* to dip into, to sop.
 ròj, *v.* to cheer.
 ròj, *v.* to be sick: ò ròj ègba, he is sick of palsy.
 rò-ndòj-rò-ndòj, *n.* paleness.
 ròj-gán, *v.* to be barren from disease.
 ròj-gbòj, *n.* the beard.
 ròj-ròj, *v.* to be easy.
 rò-ra (ará), *v.* to be gentle, go softly: mà ròra, be careful! a common salutation on meeting in the road.
 rò-rò, *n.* the bearded sheep.
 ru, *v.* to rise, swell, to spring up, as a fountain; to smoke, to be elevated, to be angry, to be agitated, to boil over, to stir up, to sprout, to flourish, to break out, to be exposed; to mingle.

rù, *v.* to bear, carry; to be lean: **rù lóh**, to remove a thing; **rù ẹ̀bọ**, to offer a sacrifice.
rù-bọ (ẹ̀bọ), *v.* to sacrifice.
ru-bu-tu, *n.* a writing, a manuscript.
ru-dí (ídí), *v.* to bud.
ru-du-ru-du, *n.* confusion.
ru-ḡin (ofin), *v.* to break the law, transgress.
rú-gu-du, *v.* to be thick and short.
ru-ke-ru-dò (òke òdò), *v.* to make a tumult.
ru...lai-ya (li), *v.* to make one vomit.
ru-lu (ilu), *v.* to stir up the town, to cause sedition.
ru-lu-ru-lu, a-ru-lu, *n.* a seditious person.
ru-nọ (inọ), *v.* to be vexed, indignant.
rún, *v.* to consume, destroy; to break to pieces, to perish.
rún, *v.* to stink; to chew a stick, to rub the teeth with a stick.
run-ḡẹ (ik), *v.* to dig into a house, as thieves.
rú-rú, *adv.* confusedly.
ru-we (iwe), *v.* to put forth leaves, flourish.

S.

sa? *adv.* where?
sá, *v.* to run, to flee, to fear; to dry in the sun: **sá kuro ninọ** or **lọdọ**, to flee from.
sá, *conj.* for;—*adv.* now, only: **sá gbọ!** hear now!
sá, *v.* to aim or point at, as with a gun; to attempt, to make: **sá akpẹ**, to make a model or pattern.
sá, *adv.* a while, for a time.
sá-ba (sún), *v.* to sit, as a hen, to incubate.
sa-di (ídí), *v.* to take refuge under a person's protection.
sa-ga-da-ga, *v.* to become a close conflict or battle.
sá-ga-tí (agn), *v.* to encamp against, to cast up works before a town, to besiege.
sa-gba-ra-ka (so agbara ka), *v.* to fortify, especially with stockades.
sa-gun (ogun), *v.* to make a charm.
sa-ka-ni, *n.* the surrounding neighborhood.
sá-ka-sá-ka, *n.* hay, dried provender.
sa-kpa-mọ, *v.* to abscond, hide.
sa-kpa-ra, *n.* barren land.
sa-kpẹ-re, *v.* to make a pattern, sign, or token.
sa-ku-sa, *n.* a bird noted for its song.
sa-la-há, sá-la-lá, *n.* a kind of apron.
sá...la-mi (li), *v.* to set a mark or seal on.
sa-lan-ga, *n.* a privy.
sa...lọ-dza, *v.* to slip from the memory.
sa-lọh, *v.* to run away, desert.
sa-lú-bá-ta, *n.* a sandal.
sa-ma, *n.* See *sajma*.
sa-mi (ami), *v.* to mark, to make a sign on.

san, *v.* to be in health; to pay, recompense, benefit: **san teḡe**, to prepay; **san ẹsan**, to retaliate; **ó san diẹ**, he is a little better; **aiya san woḡ**, they prosper in the world.
sán, *adv.* loudly, vividly, straight forward.
sán, *v.* to gird, to tie around; to crack, to split; to thunder.
san-ma, *n.* a cloud.
san-ra (ará), *v.* to be healthy, to be fat.
san-san, *adv.* in strips or slips.
san-yan, *n.* silk.
sa-ra (si), *prep.* on, in (after a verb of motion).
sa-rá, sa-ra-há, *n.* alms (Mohammedan).
sa-re (ire), *v.* to run.
sá-re, *n.* the square of a house.
sa-re-kpẹ-gbẹ, *n.* the messenger of a society, who calls the members together.
sa-ri, *n.* the Mohammedan meal before day during the fast.
sá-riḡ (si), *prep.* in the midst, among (after a verb of motion).
sa-ró-ta, *n.* a cigar.
sa-rú-ba, *n.* a border sewed to a blanket or sheet.
sá-se, *v.* to make a feast.
sa-ta, *n.* a household, a group of buildings under one head man.
sá-wò! *interj.* behold! look!
sé, *v.* to shut a door, to close up; to be barren, to miss, in shooting.
sẹ, *v.* to cook, to dye cloth or leather.
se-bọ (ibo, feeding), *v.* to grow fat, to be gross.
se-dò (òdò), *v.* to dam.
se-gi-ri (sá), *v.* to be chilly.
se-kpọḡ, *v.* to be barren or unfruitful.
se...mọ, *v.* to shut up, imprison.
se...mọ-lẹ, *v.* to shut in.
se-se, *n.* the stinging bean.
se-so (so), *v.* to bear fruit.
se-si, *adv.* perhaps, haply. (Acts 5, 39.)
sẹ, *adv.* emphatic and nearly expletive: **as, ẹ ò díde sẹ**, I will arise (Luke 15, 18); **ọ mọb sẹ o**, he is really coming ('o' pleonastic).
sẹ, *v.* to strain, as milk; to deny: **ọ sẹ Oluwa rẹ**, he denied his Lord.
sẹ, *v.* to distil, as dew, or water from the ground; to quake, as the earth; to interrogate, inquire.
sẹ-gi, *n.* a kind of bead, ancient Egyptian beads dug from the earth at Ifẹ and other places.
sẹ-hin (si), *prep.* behind, outside;—*adv.* back, backward (after a verb of motion).
sẹ-mi (omi), *v.* to drip, to filter.
sẹ-mi (sin), *v.* to preserve one's life or breath: **Ọlọrun sẹmi rẹ**, God preserve thee! (said to superiors).
sí, *v.* to be.

sí, *prep.* to, against, of, at, from, in, into: lóh sí ilé, go to the house; ó díde sí mí, he arose against me; á yé sí ikú, we are worthy of death; mọ̀ yẹ̀ sí í, I rejoice at it; nwọ̀n dźina sí wa, they are far from us; bọ̀ sí yara, go into the room.

sí, *conj.* and.

sí-a ? sa ? *adv.* where ?

sí-an, su-an, *v. impers.* it is good, it is well.

sí-bẹ̀ (sí), *adv.* there, yet, still, more: ó wà síbẹ̀, he is yet alive.

sí-bí (sí), *adv.* here, after a verb of motion.

sí-ha (sí), *prep.* by, towards, etc., after a verb of motion.

sí-hin, sí-hin-yí, *adv.* here.

sik-sik, sí-ki-sí-ki, *n.* hiccup.

sí-kpa (sí), *prep.* towards, unto, in regard to, concerning.

sí-lẹ̀ (sí), *adv.* to the ground, down.

sí-mí, *v.* to rest, to pause;—*interj.* simi! hush!

sí...ndžę, *v.* to imitate, mock.

sí-ní-ká, *n.* pewter.

sí-ni-sí-ni, *n.* a tyrant.

sí-nọ̀, *prep.* into, among.

sín, *adv.* before; preceded by tète, first or early: ó tète de sín mí, he came before me.

sín, *v.* to string, as beads; to bury; to sneeze.

sín, *v.* to serve, to worship; to accompany, to lead; to tame or pet, to raise cattle, &c.; to cease; to dun; to domineer over, to prevent from doing.

sín-gbà, *v.* to put in pawn; to transmit from town to town.

sín-hun. See *sínwín*.

sín-ka-fa, *n.* pewter.

sín-ku (oku), *v.* to bury.

sín-sín, *adv.* closely.

sín-sín, *n.* burial.

sín-sín, *n.* service, religion.

sín-wín, *v.* to be silly, crazy.

sí-sọ̀, *n.* a speaking, which is spoken: ẹnì òrọ̀ sí-sọ̀, one who speaks fluently.

sí-wa, *adv.* forward: síwa sehín, forwards and backwards, to and fro.

sí-wa-džu (sí), *prep.* before;—*adv.* before, more, for a little space.

so, *v.* to tie, to hang; to bear fruit.

só, *v.* to break out aloud, to break wind.

só-bi-a, *n.* the Guinea worm.

só-de (sí), *adv.* out of doors, out.

só-dži (sí), *adv.* near, into the shadow or presence of: mu...solži, to receive into favor. (1's, 85, 6.)

só-fin (sọ̀), *v.* to enact, to prohibit.

só-ke (sí), *prep.* and *adv.* above, up.

so-kpa, *v.* to tie into a hard knot.

so-kpai-kpa, *v.* to value goods for the market, to appraise.

so...lọ-rọ̀n (li), *v.* to hang a person.

so-mọ̀, *v.* to tie to.

so-ri (sí), *prep.* on, upon, on the top of.

so-rọ̀, *v.* to hang up so as to swing, to suspend.

so-yi-gi, *v.* to marry persons, unite in marriage.

sọ̀, *v.* to throw, to leap; to move a thing; to sew up a wound or broken calabash, to mend; to cause or make (see sọ̀...di); to shoot forth from the stem, as leaves.

sọ̀, *v.* to speak, talk, pronounce, to call or name (Luke 6, 13); to quarrel, scold, complain; to come down, descend, to let or put down from the head or shoulders: sọ̀ asọ̀dọ̀, to exaggerate; sọ̀ itumọ̀, to expound, explain; sọ̀ odi sí, to speak against, to gainsay.

sọ̀...dá-ho-ro (di), *v.* to desolate.

sọ̀...dai-mọ̀, *v.* to pollute.

sọ̀-dí (idi), *v.* to explain, prove.

sọ̀...di, *v.* to cause to be or to do: sọ̀...di àsan, to bring to naught, to annihilate; sọ̀...di nlá, to make great; sọ̀...di mimọ̀, to sanctify; sọ̀...di kpikpọ̀, to increase.

sọ̀-dọ̀ (sí), *prep.* to, unto a person.

sọ̀-fa (fa), *v.* to put in pawn, to pledge.

sọ̀-hun (sí), *adv.* yonder, used after a verb of motion to.

sọ̀...ka-lẹ̀, *v.* to come, put, or bring down.

sọ̀-kun (ẹ̀kun), *v.* to uccp.

sọ̀...lẹ̀, *v.* to dash down, to lay a foundation, to pound.

sọ̀-lẹ̀-džę, *n.* a child's play, a sort of dancing doll.

sọ̀...lo-fin (li), *v.* to prohibit, forbid a thing.

sọ̀...lo-ku-ta (li), *v.* to stove.

sọ̀...lọ-džọ̀ (li), *v.* to locate in a place, to assign to lodgings.

sọ̀-lù, *v.* to pett.

sọ̀-mi-dọ-lọ-tọ̀, *n.* a solitary yellow monkey.

sọ̀-na-sí (sọ̀n ina sí), *n.* irritation, excitement: ẹ̀e sonasi, to excite against.

sọ̀-ni-di (so ẹnì di), *v.* to make, appoint, or constitute one, as to a purpose.

sọ̀...nọ̀, *v.* to throw away, to lose: ke sọ̀nọ̀, to cut off.

sọ̀n, sun, *v.* to broil, to burn. (Mat. 3, 12.)

sọ̀n, sún, *v.* to move, to shove, to filter; to plough; to send forth water, as a fountain.

sọ̀n, sún, *v.* to accuse, to sue; to point or aim at.

sọ̀n-ki, *v.* to shrivel, contract; to shrink from, shun.

sọ̀n-kọ̀n, *v.* to drip full of water.

sọ̀n-mí (omi), *v.* to filter, drip.

sọ̀n-mọ̀, *v.* to approach.

sọ̀n-mọ̀ (imọ̀), *v.* to sniff the nose, as one with a cold, to sniff.

sò-rò (òrò), *v.* to talk, converse: bá sòrò, to speak or commune with; sòrò odi sí, to speak against; sòrò ni rere, to speak well of.
sò-rò-dže-dže or **ke-łe**, *v.* to whisper, to talk privately.
sò-rò-łe-hin, *v.* to backbite.
sò-łe-łe, *v.* to predict, prophesy.
sò...łi, *v.* to miss, in throwing at.
sò-ye, *v.* to explain, to value, set a price on.
sú, *v.* to sow, to retail any liquid, as beer; to remove from the socket or handle; to perplex, to puzzle; to break out, as measles; to be weary; to fall lame, to coat with metal, as in gilding: sú dżade, to bring forth herbs, as the earth.
sù, *v.* to fail in cutting or wounding because the instrument is dull.
sú-a, su-aj, *v. impers.* is good, nice, well: ó suaj, it is well; very well, all right.
sú-ā, *adv.* universally.
su-bò, *v.* to coat with metal.
su-fe (so ife), *v.* to whistle.
su-mò. See sojmò.
sup, *adv.* (looking) with surprise: aditi wò ni li enu sup, the deaf look with surprise on people's mouths (when speaking).
sún. See sòg.
sún, *v.* to sleep; to grow thick on cooling, to coagulate, as oil; to freeze.
sun. See sòj.
sup-ko-nu, *v.* to cease.
sup-ye, *v.* to doze, to take a short nap.
su-re (sò ire), *v.* to bless or call a blessing upon.
sú-re (sá ire), *v.* to run.
sú-ru, *n.* patience: še súru, mu súru, to be patient; súru imu, taking patience, or being patient. (Jas. 5, 10.)
sù-ti, *n.* a contemptuous pouting of the lips; contempt.
su-wa, su-won. See suaj.

S.

śa, *v.* to fade.
śā, *adv.* awhile.
śá, *v.* to smite, hack, wound; to śnap a gun.
śá, *adv.* only; by all means.
śā, *v.* to pick up, collect; to pick out, select.
śa-ba. See śatij.
śa-dò (śe), *v.* to commit lewdness.
śa-džo (śe), *v.* to be anxious, apprehensive.
śa-džu, *v.* to go before, precede; to go forward, advance.
śa-fa, *v.* a kind of tree: śafa kpukpa, yellow color.

śa-fe-ri (śe), *v.* to seek.
śa-fin, śa-la, *n.* an iron chain or ring worn on the arm.
śa-fò-džú-di (śe), *v.* to be saucy, insolent.
śa-fò-wò-rá (śe), *v.* to pilfer.
śa-gá-la-má-śā (śe), *v.* to play tricks, to be guilty of double dealing.
śa-gbe (śe), *v.* to beg, to borrow.
śa-gbò, *v.* to be old.
śa-hò (śe), *v.* to despise, to ridicule.
śai! *interj.* of contempt or defiance.
śai-saj (śe), *v.* to be sick.
śa-ka, *adv.* entirely, wholly.
śa-ka-tá, *n.* a moruss, a bog.
śa-ki, *n.* paunch, tripe.
śá-ki, *v.* to miss fire or snap, as a gun; to fail in cutting, to be nought.
śa-ki-śa-ki, *adv.* unevenly, ruggedly, badly: á śā ā lógbe śakiśaki, he was badly wounded.
śá-ko-kò (śe), *v.* to occur seasonably, to be opportune.
śa-ko-so (śe), *v.* to control, govern, have dominion over.
śa-kpa-ná, *n.* small-pox.
śá-kpa-sá-kpa, *adv.* in a disorderly manner.
śa-kpe-džu-re, śa-kpe-re. See sakpèrè.
śa-kpè, *v.* to clap the hands.
śa-la-bá-kpa-de, *v.* to chance, to happen.
śā...łò-gbè (li), *v.* to wound, by striking with a weapon.
śá-lu-ga, *n.* who cleverates; fortune; a title of Adže, god of money.
śá-na (ina), *v.* to strike fire.
śa-ni-a-ni (śe), *v.* to be doubtful, uncertain.
śā-nu (śe), *v.* to pity: mo śānu wòj; ānu wòj še mi, I am sorry for them.
śaj, *adv.* twinklingly, as stars; uprightly, erectly.
śán, *v.* to strike against something hard; to cut bushes; to daub; to eat dry bread or yam.
śāj, *v.* to be loose; to flow, as a stream; to burst, to burst forth, as thunder: aśò nśāj lè, the cloth is dragging on the ground.
śa-ŋfa-ni (śe), *v.* to be profitable, advantageous.
Śa-ŋgò, *n.* the god of thunder.
śán-gbè (igbe), *v.* to cut bushes, to clear land.
śāj-gbò (igbò), *v.* to cut down a forest.
śaj-kú, *v.* to die in the prime of life.
śaj-ku-ta, *v.* to dash against a stone.
śaj-łe, *v.* to dash down.
śaj-se (ose), *v.* to strike the feet together in walking.
śaj-saj (see śaj), *adv.* in splits or strips.
śāj-wò (owò), *v.* to swing the hands in walking.
śāj-wò, *v.* to be empty-handed, i. e. having no presents in hand.

šà-raj (še), *v.* to be silly from age, be in one's dotage.
 ša-re (še), *v.* to make right, to be right.
 šā-rē (še), *v.* to be older than.
 ša-rò, *v.* to meditate, to be thoughtful.
 ša-ro-kpij, *v.* to limit.
 ša-ro-ye, *v.* to dispute, complain.
 ša-ša, *n.* an old broom; scars left by small-pox.
 ša-ša, *adv.* entirely, thoroughly; scatteringly.
 ša-ta, *n.* mud, mire.
 šā-tì, *v.* to cast away, to set at naught.
 ša-ti-kpo, *v.* to sojourn, emigrate.
 šauj-šauj, *adv.* well, thoroughly: ó gbéde wa šaujšauj, he understands our language well.
 šá-wa-da (še), *v.* to jest, joke.
 šā-wo (še), *v.* to plot, conspire.
 ša-wo-taj (še), *v.* to heal, cure.
 ša-woj (še), *v.* to be stingy.
 ša-yanj (še), *v.* to stink.
 šā-yanj (še), *v.* to pick out, cull, select.
 še, *v.* to do, to make; to be; to ail: ó šē chij bi eḡeḡe, he has a back like a hog; ki iše tí wa, it is not ours; awa še ti Olorun, we serve God; bata kò še gunj ori okuta, shoes are not good to climb up a rock; nwonj šē odún, they are keeping new year's day; še ê ki ó moḡe, make it shine; wiwò li á ô še ni titò, the crooked shall be made straight; ki iše ê? what ails him? iba nšé, fever ails him; anú rē nšé mi, I am sorry for him; kò lè še máh (or aì) must; awa kò lè še máh dza (or aìdza), we must fight.
 še-be, *n.* a black snake.
 še-bi, *v.* to suppose, to do as if.
 še...dži-na, *v.* to deepen.
 še-fe-fe, *v.* to be vain, to brag.
 še-gá-fa-ra, *v.* to excuse.
 še-gbe, *v.* to perish, to be lost.
 še-i-ro-na. See šerona.
 še-ke (eke), *v.* to tell a lie.
 še-kpe (še), *v.* to swear.
 še...la-bu-kùnj (li), *v.* to dishonor.
 še...lá-le-džo (li), *v.* to entertain a guest.
 še-la-ra (ilara), *v.* to envy.
 še...lè-gi-ri (li), *v.* to chill.
 še...lè-mò (li), *v.* to treat coldly.
 še-le-ri (ileri), *v.* to promise, to vow.
 še...lè-tẹ (li), *v.* to communicate the leprosy to.
 še...lẹ-wa, *v.* to beautify, to decorate.
 še...lo-fo (li), *v.* to bereave.
 še...lọ-rẹ (li), *v.* to befriend.
 še...lò-re (li), *v.* to confer a favor.
 še...lọ-sọ (li), *v.* to clothe, to adorn, to furnish.
 še-ni, *v.* to trouble, annoy.
 šè-ni-a (še), *v.* to be kind, accommodating.

šè-ni-sí, *v.* to exceed or go beyond one's instructions, to add to the price.
 še...ní-džam-ba, *v.* to do violence to, to maltreat.
 še...ni-šẹ (iše), *v.* to punish.
 še-ri-džú, *v.* to serve as a steward.
 še-ro-na, *v.* to go in search of.
 še-sij (ešij), *v.* to ridicule.
 še-taj, *v.* to complete, to be completed.
 še-ti, *v.* to pertain to, to serve.
 še-unj (olun), *v.* to be kind, good: o šeun, thank you, well done!
 še, *adv.* greatly.
 še, *v.* to come to pass, to happen, to be fulfilled.
 šē, *v.* to break, as a stick; to break up or subdue as a town; to make a noise: šē okunj bọ imọ ešij, make the rope into a noose on the horse's nose.
 šē, *v.* to sin; to commence.
 šē-bọ (še), *v.* to make a sacrifice.
 šē...bọ, *v.* to make into a noose on a thing. See šē.
 šē-da, *n.* silk.
 šē-dá (še), *v.* to create.
 šē-džú (odžú), *v.* to wink the eye.
 šē-fe (še), *v.* to jest, mock, ridicule.
 šē-gbẹ (še), *v.* to associate with.
 šē-ge, *n.* a kind of grass, broom-sedge.
 šē-gunj (ogun), *v.* to conquer, prevail over.
 šē-hij (še), *v.* to be behind or last.
 šē'-i-ye (še), *v.* to rebel, revolt.
 šē-ke-ke, *v.* to reckon by tickets, to cast lots; to give an account.
 šē-ke-re, *n.* a ecalabush-drum, tambourine.
 šē-ke-še-ke, *n.* fetters, shackles.
 šē-ke-tẹ, *n.* beer of maize or Indian corn.
 šē-kpe, *v.* to wither.
 šē-kpo, *v.* to be double.
 šē-ku (ši), *v.* to open the door.
 šē...kun, *v.* to diminish or remove a part. (Exod. 5, 8, 11.)
 šē...le-ti, *v.* to hem.
 šē-le-ya (še), *n.* to despise, contemn.
 šē-mbe, *adv.* in a flickering manner.
 šē...ni-kpo, *v.* to double.
 šē-nó (inó), *v.* to miscarry, to suffer abortion.
 šē-o-run, *n.* the setting sun when it appears large.
 šē-ri, *v.* to turn into another course, to take another direction.
 šē-sij, *v.* to ridicule, to be ashamed.
 šē-še, šē-tọj, *adv.* nearly, recently.
 šē-šẹ, *n.* which is broken.
 šē-taj (še), *v.* to miscarry, to deceive.
 šē-tẹ (še), *v.* to conquer, to gain the victory in a dispute.
 šē-tu (še), *v.* to be speckled.

śī, v. to make a mistake, to miss; to fade in color, to be pale; to rinse.
 śī, v. to open, to remove, to slip out of the hand, to push off from the shore.
 śī-bi, n. a spoon.
 śī-bo, n. the papaw.
 śī-dī (idi), v. to pluck up, to remove.
 śī-dži, śī-dži-bō (śe), v. to shade, to overshadow.
 śī-džū, v. to open the eyes, to be daring.
 śī-džū-wō, v. to look upon, to regard.
 śī-fi-sī, v. to misplace.
 śī-gbōj. See šugbōj.
 śī-gī-di, v. to be short and thick.
 śī-gī-di. See šugudu.
 śī-guṇ (ogun), v. to go forth to battle.
 śī-guṇ, n. the physic-nut.
 śīk, a contraction of śe ikōj, to make a fullness, or to fill up, employed as a prefix to numerals after abo, a half; as, abo śīketa (eta), three and a half; abo śīkaruṇ (aruṇ), five and a half.
 śī-ka, n. a key.
 śī-kō (okō), v. to get under way.
 śī-kpa-yā, v. to lay open, expose to view; to disclose, reveal.
 śī-kpe (śe), v. to entreat, to beg pardon.
 śī-kpo. See śī nikpo.
 śī-kun (ekun), v. to open the door.
 śī-kūj, v. to remain, after some has been taken.
 śī... la-dže, v. to condemn for witchcraft.
 śī... lai-ya (li), v. to alienate.
 śī-lo, n. a curved grass-knife, reap-hook, sickle.
 śī... lo-džū (li), v. to stimulate or revive, as when weary.
 śī-lōh, v. to start, depart.
 śī-mbo (iši ambō), n. the papaw, lit. the white man's iši.
 śī-mō-ran (śe), v. to counsel, to take into consideration.
 śī-na (ṇa), v. to miss the way, to err. In Ps. 78, 50, for śe ṇa, or šṇa.
 śī... ni-kpo, śī... ni-dī (ni), v. to remove.
 śī... ni-ye (ni), v. to remind.
 śī... nō, v. to wash, rinse.
 śīj, v. to run precipitately; to be guilty; to lend, to borrow.
 śīj, śīj-śīj, adv. uprightly, steadfastly.
 śīj, adv. piercingly, keenly.
 śīj-śīj, n. a porcupine quill.
 śīj-śīj ḡ-bē, n. a kind of sauce.
 śīḡ! interj. pshaw! tut!
 śī-ra (ari), v. to be quick, to hurry.
 śī-re (śe), v. to play.
 śī-re-guṇ (śe), v. to rebuke for ingratitude, to reproach.
 śī-ri, n. a stalk of corn or rice with the grain on it.

śī-ro (śe), v. to reckon, calculate.
 śī-se (śe), v. to move the foot, to hasten.
 śī-sā, n. which collects, a collection, &c. See śā.
 śī-sāj, n. which flows, &c. See śāj.
 śī-se, n. to mistake, to do amiss.
 śī-se, n. which can be done, which is possible.
 śī-se (śe), v. to work, to labor, to be in distress: śīse oro, to be in torment.
 śī-si, n. which errs; an error.
 śī-su, n. which is dark; darkness.
 śī-su, adv. rapidly (hwoj).
 śī-wa-džū (śe), v. to be before, first.
 śī-we-re (śe), v. to be silly, insane.
 śī-wo! an exclamation of defiance.
 śī-wō (owō), v. to remove the hand, to stop work; to remove, drive away (Exod. 8, 31): nwōj śīwō, they have knocked off work; owō tó śī, it is time to knock off.
 śī-wōj (śe), v. to weigh. (Ps. 62, 9.)
 śī-ye-me-dži (śe), v. to doubt, to hesitate.
 śo, adv. very slightly (touching).
 śō, v. to be passionate, morose.
 śō, v. to be slackened or loosened.
 śō-bō (śe), v. to hint.
 śō-dī-nō, v. See śō.
 śō-džo-ro (śe), v. to cheat in play.
 śō-džū-ko-ko-ro, v. to covet.
 śō-džū-rē-re, v. to be gracious, to favor.
 śō-džū-ša-džū, v. to be partial.
 śō-fō (śe), v. to suffer loss of property, to be empty, to waste, to feel bereaved.
 śō-fō-fō (śe), v. to tattle.
 śō-go (śe), v. to glory, to exult, to act valiantly.
 śō-ke-hij-dā, v. to be offended, to forsake.
 śō-ko-to, v. to be small, narrow, as a room.
 śō-ko-tō, v. trousers, pantaloons.
 śō-kpe (śe), v. to be simple, ignorant.
 śō-kun, śō-kun-kun, v. to be dark.
 śō-lō, n. a rivulet.
 śō-lo-ri, v. to command, to rule over.
 śō-nō, v. to be peevish, surly.
 śōj-šo, n. the point or tip; a pinnacle; a small item, a particle.
 śō-re (śe), v. to do good.
 śō-ro, v. to be difficult.
 śō-rō (śe), v. to be sharp pointed; to be spiteful, furious.
 śō-šo, adv. singly, only.
 śō-šo (śe), v. to bewitch.
 śō-wō (śe), v. to make money.
 śō-wo (śe), v. to trade.
 śō-yi (śe), v. to be dizzy.
 śō, v. to watch, to guard.
 śō-de (ode), v. to patrol.
 śō-fō, v. to mourn for the dead.

şo-fon, *v.* to be persuasive : á şofon bi alakara, he is as persuasive as a cake-seller.
 şo-gba (şe), *v.* to keep a garden.
 şo-hom-bi-a, *n.* a boot.
 şo-kaj (şe), *v.* to be one, to agree, act in concert.
 şo-kpe (şe), *v.* to thank.
 şo-lá (şe), *v.* to honor.
 şo...lo-şo (li), *v.* to garnish, adorn.
 şo-na (şe), *v.* to work at a trade, to carve.
 şo...ni-gbo-wó, *v.* to strike with the elbow, to jog.
 şon, *adv.* coolly, calmly.
 şon, *adv.* precipitately, with a plunge.
 şon, *v.* to abstract by little at a time.
 şon-gon, *v.* to be long and slender : aşon-gon óbiri aşowo máli dē odža, (a riddle), a long slender trading woman who never reaches the market, i. e. a canoe, which is left at the landing-place when the owner goes into the market.
 şon-gon, şon-gon-şon-gon, *n.* which is long and slender.
 şo-ra (ará), *v.* to watch over oneself, be careful.
 şo-ran (şe), *v.* to commit an offence.
 şo-re (şe), *v.* to be friends, to associate : ó bá mi şore kpò, he was my friend.
 şo-ro. See şon-gon.
 şo-rom-bi-a, *n.* See şolombia.
 şo-şo (şe), *v.* to adorn.
 şo-şo (şe), *v.* to complain, to talk much.
 şo-te (şe), *v.* to be a foe, to revolt.
 şo-wó (şe), *v.* to hand over, send over, deliver.
 şo-won (şe), *v.* to be scarce, dear, precious.
 şu, *v.* to cast out, to evacuate feces.
 şú, *v.* to discourse ; to intrust ; to grow dark, to blacken, as clouds : ilē şú, it is dark ; şú okun-kun, to be dark, obscure, difficult to be understood ; şú dżikana, to make bricks ; şú si, to care for or notice what is amiss.
 şù, *v.* to knead, to make into balls or loaves ; to be round as a ball, to be cylindrical ; to collect, as a swarm of bees ; to be disagreeable to.
 şù-bò, *n.* See şámò.
 şu-bu (şe ibu), *v.* to fall : bi şubu, to push down.
 şu-džo, *v.* to collect, as a crowd.
 şu-gbò, *conj.* but, yet.
 şu-gu-du, *n.* an image made of clay.
 şu-kpó (okpó), *v.* to marry a widow.
 şu-ká, *n.* a little hand-basket.
 şu-ku-rá, *n.* a partridge (the akpáro).
 şu...le-se (li), *v.* to besmear with paint.
 şu...lò-hun (li), *v.* to censure, to abuse.
 şu-lo-kpó (li). See şukpó.
 şù-mó, *v.* to gather around, to press upon, in a crowd ; to settle on, as bees.
 şu...ni-nó (inó), *v.* to purge.

şu-nó (inó), *v.* to be loose, to run off, as the bowels.
 şu-ra, *v.* to treasure up.
 şu-ru, *v.* to be in a heap or bunch.
 şu-şu, *v.* to be plump.
 şu-şu, *adv.* greatly, utterly.

T.

ta, *v.* to shoot, to kick ; to sting, to burn, as pepper ; to spill or shed, as blood ; to open a boil ; to pour, to avoind ; to cast, to fall on ; to spread, as a sail ; to shine ; to produce, as yams or potatoes, to shoot forth roots or branches ; to sound aloud ; to go from place to place : ta ire, to imprecate evil upon.
 ta ? *pron.* who ?
 tâ, *v.* to sell ; to fine.
 tâ-ba, *n.* tobacco.
 tâ-bí, *adv.* or, indeed.
 ta-dže (eđže), *v.* to shed blood.
 ta-dži, *v.* to awake suddenly.
 ta-džu (odžu), *v.* to be in haste, to be anxious.
 ta-fa (fa), *v.* to shoot a bow.
 ta-fa-la, *v.* to waste.
 ta-fa-ta-fa, *n.* an archer.
 ta-ge-re, *v.* to hasten.
 ta-gbo-kun, *v.* to set sail.
 ta-gbon-gbon, *v.* to stagger, to decline to one side.
 tai, tai-tai, *adv.* indifferently, insolently.
 ta-ka (ika), *v.* to snap the fingers.
 tá-kar-dá, *n.* paper.
 ta'ke-te, *v.* to throw a summerset.
 ta-ke-te, *v.* to stand aloof.
 ta-ko-ko, *v.* to tie a knot.
 ta-kò-ta-bò (ate), *n.* a pair, male and female.
 ta-kpa (ikpa), *v.* to kick, strike, snatch away.
 ta-kpe (ikpe), *v.* to shoot or put forth ears, as maize.
 ta-kun (okun), *v.* to stretch a rope.
 tá-lá, *n.* white cloth, whiteness.
 ta...lai-ya (li), *v.* to strike on the breast, to be contrary to, as the wind.
 ta-la-ká, *n.* which is poor, a poor person.
 ta...lo-re (li), *v.* to give a gift to.
 tâ lu-bò, *n.* young fruit.
 tá-ma-ha, *v.* to suppose, to hope.
 ta-mkpa, *n.* the breast-bone.
 tâ-ná (taj ina), *v.* to light a lamp or candle.
 ta-ndže, *v.* to cheat, to deceive.
 ta-ndžu, *v.* to look stern.
 tá-ni-tá-ni so-ko, *n.* a centipede.
 ta-nò, *v.* to throw away, cast out.
 taj, *v.* to be seen to ; to run a canoe aground.
 tán, *v.* to be finished, perfect ; to cure ;—*adv.* perfectly.

- tân, *v.* to shine, to light, as a lamp; to entice, deceive, scatter: tân mọ̀lẹ̀ or inọ̀lẹ̀, to shine.
- tan'-ga-ra, *n.* tin, a plate.
- tan-gbo, *v.* to take root.
- tan-ka-le, *v.* to spread abroad, promulgate.
- tan-kpa-ra, *v.* to ulcerate.
- tan-san, *v.* to shine, as a lamp.
- tân-tan, *adv.* (stretching) to the full extent, violently, as in convulsions.
- tan-ta-si, *n.* a yam-vine left to rot.
- tā-ra, *n.* gravel.
- tā-ra, *adv.* straight forward, hastily.
- tar-dá, *n.* ink.
- ta-ri (ori), *v.* to push violently.
- ta-sa, *n.* tin or pewter.
- ta-se, *v.* to miss.
- ta-se (vse), *v.* to kick.
- ta... si-lẹ, *v.* to spill, to shed, as blood.
- ta-sẹ, *v.* to imprecate evil on.
- ta-sọ, *v.* to warp thread for weaving.
- ta-wo, ta-yo, *v.* to play the game called 'worry.'
- ta-tu, *adv.* very (light); sadly, gloomily: igit yifere tatu, this mood is very light.
- te, *v.* to fondle, worship, propitiate.
- tē, *adv.* (sitting or alighting) on the top.
- tē-de, *n.* a kind of parrot.
- te-dzu, *v.* to look after, superintend.
- tē-fe-tē-fe, *adv.* wholly, entirely.
- te-mi, *pron.* of me, mine.
- te-ni. See toni.
- te-ni-te-ni. See tonitoni.
- te-re, *n.* a wave of the sea.
- te-re, *adv.* scatteringly: eni tere edzi tere, one here and there.
- te-te, *adv.* early, soon, first; with a quick pace.
- te-te, *n.* the leg of a beast.
- te-te-kó, *adv.* first.
- tẹ, *v.* to lay, to spread out; to be flat, insipid, disgraced; to beat or outdo; to push forward; to erect, as a tent or an altar.
- tẹ, *v.* to trample; to bend; to castrate; to approach, to be near: tẹ si, to agree to.
- tẹ-bá, tẹ... ba-lẹ, *v.* to bend, to bow, to be cast down.
- tẹ... bẹ-re, *v.* to bend, bow, level.
- tẹ... bọ, *v.* to dip, to immerse; to hang up on a hook or pin.
- tẹ... bọ-mi (omi), *v.* to dip into water.
- tẹ-dọ, *v.* to be patient, to act calmly, leisurely.
- tẹ-dó, *v.* to encamp, to found a settlement; to inhabit, to dwell.
- tẹ-dzu, *v.* to be flat, smooth; asọ tẹ-dzu, plain cloth.
- tẹ-dzú, tẹ-dzu-mọ, *v.* to fix the eyes on, to gaze at.
- tẹ-fa, *v.* to consult Ifu.
- tẹ... gben-gbe, *v.* to expand.
- tẹ-gun, *v.* to set in battle array, to lie in wait, as an army.
- tẹ-hin-gbe-sa, *n.* a crust.
- tẹ... lai-ya (li), *v.* to soothe, pacify.
- tẹ-lẹ, *v.* to follow, pursue.
- tẹ-le, *adv.* beforehand, preciously.
- tẹ... lẹ, tẹ... lẹ-se, tẹ... si-lẹ, *v.* to tread down, trample on; to spread out, prepare food.
- tẹ... lo-go (li), *v.* to glory or triumph over.
- tẹ... lọ-ron (li), *v.* to satisfy, to comfort.
- tẹ-mọ, tẹ... mọ-lẹ. See tẹle.
- tẹ-na, *adv.* already.
- tẹ-ni-tẹ-ni, *n.* abject poverty, distressed condition.
- tẹ... nf-kpa (ni), *v.* to compel.
- tẹ-nọ (inọ), *v.* to be meek;—*adv.* quietly.
- tẹ-nu-mọ (enu), *v.* to affirm.
- tẹ-ntẹ-re, *n.* a kind of vulture.
- tẹ-yin (ti), *pron.* yours.
- tẹ-re, *n.* time, shells of which lime is made.
- tẹ-re (ti), *pron.* his, thine.
- tẹ-re, *v.* to be slender, be long and narrow.
- tẹ-ri, tẹ-ri-ba (ori), *v.* to bow, to bend the head down.
- tẹ-ru, *n.* white cloth, sheeting, shirting.
- tẹ-ru (ti), *v.* to deal in slaves.
- tẹ-ru-tẹ-ru, *n.* a slave-dealer.
- tẹ... si-lẹ. See tẹle.
- tẹ... se, *v.* to compel to do a thing.
- tẹ-tẹ, *n.* a game of chance; the name of a weed.
- tẹ-tẹ-gú, tẹ-tẹ-e-gú, *n.* a kind of cane.
- tẹ-tẹ-rẹ, *adv.* carelessly, awkwardly.
- tẹ-tu, *n.* an executioner, sheriff.
- tẹ-wọ-gbá (owọ), *v.* to receive, accept.
- ti, *aux. part.* have, has, had.
- ti, *v.* to gnaw; to tic, bind.
- ti, *pron.* who, which, that.
- ti, *adv.* how, where, when, already: ó ti wà nibẹ, he is there already.
- ti, ti, *prep.* from, of, by;—*conj. and:* á ti oko de, we came from the farm; ọrọ ti Oluwa, the word of the Lord; daro ti mi, stand by me; emi ti rẹ á lóh, I and thou will go.
- tí, *v.* to thump, to strike against; to fade, as to color, to consume.
- tì, *v.* to lean against, push, prop, support; to lock or fasten, to lock up, imprison: ti lehin, to sustain, strengthen; ti sulu, to push down.
- tì, *adv.* heavenly, vehemently (leating upon, as the sun or waves).
- tì, an adverbial particle denoting failure; as, ọ kọlé tì, he failed in his attempt to build a house.
- ti-an, *adv.* distant, far off.
- ti-bẹ, *adv.* from there, thence.
- ti-bọ, *v.* to kindle.

ti-dzú (odzu), *v.* to be ashamed.
ti-ha, *prep.* from.
ti-ka-lá, tí-ka-rá, *n.* self.
ti-ko, *adv.* sluggishly, unwillingly.
ti-kpa-se, *prep.* by, by means of.
ti-krá-ro, *v.* to cast off, reject.
ti-lé-ti lé (ati ilé ati ilé), *adv.* with all the house.
ti-lè, *adv.* from the ground, even: kò tilè sè kpe, not that, not because.
ti...lè-hin, *v.* to sustain, strengthen.
ti...lo-dzu, *v.* to abash, to be ashamed of.
ti-mó-ti-mó, *adv.* closely (adhering).
tim-tim, *n.* a pillow, a cushion.
ti-na-bò (ina), *v.* to set on fire, to kindle.
ti-nò (inó), *prep.* from within, from out of.
ti-nò-ti-nò, *adv.* heartily.
ti-ra, *n.* a Mohammedan charm; anything written, a book.
ti-rè (ti), *pron.* thine, his.
ti-ri (ori), *v.* to stoop, to look downwards: tiri si, opposite to.
ti-rin, *v.* to be slender: okun tirin, twine; Ogun kun, Osa kun, ó kun tirin kò kpade (a riddle), there remain the Ogun (river), the Osa (lake), and the slender, which you have not met (i. e. crossed); meaning the nose.
ti-rin-mò-lè (ti rin), *v.* to stand firm.
ti-ro, *v.* to stand on tiptoe reaching upward.
ti-ro-ti-ro, *adv.* with consideration, advisedly.
ti-sá-dzu, *n.* which is former or foremost.
ti-tà, *n.* which is for sale, &c. See tá.
ti-tàn, *n.* who is cheated, or deceived, &c. See tàn.
ti-tè, *n.* which is lowly, &c. See tè.
ti-ti, *adv.* continually, for ever, till: yi ô sán ti ti óla, he will be better by to-morrow.
ti...ti, *adv.* wholly, altogether: ti ogó ti ogó, all glorious. (Ps. 45, 13.)
ti-ti, *adv.* tremulously, violently (shaking).
ti-ti-ai-ye ti-ti-lai, *adv.* for ever.
ti-to-ri, *conj.* because, on account of.
ti-tò, *n.* which is straight, true, &c. See to.
ti-ton, *n.* which is new or young.
ti-wa (ti), *pron.* ours.
ti-won, *pron.* theirs.
to, *adv.* by drops, as water; without clouds.
tò! *interj.* well! very good!
tò, *v.* to be enough, sufficient, capacious; to reach: kò tó nkán, few, not much; ô kpò tò! how much or how big it is! á tó ogorun, they are as many as a hundred; fi odzú tò, to put the eye to, to attend to; tò bí, as much as; tò behe, so much, inasmuch as; asé Oluwa tó, the commandments of the Lord are right; agogo tò lù, it is time for the clock to strike; ó tò bí eni oduw mewa, he is ten years old.

tò, *v.* to stand or place in a row, to set in order, to keep or ponder in the mind; to lay up, to be restored, as a broken limb: tò dzò, to lay up, as treasure.
to-bi, *n.* a napkin, a towel.
tó-bi, *v.* to be large.
to-bi-nò-wò (nò owó), *n.* a towel.
to-dzú-bò, *v.* to pry into.
to-gbé, *v.* to doze, to slumber.
to-ge-dén-gbe, *v.* to come tumbling down.
to-ló, *n.* a wattle.
to-ló-to-ló, *n.* which is wattled, i. e. a turkey.
tom-bá, *n.* a sort of club or cudgel.
to-ni, te-ni (tó oni), *adv.* till to-day: ki...teni, before; ki á teni de, before we come.
to-ni-to-ni, te-ni-te-ni, *adv.* till now.
to-ni-to-ni, *adv.* clearly, nicely.
to-nto-ro, *n.* a small bit, a particle.
to-ri (ti), *v.* to fall to one's share, to pertain to: tori odzú, to satisfy, satiate.
to-ri, *prep.* from on.
to-ro, *v.* to be narrow.
tò-ro, *n.* an upper garment, a coat.
tò-ro, *v.* to settle, as dirty water; to be tranquil: ilè tóro, the country is at peace.
to-ro-gbé, *v.* See togbé.
to-to, *adv.* clearly, without clouds.
to-to, to-to-hun, *adv.* (never again) at all, totally, thoroughly.
tò-tò, *n.* truth: ní tòtò, truly.
to-ye, *v.* to be of equal value, to be meritorious.
to-ye-to-ye, *adv.* considerably, discreetly.
tò, *v.* to guide, lead, bring up, educate; to watch over or take care of; to be straight, right, true; to correct; to be long, durable; to split into strips; to touch; to urge, trouble, enrage; to taste.
tò, *v.* to follow, to approach, resort to, arrive at; to urinate: tò mi lóh, tò mi lehin, follow me; tò mi wáh, come to me; ke...tò, to cry to.
tò...da-gba, *v.* to bring up, as a child.
tò-do (ti), *prep.* from, from the presence of.
tò-dzú (odzú), *v.* to look after, take care of.
tò-hò, *adv.* well, very (employed in commending): iwò sèun tòhò, you have done well.
tò-hun (ti), *pron.* that one yonder.
tò-kaj-tò-kaj (ti), *adv.* with all the heart, freely.
tò-ko (tu), *v.* to paddle a canoe, to steer.
tò-kpa (ikpa), *v.* to follow, trail, trace out.
tò-kpe-re (akpèrè), *v.* to copy.
tò...kpò, *v.* to bring up together, as children.
tò-kun (okun), *v.* to guide, direct.
tò...la-ra (li), *v.* to touch one.
tò...lè-hin (li), *v.* to follow.
tò...lòh, *v.* to go to, to follow.

tò-na (òna), *v.* to go along the road, to trace the footsteps, to take the lead.
 tòn, *v.* to run, as a melon-vine.
 tòn, tún, *adv.* again, once more.
 tò-rè (ta), *v.* to give a present, to offer: tò-rè ànu, to give alms.
 tò-rò, *v.* to borrow, to beg.
 tò-sè (sèc), *v.* to trace out, track, examine.
 tò-tò, *v.* to be whole, complete;—*adv.* fully.
 tò...wò, *v.* to taste.
 tò...wò (ti ówò), *prep.* by (means of).
 tò-wò-bò (tè), *v.* to dip the hand in (Mat. 26, 23).
 tò-wò-tè-sè, *adv.* (bound) hand and foot.
 tò-wò-tò-wò (òwò), *adv.* respectfully, reverently.
 tù, *v.* to throw out, to spit; to pluck up; to fail.
 tũ, *v.* to untie, to loosen; to break loose, as a horse; to pour out, to gush, to tap a barrel; to scatter, to plunder, to unfold, to blossom, to break up, as a crowd; to pull a paddle or oar: tú ófò, to bring tidings that the bearer's friend is dead.
 tù, *v.* to cease from paining, to ease, to reconcile; to be cool or cold.
 tu-ba (Arab.), *v.* to repent.
 tu-bò (tun), *v.* to try again.
 tu-bu, *n.* a jail.
 tu-dzu-ka (odzũ), *v.* to take courage, be cheerful.
 tu...ka, *v.* to scatter.
 tu-kò, *v.* to navigate.
 tu-kpũ, *adv.* precipitately.
 tu-kũ, *n.* a wild hog.
 tu...la-ra (li), *v.* to refresh.
 tu-la-sij, *n.* misfortune, evil.
 tu...la-sò (li), *v.* to strip one.
 tu-lè (ilè), *v.* to break up the earth, to plough.
 tu...lè-dò (li), *v.* to console.
 tu...lo-dzũ (li), *v.* to tame, to charm, as one does a serpent.
 tum-bu, *n.* the silk-worm.
 tu-mò, *v.* to disclose a secret, to baffle a plot; to explain words, to expound.
 tu...nf-ho-ri-ho, *v.* to strip naked.
 tu...ni-nò (inò), *v.* to pacify, comfort, console, to propitiate.
 tu-nò. See tu...nino.
 tú-ra-ri, *n.* perfumery of any kind.
 tũ-tò, *v.* to spit.
 tu-tu, *n.* coldness, greenness (not dry, as plank); rawness, which is wet; freshness (not salt): ò dzè ò ní tutu, he ate it raw.
 tũ-tu, *adv.* entirely.

W.

wa? *adv.* where? iwe mi wa? where is my book?

wá, *v.* to seek; to share; to tremble: wa ri, to find out, discover.
 wà, *v.* to be, live, endure, stand; to dig, to pull an oar or paddle: wà imò, to perceive; wà làye or li àye, to live.
 wa, *pron.* us, our.
 wá, *adv.* loudly.
 wa-di (jidi), *v.* to examine into, to scrutinize.
 wà-du-wá-du, *adv.* hurriedly.
 wa-dzè, *v.* to seek or seize food, to forage; to gain.
 wa-dzi, *n.* blue dye or color.
 wa-dzò, *n.* to investigate a cause; to avenge a wrong.
 wa-ga, *n.* a package of kaun.
 wa-gad, *n.* mush.
 wa-gí, *n.* butter.
 wa-gun (ogun), *v.* to set in battle array.
 wáh, *v.* to come.
 wa-há-la, *v.* to trouble.
 wa-há-la, *n.* trouble, affliction.
 wa-ha-ri, *n.* a slave woman taken for a wife.
 wai. See wayi.
 wà-ka-si, wà-ra-ka-si, *n.* cheese.
 wa'-ka-tí, *n.* time, season, hour.
 wa...ki-ri, *v.* to seek for.
 wa-lá, *n.* a board to write on, a slate.
 wa-la-mi, *n.* an oar, a canoe-paddle.
 wá-le (ilè), *v.* to search a house.
 wà-lé, *v.* to be at home.
 wà-lè (ilè), *v.* to dig the ground, to dig.
 waj-ran-waj-ran, *adv.* irregularly, foolishly.
 wa-kpò, *v.* to be end to end, to abut.
 wa-ra, *n.* a shower.
 wá-ra, *v.* to be nimble.
 wà-ra, *n.* milk.
 wa-ra-kpa, *n.* epilepsy.
 wa-ri, *v.* to divide or share; to do homage, to worship.
 wa-ri-fa, *n.* a counsellor, one of the cabinet.
 wa-ri-ko (ori), *v.* to sit head to head, as two persons leaning forward in conversation.
 wa-rí-ri, *v.* to tremble.
 wa-rí-ri, *v.* to tremble greatly.
 wa-roj-ki (oroj), *v.* to stiffen the neck, to be obstinate.
 wá-si, wá-su, *v.* to preach.
 wa-wa, *n.* a leaf of maize.
 wa-wi, *v.* to make an excuse.
 wa-wò, *v.* to cease, abate.
 wa-yá-i-dzà, *v.* to come to a close contest.
 wa-yi, *adv.* now.
 we, *v.* to twist, to curl, to fold; to wean a child.
 we...kpò, *v.* to twist or wind together.
 we-le, *adv.* wavingly, as grass in the wind.

we...mō, *v.* to wind upon.
we-re, *v.* to be silly.
wé-re, *v.* to be quick motioned.
we-re-kpe, *n.* the stinging bean.
we-re-we-re, *adv.* nimbly.
we-wu (wō), *v.* to enter into danger.
wé, *v.* to be fine, as grains or fibres; to chew, grind, mash; to sport or be playful with each other.
wē, *v.* to wash, to swim; to adorn, decorate: wē džawle, to swim out.
wē for **ewē**, *adv.* again, now: ē še wē? what's the matter now?
wē...lē-wa (li), *v.* to castrate.
wē...mō, **wē...ndō**, *v.* to wash off, cleanse, purify.
wē-ra (ará), *v.* to wash oneself.
wē-re, **wē-wē**, *v.* to be small.
wē-wō (owō), *v.* to wash the hands.
wí, *v.* to speak, to say, tell: á ŋwí, they say, it is said.
wī, *v.* to singe.
wi-dzō (edzō), *v.* to complain of a difficulty.
wi-kí-ri, *v.* to publish about.
wi-ndi, *n.* an under garment.
wíŋ, *v.* to lend, to borrow.
wiŋ-riŋ, *v.* to be near a place.
wí-ri-wí-ri, *n.* twilight.
wi-ri-wi-ri, *adv.* quickly, hastily.
wi-wō, *n.* which is crooked, crookedness.
wi-wu, *n.* which is swollen, a swelling, a tumor.
wo, *v.* to doze, sleep lightly.
wō, *v.* to fall; to break, cut, or push down; to be dead, applied to large animals: ɛšɪŋ wó, the horse is dead.
wō, *v.* to look at, behold; to wait on the sick; to visit, superintend, search; to look, seem.
wō...ba-lē, *v.* to break a thing down, to abate a nuisance.
wo-du, *v.* to look black or dark.
wō...dži-na, *v.* to heal a wound.
wō-dzú (odžú), *v.* to regard.
wō-fi-ri, *v.* to glance at, to look at stealthily.
wō-hiŋ wō-huŋ, *v.* to look here and there.
wō-ke (oke), *v.* to look upwards.
wō...kpa-lē. See wó...ba-lē.
wō-lē, *v.* to fall down.
wō-lē (ilē), *v.* to look at the ground; a common salutation.
wo-lí, *n.* a prophet.
wō-lū, *v.* to fall upon from a height.
wō...lū-lē (ilē). See wó...ba-lē.
wo-raŋ, *v.* to look on, to look. (Luke 23, 35.)
wo-ro, *n.* a grain or seed.
wo-wē, *n.* hail.
wō-ye, *v.* to perceive, to observe.

wo-yi, *adv.* at this time (to-morrow or next year).
wō, *v.* to drag, to crawl, as a snake; to flock: wō džawle, to drag out.
wō, *v.* to be hollow, to enter into; to abide in a house, to lodge; to create; to put on clothes; to set, as the sun; to disappear, as an eruption; to go to roost, as fowls; to shed leaves, to press down as a burden; to distress; to be suitable, convenient.
wō-bi-a, *n.* greediness, lasciviousness.
wō-dzá, *v.* to cast down.
wō-dzō-kpō, *v.* to gather together.
wō-huŋ (wō ohuŋ), *v.* to look or see there. (Luke 17, 23.)
wō-kō (ōko), *v.* to embark.
wō...la-ra (li), *v.* to enter into one.
wō...la-šō (li), *v.* to clothe.
wō-le (ilē), *v.* to go into the house, to enter a place.
wō-lē (ilē), *v.* to sink into the ground.
wō-ndō, *v.* to take soundings.
wō-ni, *pron.* those.
wō-nō (iuō), *v.* to enter, go or come in.
wōŋ, *pron.* them.
wōŋ, *v.* to be scarer, dear, precious, stingy, to catch any thing thrown to one; to descend on, as a curse; to wean; to sprinkle; to weave, plait, knit; to blame, to relegate.
wōŋ, *v.* to measure, to weigh; to prune, to pick off; to aim or point at.
wōŋ-šō (ašō), *v.* to weave.
wōŋ-yí, *pron.* these.
wō-ra (ará), *v.* to enter into one.
wō-riŋ (iriŋ), *v.* to make nails.
wō-rō-wō-rō, *adv.* lukewarmly, as water.
wō-šō (ašō), *v.* to put on, to wear.
wō-tí, *v.* to draw aside, as for conversation, to sit by.
wō-wé (ewé), *v.* to wither, to cast the leaves.
wō-wō, *v.* to be copious, to be lukewarm.
wu, *v.* to please one by its appearance or character: lí ó tí wu kí á še (as you please that it be), be that as it may, by all means.
wú, *v.* to swell, to rise as bread; to increase, to stir up sediment; to look gloomy; to impend, as danger: ori rē wú, he was frightened.
wu-ndí-a, *n.* a virgin.
wu-ra, *n.* gold.
wu-re (wi ire), *v.* to bless.
wu-ru-wu-ru, *adv.* confusedly (mixed).
wu-wo, *v.* to be heavy, dull of action.

Y.

ya, *v.* to hasten, to be sprightly, lively; to be easy of performance; to select an image to worship; to hold in power; to warm, to be warm.

- yà**, *v.* to tear apart; to comb, adjust; to pluck ears of corn; to care in, as a well; to depart, separate from company, give place in a crowd.
yà, *v.* to be: ó yà aro, he is a cripple. (Acts 14, 8.)
ya-bo-dę, *v.* to smuggle.
ya-di (odi), *v.* to be dumb.
ya-dzu (odzu), *v.* to be saucy.
ya-gân (agân), *v.* to be barren.
ya-gbę (igbę), *v.* to evacuate feces.
ya-hú-di (Arab.), *n.* a Jew (so called at Ilorin).
ya-kpa (ikpa), *v.* to separate, to go astray, to err.
ya-kpa... si-lę, *v.* to separate from, avoid, shun.
ya-ku-ro, *v.* to leave, clear out, to be absent.
ya-la, *conj.* whether.
ya... lo-to (li), *v.* See ya... so-to.
ya-ma, *n.* the west.
yam-yam, *n.* a musketo.
ya-na (ina), *v.* to warm at the fire.
yà-na (ona), *v.* to step out of the road, to get out of the way.
ya... ndže, *v.* to cheat.
ya-ndzu (ni odzu), *v.* to be beautiful.
ya... ni ha, *v.* to chagrin, to mortify.
ya-nu (enu), *v.* to open the mouth: yanu sí, to gape or wonder at.
yan, *v.* to bake, fry, parch; to walk leisurely, proudly.
yan, *adv.* brilliantly (shining).
yán, *v.* to gape, to yawn, to weigh; to kick.
yân, *v.* to choose, select, appoint, to take out from among several, to buy food from a cook, to extract a thorn: yân lę, to appoint over. (Exod. 5, 14.)
yan-gan, *n.* maize.
yan-gi, *n.* claystone cemented with iron.
yan-gi-di, *n.* a bundle of cowries.
yan-han, **ya-uj**, *n.* a cat.
yan-huj (ohuj), *v.* to threaten.
yan-kon, *v.* to add select things to.
yan... kpa-mo, *v.* to lay up, as money.
yan... ni-kpa, *v.* to set at variance.
yan... ni-kpo-si, *v.* to set at naught.
yan... ni-tete, *v.* to kick (applied to beasts).
yan-ran, *v.* to boast of one's knowledge, to be obstinate in one's opinion.
yan-we (owe), *v.* to be plump, as a young bird.
yan-yaj, *adv.* entirely.
yân-yân, *adv.* roughly, unevenly.
ya-ra, *n.* a room: yara ôke, an upper room.
ya-ra, *n.* a ditch around a town.
ya-ra (ará), *v.* to hasten, to be active.
yà-ra (ará), *v.* to warm oneself.
ya... so-to (si), *v.* to separate, or set apart to a purpose.
ya-to (oto), *v.* to be different, to differ.
ya-uj, *v.* to mew;—*n.* a cat.
ya-ya, *adv.* nimbly, briskly.
- yá-yô** (ayô), *v.* to rejoice.
ye, *v.* to lay eggs; to be pleased; to cease doing a thing; to be comprehensible: ó ye mi, ó ye wọn, I understand it, they understand it.
yê! *interj.* oh! alas!
yê, *v.* to live, to be sound in health.
ye'-me-dzá, *n.* the goddess of streams.
ye-ye, *n.* mother.
yę, *v.* to be fit, worthy, suitable.
yę, *v.* to make much of, indulge, praise.
yę, *adv.* a little, lightly (sleeping).
yę, *v.* to turn out of place, change, postpone.
yę-mo-ti. See yonmoti.
yę-na (na), *v.* to open a road.
yę-ra (ará), *v.* to change one's position, to turn aside, to depart.
yę-tu-yę-tu, *n.* a blossom.
yę-wu, *n.* a chamber.
yi, *v.* to turn, revolve, move, pervert.
yí, *v.* to be tough, fibrous.
yi, *pron.* this.
yi... dâ-nô, *v.* to overturn, spill.
yi-gbi, *v.* to be dull or slow in hearing or believing.
yi-gl, *n.* marriage.
yi-huj (ohuj), *v.* to prevaricate.
yi-ka, *v.* to encircle, to surround.
yi... ku-ro, *v.* to avert, to cross the hands in salutation.
yín, *v.* to move, to shake slightly, to lay eggs, to attract attention, excite covetous desires.
yín, *v.* to praise, admire; to eject suddenly.
yín-bon (ibon), *v.* to fire a gun, to shoot.
yín-fin (ofin), *v.* to break a law.
yi... kpa-da, *v.* to turn, convert, pervert, avert.
yi-kpo, *v.* to turn aside, to pass away.
yín... lo-go (li), *v.* to extol, glorify.
yín... ni-bon, *v.* to shoot, to shoot at.
yín-yín, *n.* hail.
yi-si? *pron.* which?
yi-yę, *v.* cessation, failure, healthiness.
yi-yi, *n.* which is rough, scaly.
yô, *v.* to be full, satisfied with food.
yô, *adv.* deeply (red).
yô, *v.* to pull out, to draw, as a sword; to deliver, to escape; to put forth young leaves; to appear, as the new moon.
yô, *v.* to melt, to feel compassion; to slip, to be slippery, to walk stealthily: ino mi yô sí í, I pity him.
yô, *v.* to rejoice, to be glad, to triumph over.
yô-dza-de, *v.* to protrude.
yô-dzú (odzu), *v.* to be conspicuous, to appear.
yô... le-nu (enu), *v.* to harass, annoy.
yô-nu (enu), *v.* to wash the mouth; to be troublesome.

yōn, v. to *itch*.

yōn, adv. with force (falling); in a swarm.

yōn, v. to cut or saw off.

yōn-mō-tí, n. *sesame, the bene plant*.

yō-ri (ori), v. to raise the head, as from the midst of tall grass; to appear, to be conspicuous, prominent.

yō-rō, n. *vermin on fowls*.

yō...su-ti-sí, v. to thrust out the lips at, to deride.

yō-yō, n. a group, a flock, a constellation.

yún, v. to conceive, to be pregnant; to go to and fro.

APPENDIX.

[Some of the following words have been supplied from memory, and others from Crowther's Vocabulary, a work which I was not able to procure for a long time after my return to America.—T. J. B.]

A B A

a-bai-ye-dzẹ (á bá...dzẹ aiyẹ), *n.* a mischief-maker, a tattler.
a-ba-ku-lu-dzẹ, *n.* a kind of egret.
A-bọ-do-riṅ (abọ de oriṅ?), *n.* a proper name.
a-bọ-gán, *n.* See abọwogán.
a-dá-dò (lá òdò), *n.* an island; a house or settlement in a retired situation.
A-de-riṅ, a proper name of a man.
A-de-gbọ, a proper name of a man.
a-di-rẹ i-ra-na, *n.* the fowl of propitiation, killed just as a person dies.
a-di-ri (ori), *n.* grape-shot.
a-dọ-tẹ-si-lẹ, *n.* an insurrectionist, one who promotes rebellion or enmity.
a-dùṅ, *n.* See adṅ.
a-dza, *n.* a jerking; one who jerks, which is jerked, &c. See dza.
a-dzà, *n.* a fighting, a fighter, &c. See dzà.
a-dza-sọ, *n.* a flying report, hearsay.
A-dzà-sẹ, *n.* (broken by war), a town west of Badagry.
a-dze, *n.* the water ordeal.
a-dzẹ-fọ-wo, *n.* a pot-herb.
A-dzi-bọ-kpe, *n.* (palm-worshipper), a proper name.
a-fò-re-ši-bi, a-fò-re-ši-gi, *n.* an ungrateful person.
a-fọṅ-ru-gbìṅ, *n.* a sower; which is sowed, &c.
a-gaṅ-raj, *n.* the green parrot.
a-gaṅ-wo, *n.* a tree used for timber.
a-gba-kāṅ-kāṅ, *n.* a forest bird.
A-gba-ma-ya, *n.* the name of a town below Abeokuta.
a-gba-wò, *n.* See agbasin.
a-gba-yọṅ, a-gba-yọṅ-kọṅ, *n.* the miraculous berry, the sweet taste of which remains in the mouth for a long time.
a-gbe, *n.* one who takes, &c. (see gbe); a cockatoo.
a-gbìṅ, *n.* which is planted, a planter. See gbìṅ.
a-gbìṅ-yi-ka-gba, *n.* a hedge or fence around a garden.
a-gbọ, *n.* which is heard; a hearer. See gbọ.
a-gbọṅ-gbe-re, *n.* the snatch-game, played by

A I M

children: agbọṅgbere kpete igara, *snatching resembles* (lit. *thinks of*) robbery.
a-gbọṅ-yi, *n.* a kind of antelope.
a-gbu-bo, *n.* a forest bird.
a-gẹ, *n.* a petty officer, a king's servant.
à-go-ro, *n.* a title of honor.
a-gu-mò-na, *n.* a running plant.
a-guṅ, *n.* a climbing, a riding, which rides, is ridden, &c. See guṅ.
a-ha, *n.* See the root 'ha.'
a-he, *n.* See the root 'he.'
a-he-sọ, *n.* a newsmonger, a smatterer, &c. See hesọ.
a-họ, *n.* a carving, &c. See hò.
a-hu. See the root 'hu.'
a-hu-sọ, *n.* which is false, a falsehood, a false report.
ai-ba-de, *n.* unsuitable, unbecoming.
ai-bẹ-lẹ, *n.* not flat, uneven.
ai-bò, *n.* a token in Yoruba.
ai-dù, *n.* which does not refuse, which consents.
ai-dza, *n.* See the root dza.
ai-dzọ, *n.* unlike, dissimilar. See dzọ.
ai-gbe-se, *n.* not indebted, not owed.
ai-he, *n.* not picked up or gathered. See he.
ai-ke-si, *n.* not visited, unvisited.
ai-ki, *n.* not saluted, &c. See ki.
ai-ki-lọ, *n.* not warned, unadmonished.
ai-ko, *n.* ungathered; not hard. See ko.
ai-kọ, *n.* uninstructed, ignorant. See kọ.
ai-kọ-la, *n.* untattooed, uncircumcised.
ai-kọṅ, ai-kùṅ, *n.* unwhispering. See kọṅ.
ai-kọ-se, *n.* free from stumbling, void of offence.
ai-kùṅ, *n.* which is not remaining; finished, exhausted, used up.
ai-là, *n.* unsaved; invisible, &c. See là.
ai-la-di, *n.* unexplained.
ai-là-dza, *n.* unreconciled.
ai-la-dzọ, *n.* unsettled, as a dispute.
ai-li-fa, *n.* disadvantageous, unprofitable.
ai-lu, *n.* the name of a plant.
ai-lu, *n.* not perforated, imperforate.
ai-mè-te, ai-mè-ro, *n.* inconsiderate, improvident.

aì-mẹ̀-ḷẹ̀, *n.* not lazy, industrious : *ṣé aìmẹ̀ḷẹ̀, to be industrious.*
aì-mì, *n.* unshaken, *ḗc.* See *mì*.
aì-mọ̀, aì-mu, *n.* which is not drunk, *ḗc.* See *mu*.
aì-mú, *n.* not sharp, dull.
Aì-na, *n.* a proper name.
aì-rà, *n.* unbought, *ḗc.* See *rà*.
aì-rẹ̀, *n.* unshorn, *ḗc.* See *rẹ̀*.
aì-rì, *n.* unseen, *ḗc.* See *rì*.
aì-rọ̀. See root *rọ̀*.
aì-ṣì, *n.* unopened, *ḗc.* See *ṣì*.
aì-tà, *n.* unsold. See *tà*.
a-ka, *n.* the name of a tree ; the armadillo.
a-ke, *n.* a crier ; a catter, which is cut, *ḗc.* See *ke*.
a-ke-ri, *n.* a hater ; a saponaceous plant.
a-ke, *n.* a climbing plant, used for ropes.
A-ki-ọ̀-la, *n.* (only honor), a proper name.
a-ki-sa-ḷẹ̀, *n.* a running plant.
a-kọ̀ṅ-rọ̀ṅ, *n.* a closet.
a-kpa a-sa-ra, *n.* a roll of tobacco.
a-kpa i-kò-ko, *n.* a fibrous plant, of which shoe-thread is made.
a-kpọ̀-dzù, *n.* the majority, abundance.
a-kpọ̀ṅ, *n.* a king-fisher.
a-ku-ma-la-kpa, *n.* the young leaf of the shea-tree.
a-la, a-là, *n.* See the roots 'la' and 'là'.
a-la, a prefix equivalent to 'oni', implying the owner, the actor, *ḗc.* (Gram. § 52, 1, 4).
a-la-ba-la ṣẹ̀ (ala bá ni aṣẹ̀), *n.* the oracle ; a name of *Ọ̀batala*.
a-la-ba-wọ̀ṅ, *n.* a sprinkler ; one who has a stain on his character.
a-la-dù, *n.* a refuser.
a-la-fẹ̀, *n.* a lover.
a-la-fẹ̀-nì, *n.* a charitable person, a philanthropist.
a-lá-gba-da, *n.* a maker or dealer in the garment *agbada*.
a-lá-gun, *n.* a perspirer.
a-la-họ̀ṅ, *n.* which has a tongue, tongued.
a-la-rì, *n.* a king's spy or policeman.
a-le, *n.* the name of a plant.
A-lí, a proper name.
a-ḷọ̀-ke-ḷẹ̀, *n.* the fig-eater, a bird.
al-ma-ga-dzì, *n.* scissors, shears.
A-lu-bì, a proper name.
a-lu-kí, *n.* a slender prickly plant : *bì ina dzo, á bọ̀wo fu aluki, when the fire burns (the woods), it respects the aluki (and leaves it unburned).*
a-lu-ma-ga-dzì, *n.* See *almagadzi*.
ámkan, a-mu-kan, *n.* sorrel plant.
a-mọ̀-dze we-we, *n.* a medicinal plant.
a-mgba-du, *n.* the name of a pot-herb.
a-rá, *n.* the name of a bird.

à-ra, *n.* a fashion, custom.
a-rai-ye (ará aiyẹ̀), *n.* the people of the world, mankind.
a-ra-ra, *adv.* at all.
a-ra-wo, *n.* a carnivorous bird.
a-re-ke-re-ke, *n.* dishonesty, a dishonest person.
a-rẹ̀-rẹ̀-gbò-sun, *n.* a small bird with red feathers.
á-rì-ya, á-rì-yọ̀, *n.* merriment.
à-ro, *n.* a small bird with blue feathers.
a-ro-si-ḷẹ̀, *n.* a previous agreement, a bargain.
a-ru-gbo-ru-gbo, *n.* a very old man.
a-ru-kọ̀, *n.* a hoe-handle.
a-ru-kpẹ̀, *n.* a dwarf.
a-ru-lu (ilù), *n.* a seditious person.
a-sa, *interj.* See *asia*.
à-sa, *n.* the batten of a loom.
a-ta, *n.* a resinous tree.
a-tàṅ-ko-ro, *n.* a disease in fowls.
a-ti-ḷẹ̀nde (ati ilẹ̀), *n.* a youth, adolescent.
a-ti-ní, *n.* possession, attainment.
a-ti-o-ro, *n.* a tassel ; a kind of bird ; a kind of plant.
a-to-rì, *n.* a tree the wood of which is very elastic.
a-toṅ-wáh, *n.* a coming again, a returning.
a-tuṅ-ṣẹ̀. See *atunṣẹ̀*.
a-wa-wa, *n.* a small climbing animal which barks like a dog.
A-wa-ye, *n.* the name of a town.
a-wẹ̀, *n.* a washing, cleansing, that which cleanses.
a-wẹ̀-dẹ̀ (ide), *n.* an herb used for cleaning brass : *onilaba ni itòdžù orombo, onide ni itòdžá awẹ̀dẹ̀, the owner of copper looks for a lemon, the owner of brass looks for awẹ̀dẹ̀.*
a-wọ̀ṅ e-kun, *n.* a nettle, lit. leopard's tongue.
a-wu-ká-ra (akara), *n.* leavened bread.
a-ya-mọ̀-kpẹ̀, *conj.* otherwise, unless.
a-yọ̀ṅ, a-yùṅ, *n.* a saw, a file.

B.

ba-bo, *n.* a tree with a broad leaf.
ba-na-ba-na, *n.* a kind of insect.
ba-na-ba-na, be-na-be-na, *n.* a narcotic plant.
ba-un (ba un), *adv.* so, thus.
be-dzì (bi), *v.* to bear twins.
bè-ke (bi), *v.* to give a false reply, to utter a falsehood.
bè-ro-fu (bù), *v.* to reflect upon, to think about.
Be-se, *n.* a town in Yoruba.
bẹ̀-mi (bù), *v.* to give life to.
bi-a-ti-ṅwi, *adv.* just now, at once, immediately.
bi-ba, *n.* a meeting, *ḗc.* See *ba*.
bi-bà, *n.* a bending, *ḗc.* See *bà*.
bì-bì, *n.* that which is pushed, *ḗc.* See *bì*.

bi-bò, *n.* that which is fed, a feeding, &c. See **bò**.
bi-bù, *n.* that which is given, &c. See **bù**.
bi-fẹ-dzẹ (ba...džẹ), *v.* to spoil love, to cause enmity.
bi-kpò, *v.* to breed together: mu bi kpò, to cross breed.
Bi-ò-kú, *n.* (if he does not die), a proper name.
Bi-ọ-lọ-run-kpe-lu, *n.* (if God be with us), the name of a town.
Bi-ri, *n.* (darkness), the slave of Sàngó.
bi-yọ-sí (bù), *v.* to salt.
bo-dži, **bo-džin**, *n.* See **ibodži**.
bom, *n.* a kind of tree.
bo-mu-bo-mu, *n.* a tree the leaf of which curls milk.
bò...la-şò (li), *v.* to strip off the clothes.
bò-sí, *v.* to enter, enter into.
bu, *adv.* nearly, almost: ó bu şe, or ó bu tán, it is nearly finished, completed, all gone.
Bu-kú, *n.* See **Buruku**.
bu-sù, *v.* any soft springy substance, loose heavy sand, soft peaty earth.
bu-sù-gba (igba), *n.* the soft pulp of the locust fruit.

D.

da-bò, *v.* to cease coming, to cease.
da...bu-lẹ, *v.* to cause to lie down, to lay down.
da-kpa-ra, *v.* to sneer at, to make a jest of.
da-kun, *v.* to cease.
da-kùnj (òkun), *v.* to make yarn into hanks.
da...ku-ro, *v.* to release, acquit, redeem.
da...lẹ-bí, *v.* to condemn, censure.
daŋ-ka-re, *n.* soldiers.
da-o-ru-kọ, **da-ru-kọ**, *v.* to mention by name.
da...wọj, *v.* to enclose, shut in: šakata ni ida wọj wọj ni Bese, the marsh shuts them in (the town of) Bese.
de-hùnj (òhun), *v.* to lower the voice.
di-lẹ-di-lẹ, *adv.* dilatorily.
di-yan (dà), *v.* to be careful, thoughtful about.
do-gun-si-lẹ (dà), *v.* to cause war.
dó-tí, *v.* to encamp against, besiege.
dọ tẹ-si-lẹ (dà), *v.* to cause enmity.
du-du, *adv.* blackly, gloomily, darkly: òdzo šn du-du, the rain (i. e. the clouds) gathers darkly.
dza-na-dza na, *n.* the name of a disease.
dza-ndu-kú, *n.* a wicked person.
dza-ò-ke, *n.* the name of a shrub.
dza-tá, *v.* to be unconcerned about, to be careless.
džũ-džũ, *n.* a confused mass, chaos.

E.

e-ba, *n.* an oil-jar.
e-bo, *n.* a peeling off.
e-dá, *n.* a creating, creation.
e-dẹ, *n.* slackness, as of a rope; ripeness.
e-dži ẹ, **e-dži-re**, *n.* twins.
e-džu, *n.* a casting, which is cast.
e-ga, *n.* a height.
e-ga-ni, *n.* See **egake**.
e-gun, *n.* length.
e-ha, *n.* a scraper.
e-he, *n.* a gathering or picking up, a collection of things.
e-kan a-wo-di, *n.* hawk's claw, a prickly shrub so called.
e-kan ẹ-kun, *n.* leopard's claw, a prickly shrub so called.
e-kó, **e-kó ọ dún**, *n.* the winding up or end of the year.
e-ko-ro, *n.* that which is bitter.
e-kóŋ, *n.* that which is full.
e-ku-şe, *n.* the name of a disease.
e-le-ri, *n.* See **olori**.
e-lẹ-ši, *n.* one who is mistaken.
e-na a-wọj (ena for ina, fire; awọj, the tortoise), *n.* the flickering appearance of the atmosphere in hot dry weather.
e-rẹ, **e-we-re**, *n.* a kind of white bean with a black eye.
e-ro-dži-ka-si, *n.* a kind of sweet plum.
e-sin, *n.* a kind of tree.
e-su-o, *n.* a kind of antelope.
è-şe, **è-se**, *n.* paint, color.
e-şu-şu, *n.* a running prickly plant.
e-tu-tu, *n.* a small species of white ant or termites.
e-we e-ti, *n.* ear-leaf, i. e. convolvulus, so called because the juice of the leaf is mixed with oil to heal sore ears.
e-we i-na, *n.* fire-leaf, an acrid poisonous shrub, the leaf of which blisters the skin.

F.

ẹ-dẹ, *n.* a kind of tree.
ẹ-dọ fo-fo, *n.* irascibility; lit. a liver of foam. The liver is supposed to be the seat of the passions; hence **gbọdọ** (gbà ẹdọ, to receive liver), to be courageous, to dare.
ẹ-ga a-kpa-şo, *n.* a kind of palm-bird.
ẹ-gō, **ẹ-gọ-ro**, *n.* a kind of plant.
ẹ-gu-sí, *n.* water-nelson seeds, the oil made of them.
ẹ-hi-ri, *n.* a poisonous plant.
ẹ-hù-ru, *n.* a kind of large bird.

- ẹ-**yẹ-le** (ilẹ), *n.* a pigeon; lit. house-bird.
 ẹ-**ka-dọ-riji**, *num.* the seventieth.
 ẹ-**ka-dọ-run**, *num.* the ninetieth.
 ẹ-**ka-dọ-ta**, *num.* the fiftieth.
 ẹ-**kẹ**, *n.* the cheek, the jaw-bone.
 ẹ-**kẹ-dzọ**, *num.* the eighth.
 ẹ-**kẹ-riji**, *num.* the fourth.
 ẹ-**kẹ-san**, *num.* the ninth.
 ẹ-**kẹ-ta**, *num.* the third.
 ẹ-**kẹ-wa**, *num.* the tenth.
 ẹ-**kọ-kan-la**, *num.* the eleventh.
 ẹ-**ku**, *n.* a running plant.
 ẹ-**kù-kù**, *n.* a very viscid plant.
 ẹ-**lẹ-bu**, *n.* one who owns or occupies a house, or a kiln for making oil or burning earthen-ware.
 ẹ-**lẹ-gbẹ i-na**, *n.* companion of fire, a bird which hovers over the fire (to catch insects) when the prairie is burning.
 ẹ-**lẹ-yinj-dzú** (eyinj odzú), *n.* a person with prominent eyes, pop-eyed.
 ẹ-**li-ri**, ẹ-**lu-ru**, *n.* a mouse.
 ẹ-**lu i-wa-še**, *n.* the small-leaved indigo, an herbaceous plant much like the American indigo.
 ẹ-**lu ọ-gbọ**, *n.* the broad-leaved indigo, a small tree with very long virgate branches. The fine indigo of Sudan is the product of this plant.
 ẹ-**mọ**, *n.* a kind of brown rat.
 ẹ-**rin-di-lọ-gun**, *num.* sixteen.
 ẹ-**rin-di-lọ-gbọ**, *num.* twenty-six.
 ẹ-**rù**, *n.* a kind of spice, used as medicine.
 ẹ-**ru-mu**, *n.* (caught by deceit), a town east of Ibadan.
 ẹ-**run**, *n.* a medicinal tree. A fumigation of the bark is employed to drive away evil spirits.
 ẹ-**tà**, *n.* a kind of leopard.
 ẹ-**wa**, *n.* grain, i. e. corn of any kind; a mixture of boiled corn and beans.
 ẹ-**wu-ru**, *n.* a pit-fall covered with earth.
 ẹ-**yinj**, *n.* that which protrudes or is prominent.
 ẹ-**yinj**, *n.* charcoal.
 ẹ-**yinj-dzú**, *n.* the eyeball.

F.

- fà-**ti**, *adv.* freely, leisurely, greatly. See fà.
 fe-**ri-bà-lẹ**, *v.* See foribàlẹ.
 fe-**ri-bọ**, *v.* See forilọ.
 fe-**ri-ti**, *v.* See foriti.
 fə-**ti-si** (fi), *v.* to put the ear to, to listen attentively, to hearken.
 fi-**la**, *n.* a cap.
 fi...**še-sij**, *v.* to put to shame, to shame, disgrace.
 fo-**ri-si** (fi), *v.* to pay attention to, to apply the mind to.

- fọ...**kpe-te kpe-te**, *v.* to destroy.
 fọ...**rau-rau**, fọ...**ru-ru**, fọ...**tu-tu**, *v.* to destroy entirely.
 fọ...**yàn-yàn**, *v.* to break to pieces, to smash.
 fọ-**nu**, *n.* an elastic wood used for bows.
 fọ-**nu** (enu), *v.* to boast, brag.
 fọ-**wọ-lẹ** (fi), *v.* to place the hand on; to undertake.
 fu-**la**, *n.* a kind of beer. See fura.
 fu-**lẹ-fu-lẹ** (fu ilẹ, for the earth), *adv.* freely, copiously.
 fu-**lẹ-fọ-lọ-run**, fuj-**lẹ-fu-lọ-run**, *adv.* (lit. for the earth and for God), of one's own accord, freely, of choice.
 fuj-**kun**, fọj-**kun**, *v.* to discharge mucus.

G.

- ga-**ga-dzẹ**, *n.* a tree which grows near the water.
 gbà, *v.* to wrap up, to envelope.
 gbà-**a-du-ra**, *v.* (lit. to take prayer), to pray.
 gbà-**i-da-ra-ya**, *v.* to take exercise or recreation.
 gbà-**i-kpe**, *v.* to take comfort, to be comforted.
 gbe (to be), a pleonastic particle much used after adverbs and nouns of place; as, nihinyi li á gbe kó àrà wa (here it-is we to-be met selves our), we met here.
 gbin-**gbi-nđọ** (gbingbin òdọ, planted by the water), a tree growing near streams which bears an esulent bean.
 gbò-**do-gi** (gbá òdọ igi), *n.* the name of a plant.

I.

- i-**ba-dò** (òdọ), *n.* the water's edge, coast, shore.
 I-**ba-danj** (iba odán), *n.* (the meeting of the woods with the prairie), a large town fifty miles east of Abeokuta.
 I-**ba-ra** (bà rà?), *n.* a town near Abeokuta.
 I-**ba-ra-kpa**, *n.* one of the Yoruba tribes, living west of Idzáye and south of Isáki.
 I-**bó**, *n.* (who is pecked), a proper name.
 I-**bọ-lọ**, *n.* one of the Yoruba tribes, in the N. E. of the kingdom.
 I-**dẹ**, *n.* (hunting), a large town east of Ibadan.
 I-**dó**, *n.* (camping), the name of a town.
 i-**dò-do**, *n.* See adòdo.
 i-**du-kpe**, *n.* a thanking, thanks.
 I-**dzà-kà**, *n.* (a fighting around), the name of two towns on the Ferina river, called Idzàkòke or Idzà-kàuke (ókò), upper Idzàka, and Idzàkòdo (òdò), lower Idzàka.
 I-**dzà-lẹ**, *n.* (a fighting for home), a town in Iketu.

- I-džà-yè**, *n.* (*fighting for life*), a large town fifty miles N.E. of Abeokuta.
- I-dže-ša**, *n.* a tribe in the N.E. of the Yoruba country.
- I-fa-gbe-mi**, *n.* (*Ifu helped me*), a proper name given to children in honor of Ifa.
- I-fè**, *n.* (*enlargement*), a tribe and a town of Yoruba.
- I-ga-la, I-ga-ra**, *n.* a semi-Yoruba tribe east of Yoruba.
- I-gà-na**, *n.* a considerable town in Ibarakpa. See Igana.
- I-gbè-tí**, *n.* (*entangled with bushes?*), a town on a mountain west of Ilorin.
- I-gbo-ho**, *n.* (*the noisy forest?*), a town in the N.W. of Yoruba, formerly twenty miles in circuit but now much reduced. Lander's Bohoo.
- i-hu-lè-hu-lè**, *n.* See ihulè.
- i-kā-nu**, *n.* See iko *infra*.
- Ike-tu**, *n.* (*a cutting loose?*), a tribe and town of Yoruba.
- i-ki** (ikki), *n.* an animal with large eyes and small erect ears, which feeds on the kola or goora nut: iwọ̀ lè dže òbí, o sè iki bí? *thou art able to eat (art always eating) kola nuts; art thou an iki?*
- Iki-ši**, *n.* (*an opening of the thicket?*), a large town near Igboho.
- i-ko**, *n.* the act of gathering; the act of feeling a mental emotion: iko ànu or ikānu, a pitying, a feeling compassion or sorrow. See kānu.
- i-kpaŋ-ko-ro**, *n.* the name of a plant.
- I-la-de**, *n.* a proper name, a town on the Niger.
- I-lé ọ-de**, *n.* (*the hunter's house*), a village near Idžàye.
- I-le-ša**, *n.* a very large town, the capital of Idžèsa. The syllable 'ša' in these two words is a contraction of a proper name.
- I-lẹ-san**, *n.* a town in Ibarakpa.
- I-lọ-rin**, *n.* (*a going to walk?*), a large town in the north of Yoruba, a proper name of persons.
- I-lu-ku**, *n.* the name of a town.
- i-na-ki-ri**, *n.* a carpenter's compasses.
- I-ra-wọ**, *n.* (*star*), the name of a town in the western part of Yoruba, the head-quarters of Orišako.
- i-ra-wọ i-lè**, *n.* (*ground star*), a medicinal plant.
- i-rin ọ-kpa i-kpò** (*walking-staff, abundance*), *n.* a rapid journey, a forced march.
- i-rò-džu**, *n.* perplexity, vexation, sadness of countenance.
- i-ro-ko**, *n.* farm labor, tilling; a farmer.
- i-ro-kó**, *n.* an esculent running plant.
- i-ro-ko**, *n.* a kind of okra or esculent hibiscus.
- i-rò-ko**, *n.* a fine timber tree, called sassa wood in Liberia.
- i-rọ̀ džu**, *n.* patience, perseverance.
- i-rọ̀-ke-ke**, *n.* a tumult, an uproar.
- i-ru-ke**, *n.* See iruke.
- i-sa**, *n.* a rat's hole; a running plant.
- i-sá**, *n.* a sharp stick or bar for digging holes in the ground.
- I-se-hij** (i-se-i), *n.* a town west of the Ogunj.
- i-sin-ku** (okii), *n.* a burial, a funeral.
- I-šà-be**, *n.* (*a doing or an opening beneath?*) a town in the west of Yoruba.
- I-ša-ga**, *n.* (*the making of a heap or height?*), a town west of Abeokuta.
- I-ša-ki**, *n.* (*a snapping, as of a gun, a failure*), a large town in the west of Yoruba.
- I-ša-la**, *n.* a town near Aibò.
- i-še-džú**, *n.* the twinkling of an eye, an instant: ni išedžú kán, in a moment, instantly.
- i-še-ke-ke**, *n.* the casting of lots, a lottery.
- i-še-kpo-lo-hun**, *n.* a kind of tree, a kind of grass.
- i-še-ti**, *n.* a hen.
- i-si-gun**, *n.* a prairie shrub with aromatic roots.
- i-ši-ko**, *n.* a species of tree called also iši or isin.
- i-ši-se**, *n.* a wrong action, a misdeed.
- i-ši-ye-me-me-dži**, *n.* a doubting, a doubt, a scruple.
- i-šo-nó**, *n.* peevishness, surliness.
- i-šo-ro**, *n.* severity, provocation.
- i-šò-ro**, *n.* a difficulty.
- i-šu**, *n.* the act of casting out, dismissal, evacuation.
- i-šú**, *n.* the state of being dark, gloomy; darkness.
- i-šu-bu**, *n.* a fall, the act of falling.
- i-tà**, *n.* the name of a tree much used for fuel.
- I-tà-bò**, *n.* (*shaded by the ità tree?*), a town in Yoruba.
- i-ta-gbo-kun**, *n.* the act of setting sail, a being under sail.
- i-ta'-ma-ha**, *n.* hope, hoping, expecting.
- i-ta-me-ta**, *n.* the meeting of three streets or roads.
- i-te**, *n.* a fawning, a worshipping. See te.
- I-te-ro**, *n.* a town west of Igana.
- i-tẹ**, *n.* a trampling on, &c. See tẹ.
- i-tẹ-đọ** (tẹ ẹdọ), *n.* composure, patience.
- i-tẹ-lẹ-di**, *n.* the under garment, worn around the hips.
- i-tẹ-wọ, i-tẹ-wọ-gbà**, *n.* acceptance, reception.
- i-ti-lẹ-hip**, *n.* aiding, abetting, support of a person in his cause.
- I-tò-bo-lo**, *n.* a town in Iketu.
- i-wa-ri**, *n.* homage to a king.
- i-wó**, *n.* the tree which bears the bitter kola-nut.
- i-wó**, *n.* a falling; a pushing down, a felling. See wó.
- i-wò**, *n.* a look, appearance; a raven.
- i-yá**, *n.* a tree with broad leaves.
- I-ye-mọ-dža** (imọ ẹdža), *n.* (*the mother of young fishes*), one of the Yoruba idols.

- i-ye-re**, *n.* the seeds of the African locust.
I-ye-wa, *n.* (our mother), one of the Yoruba idols; a small river which falls into the Osa west of Balagry.
i-ye-yè, *n.* a kind of sour plum.
i-yi-kpà-da, *n.* a turning, conversion.

K.

- ká, k'á** (kí á), *an optative particle* much used in conversation, *let us; shall we? shall I? may we? may you?* K'á bèrè, *let us inquire*; K'á kpè woy? *shall we call them?* K'á gèşin? *shall I ride?* K'á de bè li aláfiá! *may we reach there in peace!* K'á sùnj rẹ! *may you sleep well!* a very customary salutation on retiring to rest at night. See kabiyesi and kalòh.
ka-fe (introd. from Hausa), *n.* coffee.
kai! *an exclamation of displeasure*, sometimes of wonder.
ka-ná (kán ná), *pron.* the same: èniá kaná, *the same person.*
ka-ndzú (kan odzú), *v.* See kanđzú.
ka-ndzú dzai-ye, *n.* one who makes haste to be rich, a covetous person.
ka-nti-ka-nti, *n.* a kind of gnat called "the drunkard;" a kind of ant.
kan, *v.* to ache.
kàn, *v.* to reach, to arrive.
kan-ga-ra, *n.* a kind of bill-hook or pruning knife.
kan-gba, *v.* See kagba.
kan-rin, *v.* to be far off.
kan-rin-kan-rin, *adv.* far off, out of sight, clean gone.
kā-ro, *n.* a bird so called from its cry.
kè-gi-o, kè-gi-ro, *n.* a kind of bird.
ke-ke-le-ndze, *n.* a small kind of lizard.
ke-lè, *v.* to cut down; hence akelè, *dropsy in the chest.*
ki-kan, *n.* sourness, &c. (see kan);—*adv.* earnestly, strenuously.
kí-kan, *n.* a dropping, &c. See kán.
ki-kan-ki-kan, *adv.* earnestly, strenuously.
ki-ke, *n.* See ke.
ki-kẹ, ki-kẹ, *n.* See kẹ and kẹ.
ki-kí, ki-kí, *n.* See kí and kí.
ki-ko, ki-kò, *n.* See ko and kò.
ki-kọ, ki-kọ, *n.* See kọ and kọ.
ki-kọj, ki-kọj, *n.* See kọj and kọj.
ki-ku-na, *n.* smoothness, fineness.
ki-ye-sa-ra (kiyesi), *v.* to take care of oneself, to be careful.
kò-i-tò, *adv.* not yet, lit. it is not enough: kòitò lóh, *it is not time to go.*

- ko-ko, ko-ri-ko**, *n.* grass.
kò-mò-re-kò-mò-ra (mò òrè mò òrà), *n.* an ungrateful person, lit. he knows not goodness, he knows not the purchaser of the thing which he enjoys.
kò-ni-lè-kò-lò-na (ni, to have; ilè, a house; òna, a road), *n.* a vagabond, a vagrant.
ko-ro-kpo-ma, *n.* the name of a plant.
kò-si-a, ko-su-an, kò-su-wa, *adj.* not good, it is not proper. See súa.
kò-si-ŋkan, *n.* nothing, lit. there is nothing.
kò-tó. See kòitò.
kò-wè, *n.* a bird so called from its cry.
kò-bi-kò-bi, *adv.* with many projections, like a castellated wall. The walls of royal cities only are built in this way.
kọ-rọ-gún, *n.* an iron pin on which thread is wound.
kọ-sọ-kọ, *n.* a kind of bird.
Kò-sọ-kò (kò si okó), *n.* a proper name.
kò-tò, *adj.* not straight or right, crooked, wrong.
kpa, *n.* Additional phrases to those already given are, kpa agbo, *to form a circle*, as in dancing; kpa aló, *to cease burning in a flame*; kpa aló, *to propose a riddle*; kpa aše, *to command, to proclaim a law*; kpa etc, *to intend, purpose*; kpa imò, *to consult, suggest, hint*; kpa iyé, *to forage in the farms*; kpa oşu dze, *to miss or forget the mouth*; kpa oşuşi, *to form a grove*; aşori kí ikpa oşuşi, *the apus never forms a grove, only one tree being found in a place*; kpa odzó dze, *to miss or forget the day.*
kpa-kpa-gò-ri, *n.* a kind of bird.
kpa kun-re-te, *n.* a kind of dove.
kpa-ló (aló), *v.* to cease burning in a flame.
kpa-mò (imò). See kpimò.
kpa-nşu-ká, *n.* a large calabash with a lid or cover.
kpa-ntí, *n.* See kpantiri.
kpá-si, *n.* a coarse grass used in thatching.
kpò-kpo-lá, *n.* a tree with scarlet flowers.
Ku-mi (kọj omi?), *n.* a proper name.
ku-rú! *an outcry of women to drive away hawks.*

L.

- la-gba-de-me-dzi** (li), *adv.* in the middle or midst.
laì-bẹ-ru, *adv.* without fear, boldly.
laì-bò, *adv.* in an uncovered or unsheltered state.
laì-dzẹ-bi, laì-lẹ-şẹ, *adv.* innocently, without sin or guilt.
là...lò-na (li), *v.* to enact, ordain.
La-şì-me-dzi, *n.* a proper name.
lè-ri (li), *v.* to have filth, to be filthy, unclean.

- lẹ-bi** (li), *v.* to be guilty, to be condemned.
lẹ-şẹ (li), *v.* to be sinful.
li-lá, *n.* which is split or to be split, &c. See **là**.
li-lẹh, *n.* a going, a departure.

M.

- Ma-dá-ri-ke**, *n.* a proper name.
Máh-kú, *n.* a proper name.
maf-ki-ri, *n.* embroidery.
Ma-má, *n.* a proper name.
ma-na, *n.* a kind of bird.
mè (emi *I, è not*), in the Egba dialect, *I will not*:
 mè dẹhin rá ọso, *I will not buy cloth again*.
me-dzi-lá, *num.* twelve.
me-dzi-me-dzi, *num.* two by two.
me-yan-me-yan, *adv.* in small pieces, (broken)
 to atoms.
mọ-ko-ko (ikoko), *v.* to make earthenware.
mọ-nu-mọ-nu, *n.* See **mọlunọdu**.
mọ-hun-gbo-gbo (oluṅ), *v.* to know all things,
 to be all-wise.

O.

- o-bo-ni**, *n.* a secret society of great power and
 influence, connected with the religious and civil
 government of Yoruba. See **ogboni**.
O-dzò, *n.* a dancer; a proper name.
O-fi-ki, *n.* a proper name.
o-fu-a, *n.* a kind of kola-nut; the name of a me-
 dicinal tree.
O-gbo-mọ-şọ, *n.* (the wild cat caught the sen-
 tinel?), a large town in Yoruba.
o-gbo-yá, *n.* a small carnivorous animal.
o-gbu-gbu, *n.* a wild duck (?); a kind of grass;
 dyed cotton wool.
O-gu-ba-na, *n.* a proper name.
O-gu-bọ, *n.* a proper name.
o-gu-du-gbẹ, *n.* See **ogodugbẹ**.
o-gu-mọ, *n.* an esculent herb.
O-gu-nto-ro, *n.* a proper name.
o-gun-gun, *n.* a kind of tree.
o-gu-rò-do, *n.* (standing erect), a kind of bird.
o-ki-ti-kpó, *n.* name of a tree.
o-ki-yan, *n.* a small animal which lodges under
 rocks.
o-kpe-re, *n.* a bird which is said to be almost
 always asleep.
ò-kpo-kpo, *n.* a kind of banana.
o-lo-fe-re, *n.* name of a bird.
o-lo-gi-ri, *n.* a species of oriole.
o-lo-gū-ni, *n.* a small gregarious bird.
o-lo-kpi-ri, *n.* name of a bird.

- O-lu-ko-nto**, *n.* a proper name.
O-ni-şe, *n.* (a door), a proper name.
o-ra, *n.* a medicinal tree.
o-ri, *n.* a kind of wild pigeon.
ò-ri, *n.* a large fruit similar to the black haw.
o-ri ẹ-ya, *n.* a tribe.
o-ri ọ-ya, *n.* a kind of hedgehog.
o-ri...sí, o-ri...ya, *v.* to feel lively, be well
 pleased: ori wọy sí, they are delighted, lit. their
 head opens.
o-ri...wu, *v.* to be delighted with the conduct or
 words of an inferior who is much beloved; to yearn.
o-rò, *n.* custom, habit, fashion.
o-ro-fo, *n.* a kind of wild pigeon.
o-ro-gbo, *n.* a kind of kola-nut.
o-ro-rẹ, *n.* the name of a bird.
o-ru-kpa, *n.* the name of a tree.
o-ru-wọ, *n.* a kind of tree, useful for timber.
ò-sin i-we-fa, *n.* (the left hand eunuch), a eunuch
 of the third rank.
o-sin i-ya-lo-de, *n.* (a wise woman of the left
 hand), a title next to that of **ọṣọ-iyalode**.
ò-sin i-ya-ma, *n.* (the left hand of west), the
 south.
o-şe, *n.* name of a tree.
o-şi-kpi, *n.* name of a tree.
o-şu-şu, *n.* a kind of prickly bush.
ò-we, *n.* young leaf of the plant ewere.
ò-we a-wọṅ, *n.* a trailing leguminous plant.
o-we-re-dze-dze, *n.* a kind of trailing shrub.
o-wu a-ke-şe, *n.* a kind of cotton with small pods.
o-wu ò-go-do, *n.* a kind of cotton with large pods.

O.

- ọ-bai-ye-dzẹ**. See **abaiyedzẹ**.
ọ-ba-kán-bí-ke-dzi, *n.* a first cousin on the fa-
 ther's side.
Ọba Ku-so, *n.* the King of Kuso, a title of Shangó
 who was a king of Kuso or Koso in Yoruba, at
 which place he descended alive into the ground,
 and for that reason was deified.
ọ-ba-ni-dzẹ, *n.* See **abunidzẹ**.
Ọ-ba O-gó, *n.* King of Glory, a title of God.
ọ-dan-ko, *n.* a species of wild fig-tree.
ọ-dzẹ-rẹ, *n.* a medicinal plant.
Ọ-fa, *n.* a town in Yoruba.
Ọ-ka, *n.* the name of a plant employed to cure the
 disease called **ọka**.
ọ-kpẹ-rẹ, *n.* the pepper-bird.
ọ-kpọṅ si-bó, *n.* the pine-apple.
ọ-kpọ-tọ ki-ti, *n.* a kind of wild fig-tree.
ọ-lọ i-nó, *n.* the kidneys.
ọ-mọ-lá-la, *n.* a great-grandchild.

o-mo-ri-ka, *n.* the tip of the finger.
 o-mo-ri o-dó, *n.* a pestle.
 o-mo-ri o-lo, *n.* the upper mill-stone.
 o-mo-tê, *v.* (child bends or prostrates), to be taken with the pains of child-birth.
 O-ta, *n.* a town and tribe south of Abeokuta.
 o-tón ga-ba-sí, *n.* the north.
 o-tón i-we-fa, *n.* a eunuch of the second rank.
 o-tón i-ya-lo-de, *n.* a wise woman of the second rank.
 o-wô tê, *v.* (hand bends or grasps), to attain to, come into possession of: o-wô rê tê òhà, he attained to honor.
 o-wô-wô, *n.* a bird which lodges in holes.
 O-yan, *n.* name of a tributary of the Ogun.
 o-yê, *n.* grey color: ẹ́sín oyé, a grey horse.
 Oyọ, *n.* the capital of Yoruba.
 o-yò, *n.* one who rejoices, a rejoicer.
 o-yò-gò-họ-gò-họ, *n.* a bird so called because its motions are supposed to indicate joy.

R.

ran-hun ran-hun, *n.* perplexity;—*adv.* confusedly.
 ran-kpo (ikpo), *v.* to speak ironically.
 rẹ...mẹ-yan-mẹ-yan, *v.* to crush to atoms.
 rih...la-ga-ke or le-gi-ni (li), *v.* to tickle.
 ri-rà, *n.* that which is bought or to be bought, &c.
 See rà.
 ri-rè, *n.* a going, &c. See rè.
 ri-ro, *n.* the act of forging iron; withering, &c.
 See ro.
 ri-rún, *n.* a consuming, that which is to be consumed, &c. See rún.
 rò...lo-dzú (li), *v.* to tame, domesticate.
 rú-rú, *adv.* utterly (destroyed or broken to pieces).

S.

si-sè, *n.* a cooking, to be cooked, &c. See sè.
 si-so, *n.* a tying, &c. See so.
 si-sù, *n.* a sleeping, &c. See sù.
 sọ...dẹ-ru (li), *v.* to enslave.
 sọ...dì-dì, sọ...lì-lì, *v.* to play a game.
 sọ-dì-mì-lọ to, *n.* the solitary yellow monkey.
 sọ...dì ran-hun ran-hun, *v.* to perplex.
 sọ...dọ-mọ (di), *v.* to adopt.
 sọ...dọ-rọ (di), *v.* to enrich.
 su-na-sí, *n.* provocation.
 suu-ru, *n.* See sū-ru.

Ś.

śá-fa, *n.* an iron ring worn on the wrist by hunters.
 śa-gbe-śa-gbe, *n.* a beggar.
 śa-gon (śc), *v.* to be contentious.
 śan-kpa-ná, *n.* See śakpaná.
 śa-śa-ba-ku, *n.* the coffee-tree.
 śe bai-bai, *v.* to grow dim, to be obscure.
 śe gbe-de-gbe-yọ, *v.* to interpret, act as interpreter.
 śe-ne-wo, *n.* name of a bird.
 śe...ru-bu-tu, *v.* to write.
 śe su-na-si, *v.* to provoke.
 śe-tán, *adv.* after all;—*v.* to complete.
 śe-da e-le-fin, *n.* purple-shaded silk.
 śe-da yo-ri-yo-ri, *n.* white silk.
 śe-kpo-lo-hun, *n.* name of a prickly shrub.
 śe...lo-dzú or le-ka-na, *v.* to wink or beckon by way of giving a hint.
 śe-ni-fin-ran, *n.* name of a thorny shrub.
 śe...ni-fon, *v.* to suit; to rub or scratch the body of another.
 śe...ni-śe, *v.* See śe...ni-śe.
 śe-sin, *v.* See śe-sin.
 śi...le-nu, *v.* to open one's mouth, to cause one to open the mouth.
 śin, *v.* See śi.
 Śo-á-mi-de, Śo-a-nde, *n.* a proper name.
 so-we-ra (śc), *v.* to struggle, to make a great effort.
 sọ-fọ-din, *n.* an esculent herb.
 sũ-ru, *v.* to be small, applied to a leaf or bunch.
 sũ-ru, *v.* to be large, applied to a bunch or anything expanded.
 sú-si, *v.* to care for, to notice, to reply when spoken to.

T.

ta-ki-ri, *n.* clemency.
 tá-ma-han, *v.* See támaha.
 tan-ga-lá, *n.* the name of a bird.
 tan-gi-ri, *n.* a running plant, the fruit of which is used in dressing morocco leather.
 ta-ré (iré), *v.* to imprecate evil upon.
 tẹ...ná, *adv.* already: iwọ tẹ de ná? hast thou come already?
 tẹ...rì, *v.* to put under, submerge; hide, suppress.
 tí-a, *n.* See tira.
 ti-an-ti-an, *adv.* abundantly.
 tí...so-de (si), *v.* to push out, to exclude.
 ti-won-ti-won, *n.* a wart; the name of a bird.
 tom-bó, an unmeaning word used by children at play, while hopping on one foot: lakalaka tombó! hop along tombó!

tò-ro, *n.* a kind of rat, noted for its fatness.
tò-fò (tù), *n.* to tell mournful news, to bring news that a friend is dead.
tu...džŏ (odžŏ), *v.* to dismiss an assembly : tudžo, to disperse, adjourn.

U.

û, *pron.* him, her, it, after a verb ending in 'u.'

W.

wà...lai-ya (li), *v.* to encourage, embolden strengthen.
wa-kpa, *n.* See warakpa.
wa-kpa-kanj (wò), *v.* to squint.
wá-lè (wáh ilè), to come to the ground : odžú rè wálè (his eye came to the ground), he came to himself, after being drunk or crazy.
wę-re-wę-re, *n.* a dwarf.
wi-li-ki, *n.* leather worn by males.
wo-lu-ha, *n.* among the Mohammedans, family prayer.

12

wŏ-hij (ehij), *v.* to be crook-backed or hunch-backed.
wŏŋ-dò (òdo), *v.* to measure the depth of water, to sound.
wŏ-şo-wŏ-şo, *n.* the name of a bird.

Y.

yá-be-dži (ibedži), *v.* to purchase images of the god of twins.
yà-ha-na (ahana), *v.* to be wild, wicked, lawless.
yan-kŏ-tŏ, *n.* an esculent herb.
yan-raj-yan-raj, *adv.* brilliantly.
yan-rinj, *n.* an esculent herb.
yan-rinj mi-mi or **yi-yiŋ-rinj**, *n.* quicksand.
yá-re (erè), *v.* to make or purchase an image to worship.
yā-rinj, *n.* a disease in fowls.
yi-fŏ (yi, to turn), *v.* to dress greens for the table.
yŋ-rinj, *v.* to yield or give way under the feet.
yo...lŏ-huŋ (li), *v.* to seek to entrap in conversation.
yŏŋ-yŏŋ, *n.* a plant used for washing horses.
yŏ-rŋ, *n.* name of a bird.

PART II.

ENGLISH-YORUBA.

A B A

abast', *adv.* lehiṅ, sehiṅ.
aban'don, *v.* fisilẹ.
aban'donment, *n.* ifisilẹ.
abase', *v.* reṣẹ.
abase'ment, *n.* arẹḷẹ, ireḷẹ.
abas'er, *n.* arẹḷẹ.
abash', *v.* dodžuti, lodžuti, ti ... lodžú.
abash'ment, *n.* idodžuti.
abate', *v.* fa, mu ... fã, wawô.
abat'ed, *a.* afã.
abate'ment, *n.* ifã.
abbe'viate, *v.* ke kuru.
abbrevia'tion, *n.* ike kuru.
abbe'viator, *n.* ake kuru.
ab'dicate, *v.* fi oye lẹ.
abdica'tion, *n.* ifoyelẹ.
abdo'men, *n.* ikun.
abdo'minal, *a.* ikun, ti ikun.
abduc'tion, *n.* igbelôh.
abet', *v.* See *aid, help*.
abet'ing, *n.* òwẹ.
abet'tor, *n.* oḷowẹ.
abhor', *v.* korira.
abhor'red, *a.* akorira.
abhor'rence, *n.* ikorira.
abhor'rent, *a.* li irira.
abhor'rently, *adv.* li akorira.
abide', *v.* gbe, dzoko, wô.
abi'dingly, *adv.* li agbe, ni ikpẹ.
abil'ity, *n.* agbara, ikpa, okuj.
ab'ject, *a.* atẹni, arẹḷẹ.
ab'jectness, *n.* tẹnitẹni, itẹni.
ab'jectly, *adv.* li atẹni.
abjura'tion, *n.* egún.
abjure', *v.* še egún.
abjur'er, *n.* asẹgún.
a'ble, *a.* lẹ, lera.
a'ble-bodied, *a.* alagbara, alera.

A C C

ablu'tion, *n.* aluwala, iwẹnô.
a'bly, *adv.* li agbara.
abode', *n.* ẹbu, ibudžòko.
abo'lish, *v.* kparun.
abo'lishable, *a.* ti á lẹ kparun.
abo'lisher, *n.* akparun, ẹni tí ó kparun.
aboli'tion, *n.* akparun, ikparun.
abo'minable, *a.* akorira.
abo'minate, *v.* korira.
abomina'tion, *n.* irira.
abori'ginal, *n.* atetedelẹ.
abor'tion, *n.* isẹṅ: *to suffer abortion*, sẹṅo.
abor'tive, *a.* asanj.
abound', *v.* kpô. See *multiply, increase*.
about', *adv.* kiri, niha.
about', *prep.* nidi, niditi, niha.
above', *adv.* leke, lòke, sòke.
above', *prep.* dzù, leke, lòke, sòke.
abreast', *adv.* lokaṅkaṅ, niha.
abroach', *a.* atú.
abroad, *adv.* kákiri, kálẹ, lode.
ab'rogate, *v.* See *repeal*.
abrupt', *a.* òdžidži, ogán.
abrupt'ly, *adv.* lòdžidži.
abrupt'ness, *n.* òdžidži, ogán.
abscond', *v.* kpmáô, salôh, sakpmáô.
abscond'er, *n.* asalôh.
ab'sence, *n.* aisi, ehiṅ.
ab'sent, *a.* kòsi, aisi, lehiṅ.
absent', *v.* fákuro, yákuro.
absentee', *n.* alaisi.
absolu'tion, *n.* afidži.
absolve', *v.* fidži.
absolv'er, *n.* afidži.

absorb', *v.* mọ, mu.
absorb'able, *a.* ti á lẹ mu.
absorb'ed, *a.* amu.
absorb'ent, *n.* agbemú.
absorp'tion, *n.* amu.
abstain', *v.* fà ... sehiṅ, ronô.
abste'mious, *a.* aronô.
abste'miously, *adv.* li aronô, ronôronô.
abste'miousness, *n.* aronô.
ab'stinance, *n.* ironô.
ab'stinent, *a.* ironô.
abstract', *v.* gbe ... lôh, mu ... lôh, sôh.
abstruse', *a.* džinlẹ, luha.
abstruse'ly, *adv.* džinlẹ, luha-luha.
abstruse'ness, *n.* adžinlẹ, idžinlẹ.
absurd', *a.* kò dzana.
absurd'ity, *n.* aidžana, aitô.
absurd'ly, *adv.* laitô.
abund'ance, *n.* ifo, okpô, okpô-lokpô.
abund'ant, *a.* kpikpô, kpô.
abund'antly, *adv.* li okpô-lokpô.
abuse', *v.* bú, fi ... bú, sù ... lóhuj.
abuse', *n.* binabina, ibu, iregún.
abu'ser, *n.* algbu.
abu'sive, *a.* ebú, li ebú (li, to have).
abu'sively, *adv.* li ebú (li, in, with).
abut, *v.* wakpô.
abut'ment, *n.* iwakpô.
abyss', *n.* ibu, ibubu.
accede', *v.* See *agree*.

ac'cent, *n.* iwilé.
 accent', *v.* wi lé.
 accent'ed, *a.* awilé.
 accept', *v.* gbà, gbike, tẹwógbà.
 accept'able, *a.* atẹwógbà, dà.
 accept'ably, *adv.* li atẹwógbà.
 accept'ance, *n.* itẹwógbà.
 accept'ed, *a.* atẹwógbà.
 accept'er, *n.* atẹwógbà.
 ac'cess, *n.* isumọ.
 access'ible, *a.* tí á lẹ sumọ.
 ac'cident, *n.* abákpade, èsí.
 accident'al, *a.* akòsẹba.
 accident'ally, *adv.* li abákpade.
 acclama'tion, *n.* ihókùny, ihólé.
 accom'modate, *v.* nu ... ba, nu ... bade.
 accom'modating, *a.* aṣeun (applied to persons).
 accommoda'tion, *n.* (room), aye, ibí, wẹ.
 accom'paniment, *n.* aṣinlòh, ibálòh.
 accom'pany, *v.* bá ... lòh, sù.
 accom'panying, *a.* tí bá wáh or lòh.
 accom'plish, *v.* òwe.
 accom'plish, *v.* kpinu, sétán.
 accom'plished, *a.* akpinu.
 accom'plisher, *n.* akpinu.
 accom'plishment, *n.* akpinu.
 accord', *v.* bá ... de, rekpọ.
 accord', *n.* ibáde.
 accord'ance, *n.* ibáde.
 accord'ant, *a.* abáde.
 accord'ing to, *prep.* gege bí.
 accord', *v.* kí.
 account', *v.* rodzọ.
 accountability, *n.* idzísẹ.
 account'able, *a.* ní idzísẹ.
 accou'trements, *n.* itamọra.
 accu'mulate, *v.* kó ... dzọ.
 accu'mulated, *a.* akodzọ.
 accumula'tion, *n.* agbasi, akodzọ.
 ac'curacy, *n.* akpé, ikpé.
 ac'curate, *a.* kpé.
 ac'curately, *adv.* kinikini.
 accurse', *v.* See *curse*.
 accusa'tion, *n.* afọranmọ, eṣe, eṣọ, eṣù.
 accuse', *v.* fẹ ... lẹfẹ, fi ... bú, fi ... sọy, fọranmọ, sọy, sún.
 accus'ed, *n.* afisọy, eṣẹfẹ.
 acus'er, *n.* olufisọy.
 accus'tom, *v.* ló.
 ache, *v.* fọ, ra.
 a'cid, *a.* kanj.

acknow'ledge, *v.* dzẹwọ.
 acknow'ldgment, *n.* idzẹwọ.
 acquaint'ance, *n.* adugbo, aladugbo, odzulumọ.
 acquit', *v.* dá ... kuro.
 acquit'tal, *n.* idakuro.
 acquit'ted, *a.* adakuro.
 across', *adv.* li ebu.
 act, *v.* še.
 act, *n.* aṣe, íse.
 ac'tion, *n.* aṣe.
 ac'tive, *a.* munú, yara.
 ac'tively, *adv.* munumunu.
 acti'vity, *n.* imunú, iyara.
 ac'tor, *n.* aṣe, oluṣe.
 acute', *a.* gongo, mú.
 acute'ness, *n.* agongo, amú, imú.
 adapt', *v.* muba, mu ... bade.
 adapta'tion, *n.* amba.
 adapt'ed, *a.* bárekpọ.
 adapt'edness, *n.* abade.
 add', *v.* bu ... kọy, bumọ, busi, fi ... kọy, fi ... si, ka ... kọy, ṣeni sí.
 add'er, *n.* olubukọy.
 add'ing, *n.* abukọy.
 addi'tion, *n.* abukọy, abumọ, ọni, ibusi.
 addi'tional, *a.* alakọy.
 ad'dle, *v.* še obu.
 ad'dled, *a.* obu.
 adhere', *v.* da ... kpọmọ, da ... mọ, fà ... mọ, faramọ, mọ, rẹ.
 adhe'rence, *n.* awamú, idakpọ, mọ.
 adhe'rent, *a.* amọ.
 adhe'sion, *n.* imọ.
 adhe'sive, *a.* amọ.
 adhe'siveness, *n.* imọ. For other roots, see *adhere*.
 adieu', *adv.* See *farewell*.
 adjoin', *v.* faramọ, gbè.
 adjoin'ing, *a.* afaramọ, ifaramọ.
 adjourn', *v.* tu ... ka.
 adjura'tion, *n.* afibú, ifibú.
 adjure', *v.* fi ... bú.
 adjust', *v.* kpakadza, yà.
 ad'mirable, *a.* ní iyin.
 ad'mirably, *adv.* tọhọ.
 admire', *v.* yin.
 admit', *v.* gbà, gbà ... nilé.
 admit'tance, *n.* igbà.
 admo'nish, *v.* kilọ.
 admoni'tion, *n.* akilọ, ikilọ.
 admo'nitor, *n.* onikilọ.
 ado', *n.* ariwo.
 adopt', *v.* gbà, gba ... še.

adorn', *v.* še ... lo'ọ, ṣọsọ, wẹ.
 adorn'ing, *n.* oṣo.
 adrift', *a.* fọ, afọ.
 adult', *n.* ágba.
 adul'terate, *v.* búlà, da ... lu, lu.
 adul'terated, *a.* abulá, adalu.
 adul'teration, *n.* abula.
 adul'terer, *n.* adó.
 adul'teress, *n.* kpaṣaga.
 adul'terous, *a.* aladọ oníṣe kpaṣaga.
 adul'tery, *n.* òdží, kpaṣaga.
 advance', *v.* fi ... ṣadzu, korisi, ṣadzu.
 advance', *n.* iwadzu.
 advance'ment, *n.* afiṣadzu, ifiṣadzu.
 advan'tage, *n.* aṣfani.
 advanta'geous, *a.* še aṣfani.
 ad'vent, *n.* atibọ.
 ad'versary, *n.* ọta.
 ad'verse, *a.* odi sí, ṣé odi sí.
 adver'sity, *n.* ikponḍu.
 advice', *n.* adamọran.
 advise', *v.* bá ... rọ, damọran, gbimọ, lamọran.
 advi'sedly, *adv.* See *considerately*.
 advi'ser, *n.* adamọran, onidamọran.
 ad'vocate, *v.* gbà ... wi, bẹbẹ fu, ṣikpe fu.
 ad'vocate, *n.* abẹbẹ, alagbàso, aṣem, eṣẹbẹ.
 adze, *n.* ake gboro.
 afar', *adv.* li òkere.
 affair', *n.* òran.
 affect', *v.* kpa, dọy.
 affec'tion, *n.* aṣe, ifẹ.
 affec'tionate, *a.* onife.
 affec'tionately, *adv.* li aṣe, fi ifẹ.
 affirm', *v.* tẹnumọ.
 affirma'tion, *n.* itenumọ.
 afflict', *v.* foro, kpon ... lodzú.
 afflict'ed, *a.* olúkponḍú.
 afflic'tion, *n.* ikponḍu, wahála.
 afflu'sion, *n.* ibómíwọy.
 affloat', *v.* lí afọ.
 afoot', *adv.* bá tí eṣe: *he went on foot, ó bá tí eṣe lóh*.
 afraid', *a.* alyafọ, bẹru.
 afresh', *adv.* titọy, tọy.
 after, *adv.* lehin, sehin.
 afternoon', *n.* odzọ aṣe, aro-mọlẹ, idziṣokpalẹ.
 after'wards, *adv.* igbẹhin, ni gbẹhin.

again', *adv.* dehin, ÷we, kpada, ton, wè.
against', *prep.* sí, tí.
age, *n.* ogbo.
a'ged, *a.* arugbo, ogbo.
a'gent, *n.* adžele, ašehinde, ašó-džu.
aggress', *v.* firan.
aggress'or, *n.* onifiran.
a'gitate, *v.* ru, ru...soke.
a'gitated, *a.* aru, ru.
ago', *adv.* kòdža.
a'gonize, *v.* šé awayá.
a'gony, *n.* awayá iwáyá-idžá.
agree', *v.* bade, bare, dimi, ré, rekpò, šòkan žèsi.
agree'ment, *n.* alukawani, ibade: *a secret agreement*, adimò.
aground', *adv.* gún, tó.
a'gue, *a.* odžòdžò.
ah', *interj.* aa.
ahead', *adv.* lí iwadžu, sí iwadžu.
aid, *v.* dže...lowe, gbe, ran...lowe.
aid'er, *n.* elegbe, oluranlowe.
ail, *n.* še, dòn: *ě š e o ? what ails thee?*
aim, *v.* sá, sòn, sùn, wòn.
air, *n.* afefe, efufu.
air, *v.* kpatefe.
air'y, *a.* onifefe.
akin', *a.* ba...tán, tán.
alarm', *v.* deriba, dagiri.
alarm', *n.* idagiri, ididži.
alas', *interj.* aa, áša, yé.
albi'no, *n.* aň.
ale, *n.* oti.
a'lien, *n.* adžedži.
a'lienate, *v.* ši...laiya.
alight', *v.* bà.
alike' (be), *v.* alyato, bákana, dabi, džo.
alive', *a.* alaiyè, alàyè, àye, layè.
Al'coran, *n.* alkurani.
all', *a.* gbogbo, dede, ogbo: *at all*, rara, arara.
al'legory, *n.* akawe.
alli'ance, *n.* ibare.
al'ligator, *n.* oni.
all-see'ing, *n.* arigunbgogbo.
allure'ment, *n.* etan.
Almigh'ty, *n.* Obangidži, Ban-gidži.
almost', *adv.* fere ofere.
alms, *n.* itore ʼnu, ore ʼni, sará, sarahú.

aloft', *adv.* lòke, sòke, leke.
alone', *a.* nikan, nikanšoso.
alongside', *adv.* niha.
aloof', *adv.* okere: *to stand aloof*, tákete.
aloud', *adv.* kunjun.
alrea'dy, *adv.* ná, ne.
al'so, *conj.* kpeju.
al'tar, *n.* idžebò, kpekpe.
altoge'ther, *adv.* kpatakpata.
al'ways, *adv.* nigbagbogbo.
ambuscade', *n.* buha, iba, ide-na.
am'bush, *v.* bàmòlè, dena, ro-gun.
am'bush, *n.* abamòlè, adena.
amen', *adv.* aňin.
amend', *v.* toň...še.
amend'ment, *n.* atonše.
a'miable, *a.* niwa.
amid', amidst', *prep.* larin.
amiss', *a.* šíše.
among', *prep.* larin, ninó, šarin, sinó.
amount' to, *v.* dža sí.
a'mulet, *n.* onde, tira, ògun.
an'cestor, *n.* italemo, babá.
an'chor, *v.* dòkòduro, dòkòro.
an'chor, *n.* idòkòro.
an'cient, *n.* igbàni.
an'ciently, *adv.* nigbàni, ni-lailai.
an'cientness, *n.* ogbologbo.
and, *conj.* oň, sí, aň, tí, dehin.
an'gel, *n.* maleika.
an'ger, *n.* ibinó, idimó.
an'ger, *v.* bí...ninó.
an'gle, *n.* igon.
an'gry, *v.* binó, ru, runó: *an angry man*, abinó.
an'kle, *n.* kokose.
anni'hilate, *v.* sò...di àsan.
annoy', *v.* dà...lara, yo...lenu.
annoy'ance, *n.* idžaba, lálá.
ano'nt, *v.* kun, kpara, ta, fi ororo yan.
ano'nt'ed, *n.* eňi to á fi ororo yan.
ano'ther, *pron.* ełomíran, mi-ran, mire, omíran, omonikedži.
an'swer, *v.* dahun, da...lòhun.
an'swer, *n.* esi, idahun.
ant, *n.* cran; *different kinds are called*, òra, esa, idžalòh, ikandu, ikan, ota.
antece'dent, *n.* ašadžu.
an'telope, *v.* the various kinds

are called, agbari-gba, agboňrin, egbin, ekulu, era, etu, gala, ma-šegbin, otolo, esto.
anti'cipate, *v.* budža, daba.
anti'cipa'tion, *n.* abudža, itowò.
an'tidote, *n.* akporò.
anxi'ety, *n.* adžò, aniyán, idaro, itara.
anx'ious, *a.* alaniyan, tadžu, šé adžò, džíyan.
anx'iously, *adv.* fi adžò.
a'ny, *a.* eňi.
a'ny-one, *pron.* eňi kún.
a'ny-thing, *n.* ohunkolun.
apart', *adv.* lí akpakay.
apart'ment, *n.* yara.
ape, *n.* inaki, iro.
apiece', *adv.* fí olukuluku.
apo'logize, *v.* šikpe, wawí.
apo'logy, *n.* awawí, išikpe.
appa'rel, *n.* ašo, ibòra.
appa'rent, *a.* hàn, tí o hàn.
appari'tion, *n.* arididži.
appeal', *v.* fi òran lóh.
appear', *v.* fara...hàn, hàn, lá, lé, yo, yòdžu, yori.
appea'r'ance, *n.* àwò, odžú.
appear'ing, *a.* ilá.
appease', *v.* tu, tu...ninó.
appertain', *v.* tori.
app'etite, *n.* išinu.
applaud', *v.* hokun.
applause', *n.* ihokun.
apply', *v.* fi, fi sí.
appoint', *v.* fi...dže, fi...še, ran...lòh, sonidi, yàŋ: *to ap-point a day*, dadžo.
appoint'ed, *a.* ayàŋ: *appointed day*, adadžò.
appoint'ment, *n.* ilàna, ifidže.
appraise', *v.* sokpaykpa.
apprehen'sion, *n.* onó, onó.
apprehen'sive, *a.* šadžò, šonó.
approach', *v.* soňinó, sumó, tò.
a'pron, *n.* alayekan, ibante.
ar'cher, *n.* akpofin, akporiki, tafatafa.
ar'gue, *v.* džíyan.
arise', *v.* dide, nde: *to arise be-fore day*, dadži.
aristo'cracy, *n.* fada.
ark, *n.* òkò.
arm, *n.* akpa.
arm, *v.* di...hamòra: *to arm!* tìlè!
armed, *a.* hamòra.
arm'ct, *n.* adžinde, džúfu, šufu, šaba.

ar'mor, *n.* ihamora.
 arm'pit, *n.* abeya, abiya, iya.
 ar'my, *n.* agbagun, ogun.
 around', *prep.* ká.
 around', *adv.* ká, kálè.
 arouse', *v.* dži...dide, džiunde.
 arraign', *v.* bi...lédžo.
 arrange', *v.* tò.
 arrangement, *n.* itò.
 arri'val, *n.* atide.
 arrive', *v.* bò, de, džasì, tò.
 ar'row, *n.* ofa.
 ar'tery, *n.* isan.
 art'ful, *a.* alayidayida.
 as, *adv.* ba, bi, biènikpè, bi...ti.
 ascend', *v.* gòke, gori.
 ascen'sion, *n.* igòke.
 ascertain', *v.* ridi.
 ashamed', *a.* šesin, tidžù, ti...
 lodžù.
 ash'es, *n.* èru, labulabu.
 ashore', *a.* gujle.
 aside', *adv.* li akpakan.
 ask, *v.* bère, bi, bi...lebi, bi...
 lere.
 asleep', *a.* asùj, nsùj.
 ass', *n.* ketèketè.
 assassina'tion, *n.* amolèkpa.
 assault', *v.* ba...ni džauba, dá,
 da...nigi, kolu.
 assem'ble, *v.* dari...džò, gba
 ...džò, džò, kpè, kpè...džò.
 assem'bly, *n.* adžò, akpèdžò:
*an assembly for a feast, adžò-
 džèkpò, adžòmòkpò.*
 assent', *v.* balòhun.
 assist', *v.* bá...še, gbà, gbe,
 ran...lòwò.
 assist'ance, *n.* ibaše, iranlòwò.
 assist'ant, *n.* abaše, abaniše.
 asso'ciate, *v.* kegbe, šegbe,
 šore.
 asso'ciate, *n.* alabadže, egbe.
 assort', *v.* kawò.
 assort'ment, *n.* owò.
 assume', *v.* mawò.
 assu'rance, *n.* igbekèle.
 assure', *v.* fi or mu...dadžù.
 assu'redly, *adv.* dadžùdadžù.
 asth'ma, *n.* fere.
 asthma'tic, *n.* alafere.
 asto'nish, *v.* ènu ya, yanu, ya
 ...lenu, hà še.
 asto'nishment, *n.* hà, iyanu.
 astray', *adv.* yakpa.
 asun'der, *adv.* loto.
 at, *prep.* leba, li, ni, si, ti.
 athirst', *a.* ongbè gbè.

atone', *v.* še etutu.
 atone'ment, *n.* etutu.
 attach', *v.* fi...mò.
 attach'ment, *n.* afimò.
 attack', *v.* džalù, kòlù.
 attain', *v.* owò tè.
 attain'ing, *n.* atini.
 attempt', *v.* kusa, sà.
 attempt', *n.* isà.
 attend', *v.* dà, fodžuto, fodžusi,
 fyesi, kiyesi, kòdžusi, mudžuto.
 atten'dance, *n.* ibálòb, isinj.
 atten'dant, *n.* amòra.
 atten'tion, *n.* aiyesi, akiyesi,
 ifetisi, igbò.
 at'tic, *n.* adža.
 attract', *v.* kufja.
 attrac'tion, *n.* okufja.
 at'tribute, *n.* iwà.
 au'dible, *a.* ti á lè gbò.
 austere', *a.* onròro, ròro.
 au'thor, *n.* olúkpileše, oniši.
 author'ity, *n.* olá.
 au'thorize, *v.* fi olá lé.
 avail', *v.* ère dže, džère.
 a'varice, *n.* okandžua.
 avari'cious, *a.* okokandžua.
 avenge', *v.* gbesin, wadžò.
 aveng'er, *n.* olugbesan.
 a'venue, *n.* okpokpo, orere.
 aver'sion, *n.* aife.
 avert', *v.* yi...kuro, yi...kpa-
 dà.
 avoid', *v.* sa kuro.
 await', *v.* durode.
 awake', *v.* dži: *to awake sud-
 denly, tadži.*
 awake', *a.* adzi, aisùj.
 aware', *a.* mò.
 away', *adv.* kuro, lóh, nò.
 awe, *n.* èru.
 awe, *v.* deruba.
 aw'ful, *a.* li èru.
 awhile', *adv.* sa, ša.
 awk'ward, *a.* gígò, gò.
 awk'wardly, *adv.* tetèrè.
 awk'wardness, *n.* gígò.
 awl, *n.* olu.
 axe, *n.* àke, akeke, eđòj.

B.

baboon', *n.* akiti, obo.
 ba'by, *n.* omò-agbo, omò-owò.
 ba'chelor, *n.* akpoj, ogi.
 back, *n.* ehinj: *back of a fur-
 nace, daginj.*

back, *adv.* lehin, sehin.
 back'bite, *v.* sorojlehin.
 back'biter, *n.* alenini, asoroje-
 lin.
 back-door', *n.* èburu.
 backed, *a.* abelin.
 backslide, *v.* fà...sebin.
 back'ward, *adv.* lehin, lehin-
 lehin, sehin.
 bad, *a.* buru, buburu.
 bad'ness, *n.* buburu.
 bag, *n.* abò, akpo, lába.
 bag'gage, *n.* èru.
 bai'liff, *n.* ikpefon, olokpka.
 bait, *v.* fi...wò.
 bake, *v.* di, dij, yan.
 ba'ker, *n.* alákara.
 bal'ance, *n.* ogba.
 bald, *a.* kpari, akpari.
 bale, *v.* (water), gbòj; (to pack),
 di...li óketè.
 bale, *n.* óketè.
 ball, *n.* isù, iwòšù, ota.
 ball, *v.* šù, di...li ošù.
 bamboo', *n.* okpagan, (wine-
 palm) akpàko.
 bana'na, *n.* ogèdè.
 band, band'age, *n.* ođža, agba-
 dža, èka.
 ba'nish, *v.* lé kuro or džade.
 bapt'ism, *n.* itèbomi.
 baptiz'e, *v.* tètòmi.
 barba'rian, *n.* alalgbede.
 bar'ber, *n.* onigbádžamò.
 bard, *n.* akúnjungbà.
 bar'gain, *v.* dehun, kpinu.
 bar'gain, *n.* adehun, arosilè,
 arotèlè.
 bark, *v.* gbò.
 bark, *n.* ekpo.
 barn, *n.* ahere.
 bar'rel, *n.* agba.
 bar'ren, *a.* agàn, šagàn, ase-
 kpoj, sečò, yàgàn, sekpòj, iron-
 gàn, asečò, (said of land) ašalè,
 akpara, sakpara.
 bar'renness, *n.* See barren.
 bar'ter, *v.* kparò, kpašikparò.
 base, *a.* adžadže.
 base, *n.* isalè, idi.
 bash'ful, *a.* onisadžù, olodžuti,
 tidžà.
 ba'sin, *n.* awo koto.
 bas'ket, *n.* agbòj, šuku.
 bas'tard, *n.* omò-ale.
 baste, *v.* gan.
 bathe, *v.* luwè.
 bath'house, *n.* baluwè.

- bat'tle**, *n.* idžakpati, ogun.
bat'tle-axe, *n.* ganuganu.
bawl, *v.* kigbé.
bawling, *n.* ikigbé, ifó.
be, *v.* mbè, wà, yà, nì, gbe, ri, sí, še, di, dže.
beach, *n.* ebute, ibadò.
bead, *n.* ilèkè; *shell bead*, akon; *palm-nut bead*, alagidigba; *fossil—old Egyptian glass bead*, segi.
beak, *n.* kòkoro.
beam (*of a house*), *n.* eké.
bean, *n.* ewe, awudže, kpo-kpoundo.
bear, *v.* bí, bímo; *to bear fruit*, so, seso; *to bear a burden, carry*, rù; *to bear with patience, to endure*, rì, kparamó.
beard, *n.* ironḡbon.
beast, *n.* eṣan, eṣanko.
beastly, *a.* bí eṣanko.
beat, *v.* lù, bò, tẹ, bilù, kpa.
beau'tiful, *a.* lí ẹwa, yandžu, aręwa, dara.
beau'tify, *v.* še...lęwa.
beau'ty, *n.* ẹwa, idara.
because, *conj.* mitori, mitoriti, latorì.
beck'on, *v.* džuwó, fowokpè, šakpere.
become, *v.* dà, di. See *suit*.
bed, *n.* ibusun, akete, okpo, kpekpele.
bed'bug, *n.* idon.
bed'fellow, *n.* abáunšun.
bee, *n.* oyin, olugbe.
bee'hive, *n.* ilé-oyin.
beef, *n.* eṣan mahi.
beer, *n.* otí, šekete.
bee'tle, *n.* (*a heavy mallet*), alubara, bambam; (*an insect*), oḡonḡon.
be'fall, *v.* ba.
before, *adv.* ki...to, ki...teni, larin kán, niladžu, niwadžu sin, siwadžu.
before, *prep.* iwadžu, lodžu, niwadžu, siwadžu, šiwadžu.
before'hand, *adv.* tẹle.
befriend, *v.* še...li oṣe, še...loṣe.
beg, *v.* bẹ, bẹbe, šagbe, toṣo.
beget, *v.* bí, bímo.
beget'er, *n.* obi.
beg'gar, *n.* alagbe, ašagbe, ma-dekoso.
beg'ging, *n.* agbe.
begin, *v.* bẹṣesi.
begin'ner, *n.* alakoše, olukpileše.
begin'ning, *n.* akóše, ašéšekóše, atetekoše, ateteše, atikpileše, ikpilè, ikpileše, ileše.
begrudge, *v.* kòy, kùn.
beguile, *v.* tán, tán...dže.
beguile'ment, *n.* itandže.
behave, *v.* hù, hùwà.
beha'vior, *n.* hilù, iwà, iwà-kuwà.
behead, *v.* be...lori, beṣi.
behind, *a.* lehin, sehin, šehin.
behold, *v.* kiyesi, sawò, wò.
behoove, *v.* ye fu.
belief, *n.* igbagbó.
believe, *v.* gbà...gbó.
believ'er, *n.* olugbó, olugbagbó.
bell, *n.* ago, agogo, korokoro, šaworo, gbangan.
bell-ringer, *n.* alagogo.
bel'lows, *n.* ewri.
bel'ly, *n.* ikun.
belong, *v.* dže ti, še ti, tori.
belov'ed, *a.* ayanfe, ayo, olufe.
below, *prep. and adv.* isalè, lódo, nisalè.
belt, *n.* lawani, mayafi.
bend, *v.* bà, dà, lò, reṣe, tẹ, tẹba, tẹ...balè, tẹ...bẹre.
beneath, *prep.* labè, nisalè.
benefac'tor, *n.* ašore, olore.
be'nefit, *v.* da...lere, saṣ.
bene'volence, *n.* ifeni, anu ofé.
bene'volent, *a.* olóre ofé, olanu ofé.
benumb'ed, *a.* keti, ketiri.
bereave, *v.* gbà...li (Gen. 43, 14), še...lofo.
bereav'ed, *a.* fo.
bereave'ment, *n.* ofo.
beset, *v.* ro...gbaka.
besides, *adv.* kpeḡukpeḡ.
besiege, *v.* doti...ka.
bespeak, *v.* bà.
best, *a.* dara džu gbogbo lóh.
bestow, *v.* búsi.
bestow'er, *n.* alabúsi.
betray, *v.* dà, fi...hán, kpa.
betray'er, *n.* onifilhá, oniku-kpani.
betroth, *v.* fe...fu, fe...sóna.
betroth'ed, *a.* afešona.
bet'ter, *a.* fuyè, saṣ.
between, *prep.* larin, ninó.
bewail, *v.* kpèhunrere.
beware, *v.* kiyesi.
bewil'der, *v.* dánu.
beyond, *prep.* kòdža, lóke.
bid, *v.* kpè.
bier, *n.* aga-kposi.
big, *a.* tobi, lara.
bill-hook, *n.* ada.
bil'low, *n.* tere, imui.
bind, *v.* dè, di, demó, deru.
bind'ing, *n.* diidi, èbo, édi.
bird, *n.* eiyé; *bird of prey*, akósa.
bird'-cage, *n.* ilé-eiyé.
bird'-lime, *n.* ate.
bird'-shot, *n.* ahariya, awaya.
bird'-snare, *n.* adža-akpa, igè-kpa, isoča, kpekpe.
birth, *n.* ibi.
birth'day, *n.* idžó ibi, odžó ibi.
birth'place, *n.* ibi-ibi.
birth'right, *n.* ogun ibi.
bit, *n.* gangan, kikini, okele; *a bridle-bit*, idžanu.
bite, *v.* bu...dže, bu...šan.
bit'ter, *n.* kòro.
bit'terness, *n.* arankán, ikoro, otoro.
black, *v.* dú.
black, *a.* adú (loḡodžó).
black'ing, *n.* edú.
black'ness, *n.* dudu.
blad'der, *n.* ilé ato.
blade, *n.* (*of grass*), ehu.
blame, *v.* bá...wi, fi...džébi, wóy.
blame'less, *a.* albáwi.
blan'ket, *n.* alakiba, kubusu.
blaspheme, *v.* sò...egán, sòro egán.
blasphem'er, *n.* asòro egán, olusòro egán.
blas'phemy, *n.* egán.
blast, *v.* fifon.
blaze, *n.* owo-ina.
bleed, *v.* seḡže gbádže, gbà...leḡže.
bleed'ing, *n.* isedže, igbádže; *a bleeding at the nose*, amáron.
bless, *v.* búkòṣ, búsi, sure, wure.
bless'ed, *a.* alabukòy, ibukòṣ ni fu.
bless'er, *n.* olúbukòṣ, onibusi.
bless'ing, *n.* abukòṣ, ibukòṣ, ibusi.
blind, *a.* foḡdža; *a blind person*, afoḡdžu.
blind, *v.* fo...lodžu; *to blind with brightness*, boḡžuyan.
blind'fold, *v.* di...lodžu.

blind'ness, *n.* airiran, ifodzú.
 blis'ter, *v.* lè.
 bloat, *v.* wu.
 block, *n.* (*of houses*), kusata.
 block, *v.* dina.
 block'head. See *stupid*.
 blood, *n.* edže.
 blood'guiltiness, *n.* ẹ́sẹ edže.
 blood'iness, *n.* ẹ́džẹ.
 blood'shed, *n.* itadžesilẹ́.
 blood'y, *a.* edže, ẹ́džẹ.
 bloom, *v.* dife, tu.
 bloom, *n.* ina, itana, yetuyetu.
 blot, *v.* bá...wọ́, kparun.
 blot, *n.* abáwọ́.
 blow, *v.* fẹ, fọy: *to blow off*,
 fenọ; *blow away*, fẹ́lọh.
 blow, *n.* idža: *a blow with the*
 fist, bende, ẹ́sẹ.
 blow'ing, *a.* fifọ, ifẹ.
 blue, *n.* aró, ayinri, wadži.
 blunt, *a.* kú.
 bo'a-constric'tor, *n.* ẹ́rẹ.
 boar, *n.* akọ ẹ́dẹ: *a wild boar*,
 ọ́gan, amado, igan.
 board, *n.* akpako, kpako.
 boast, *v.* ẹ́sẹ fefe, fudža, halẹ́,
 džanu, yanran.
 boast'er, *n.* ahale, omifefe.
 boast'ing, *n.* fefe.
 boat, *n.* ọ́kọ, ọ́kperẹ.
 boat'man, *n.* atuko, ọ́lọkọ.
 bob'tail, *n.* akeru.
 bo'died, *a.* abara, alara.
 bo'dily, *adv.* taratara.
 bo'dy, *n.* arí.
 bog, *n.* ẹ́rẹ, irá, ẹ́akata.
 bog'gy, *a.* akóro.
 boil, *n.* owo.
 boil, *v.* bọ, hó, ru.
 boil'er, *n.* odu.
 bold, *a.* gbodžu, lalya.
 bold'ly, *adv.* laiberu.
 bold'ness, *n.* alberu, alfoya.
 bols'ter, *n.* irora, tintim.
 bond, *n.* ẹ́di, ide.
 bond, *a.* onde, oloko-eru.
 bond'age, *n.* ẹ́woy, ide, ideni,
 oko eru.
 bond'maid, *n.* iwofa ọ́biri.
 bond'man, *n.* iwofa ọ́kọri.
 bond'servant, *n.* iwofa.
 bond'service, *n.* ọ́fa.
 bone, *n.* egun, egungun.
 bo'ny, *a.* elegun.
 book, *n.* iwe, tíra.
 boot, *n.* ẹ́hombia, ẹ́orombia.
 boo'ty, *n.* amọ́na.

bor'der, *n.* saruba, okpinlẹ́,
 odžu-ilẹ́.
 bore, *v.* lu, da...lu.
 born, *a.* bibi.
 borne, *a.* riru.
 bor'row, *v.* tọro, wiu, ẹ́nu.
 bor'rower, *n.* atọro, onitọro.
 bo'som, *n.* owokajaiya.
 both, *conj.* ati, medžedžedži.
 both'er, *v.* yo...lenu.
 bot'tle, *n.* igo, afogun, ọ́kpálaba.
 bot'tom, *n.* isale, gbongbo.
 bot'tomless, *a.* alusalẹ́.
 bough, *n.* aketon, akpa, ẹ́ka,
 ẹ́ton kpeka.
 bound, *a.* ide, ni dide.
 bound'ary, *n.* okpin, okpinlẹ́.
 bound'less, *a.* ailokpin, alini-
 kpekun.
 bow, *v.* foribalẹ́, teba, te...bale,
 ẹ́ri, ẹ́riba.
 bow, *n.* orun.
 bow'knot, *n.* awotiri.
 bow'legged, *a.* awọlewọ́ri.
 bow'els, *n.* ifọ.
 bowl, *n.* ọ́kpon.
 bow'string, *n.* ošán.
 box, *n.* akpoti, ago, bata.
 boy, *n.* omokọri.
 boy'hood, *n.* iwá omọ.
 brag, *v.* ẹ́fefe, fudža.
 braggado'cio, *n.* kufekufe,
 afudža.
 braid, *v.* bá, diron.
 brain, *n.* modumodu.
 brake, *n.* igbẹ́.
 bran, *n.* egbo, eta.
 branch, *n.* See *bough*.
 brand, *v.* sámi si.
 brand, *n.* àmi, isàmi.
 brand'ed, *a.* alami, onisami si.
 brass, *n.* ide.
 brave. See *bold*.
 brawl, *v.* sọ, dža.
 bread, *n.* ákara; various kinds
 are called, ẹ́kan, ekuru, kùduru.
 bread'seller, *n.* alikara.
 breadth, *n.* igboro, awe, ayé, ibo.
 break, *v.* bù, di, dža, ẹ́: *to*
break loose, džakun, tú; *break*
out, ru; *break to pieces*, rún;
break down, wó; *break up*, tú.
 break'fast, *n.* aso-owuro.
 breast, *n.* aiya, igẹ, omu.
 breast'bone, *n.* tamkpa.
 breast'plate, *n.* awo-aiya.
 breast'work, *n.* odi.
 breath, *n.* ẹ́mi.

breathe, *v.* mi, mi ẹ́mi, fẹ, gbij.
 breath'ing, *n.* imi.
 breath'less, *a.* ailẹmi.
 breech'es, *n.* See *pantaloons*.
 breed, *v.* bí.
 breed, *n.* oruko: alakpatà kò
 bère oruko, *the butcher does not*
enquire the breed.
 breeze, *n.* afẹ́, ategun, ọ́fọ.
 brew, *v.* kponi.
 brew'er, *n.* ọ́lọfi.
 brew'ery, *n.* ẹ́bu-ọ́fi.
 bribe, *n.* abetele.
 bri'bery, *n.* abetele, ibetele.
 bride, *n.* iyawo, adelebọ.
 bridegroom, *n.* ọ́kọ-iyawo.
 brideg, *n.* afára.
 bri'dle, *n.* idžanu.
 bri'dle, *v.* ko...li idžanu.
 bri'er, *n.* egún.
 bright, *a.* dan, fofọ.
 bright'en, *v.* dan, mu...dan.
 bright'ly, *adv.* rokiroki.
 bright'ness, *n.* idan, riran.
 bril'liant, *a.* ran, yan.
 bril'liantly, *adv.* yan.
 brim, *n.* eti.
 brim'ful, *a.* kọ́ di eti.
 bring, *v.* mu...wá, gbe...
 wá.
 brink, *n.* bebe.
 brisk, *a.* yara.
 brisk'ly, *adv.* yaya.
 bris'tle, *n.* iron gaungau: *a*
turkey's bristle, ogbon.
 brit'tle, *a.* elege.
 brit'tleness, *n.* ege.
 broach, *n.* tu.
 broad, *a.* gbọro, nibo.
 broad'cast, *adv.* ni gbọro.
 broil, *v.* son, sun.
 broiled, *a.* sisun.
 bro'ken, *a.* dida, ẹ́sẹ: *broken*
in the bottom, adžadi.
 bro'ken-hearted, *a.* oniróbi-
 nọdžẹ.
 brook, *n.* abetu.
 broom, *n.* ọwo, šaša.
 broom'sedge, *n.* bere, mene.
 broth, *n.* omitoro.
 bro'ther, *n.* ará, arakọri, aburo,
 egbon.
 bro'therhood, *n.* iwa ará.
 brow, *n.* iwadžú: *brow of a hill*,
 gẹ́gẹ́ re.
 brown, *a.* kpón rusurusu.
 bruise, *v.* ha.

bruis'ed, *a.* hila, fiŋ.
 brute, *n.* eṛaṅko.
 bru'tish, *a.* bi eṛaṅko.
 buck'et, *n.* kuruba.
 bud, *v.* rudi.
 bud, *n.* idí, irudi.
 buff'alo, *n.* eṣoṅ.
 bug, *n.* kòkoro.
 build, *v.* kẹ, kọlẹ, mọ, mọlẹ, mọdi.
 build'er, *n.* akọlẹ, amọlẹ, dumo.
 bulb, *n.* ẹta.
 bulk, *n.* gbíngbíníki.
 bulk'y, *a.* lara.
 bull, *n.* akọ malù.
 bul'let, *n.* ọta.
 bul'rush, *n.* ore.
 bul'wark, *n.* odi.
 bunch, *n.* olidi.
 bun'dle, *n.* àbo, idi, iti, iwọṅ-wọṅ, yangidi.
 bur, *n.* emọ.
 bur'den, *n.* erù.
 bur'glar, *n.* abolé, bolebole.
 bur'glary, *n.* ibolé, ifolé.
 bur'rial, *n.* isín, siyisín.
 burn, *v.* dzó, dżona, dżonirun, dżoran, kun, ràn, sọṅ, sun, ta.
 bur'nish, *v.* dan, mu ... dan.
 burst, *v.* be, ẹaṅ.
 bu'ry, *v.* sín, siṅkú.
 bush, *n.* igbẹ, igbòro.
 bu'siness, *n.* isẹ, ọraṅ.
 bu'sy, *a.* alrodzú, alrowọ, kùṅ, kposilé.
 bu'sybody, *n.* ofofo, ofoforo, olofofo.
 but, *conj.* ẹugboṅ, bikòṣe.
 but'cher, *n.* alakpatá.
 but'ler, *n.* agbọti.
 butt'end, *n.* idí.
 but'ter, *n.* ori amọ, wagi.
 but'terfly, *n.* labalaba.
 but'tock, *n.* idi.
 buy, *v.* rà, dá.
 buz'zard, *n.* gunugunu.
 by, *prep.* ẹba, fi, leti, lodọ, níkpa, níkpase, síha, níha, tíkpase.
 by-and-by', *adv.* nígbòṣe, dígbòṣe.

C.

cack'le, *v.* gbẹ.
 cack'ling, *n.* kẹkẹ.
 cake, *n.* ákara, moimoi, ọlẹlẹ.

ca'labash, *n.* akoto, igba, kpoko.
 cala'mity, *n.* ọfo.
 cal'culate, *v.* síró.
 calf, *n.* eṅbòrọ malù.
 ca'lico, *n.* kelekú.
 call, *v.* kpẹ, kekpe, kọ.
 call, *n.* akesi, ikpẹ.
 cal'lous, *a.* ekó, kaṅgi.
 calm, *a.* dákedzẹ, dákerọro.
 calm, *v.* mu ... dákedzẹ.
 calm, *n.* idake, idakedzẹ, idakeroro.
 calm'ly, *adv.* ẹṣọṅ, teṣọ.
 ca'mel, *n.* ibakasiẹ, rakumí.
 camp, *v.* dọ, teṣọ.
 camp, *n.* budo, ibudo.
 can, *aux. v.* lẹ.
 can'did, *a.* awimáhyihuy.
 can'dle, *n.* atọṅkpa.
 can'dlestick, *n.* ọkpa atọṅkpa.
 can'dy, *n.* oyín.
 cane, *n.* ikaṅ, teṣeṅ.
 can'ker, *v.* dakpara.
 can'ñibal, *n.* adzénia, dżénia-dżénia.
 can'non, *n.* agbabọṅ.
 canoe', *n.* fatẹlẹ, ọkọ, ọkpere.
 cap, *n.* fila, abeti, aramọri, dżofofo.
 capa'cious, *a.* gbàgba, tó.
 caprice', *n.* iwàkuvà.
 capsiz'e', *v.* dà.
 cap'tain, *n.* olori.
 cap'tivate, *v.* ko ... lẹh.
 cap'tive, *n.* (male), igbekun; (female), igbesin.
 capti'vity, *n.* ikogun, ikolẹh.
 caravan', *n.* ero, ẹwo, ọwọ.
 card'ed, *n.* aburan.
 care, *v.* bodzútó, bódzúwò, nisi, ẹe aniyán.
 care, *n.* aniyán, itọdzu.
 care'ful, *a.* diyan, nani, ẹora.
 care'fully, *adv.* lesoleso.
 care'fulness, *n.* ẹso.
 care'less, *a.* altdzú, aikiyesi.
 care'lessly, *adv.* teṣere.
 caress', *v.* nani.
 car'nal, *a.* ará, tí ará.
 carne'lian, *n.* esu.
 carn'i'vorous, *a.* eṛaṅ abekána.
 car'penter, *n.* gbẹnagbẹna.
 car'pet, *n.* kinisi.
 car'rier, *n.* alírù.
 car'ry, *v.* rù.
 cart, *n.* kekeru.
 carve, *v.* gbẹ.

carv'er, *n.* ibuke.
 carv'ing, *n.* ibuke, ike.
 cascade', *n.* ọsọro.
 case, *n.* ọraṅ.
 cask, *n.* agba.
 cassa'va, *n.* ogege.
 cast, *v.* gba ... lù, gbọṅ, dzá ... tilẹ, dzá, ẹati, ẹu, wọdza, ta, ta ... nọ, tẹ ... bá, tẹ ... balẹ, tí ... kuro.
 cast'away, *n.* adọṅ.
 cas'trate, *v.* tẹ, wẹ ... lẹwa.
 ca'sual, *a.* abakpade.
 cat, *n.* ese, ologini, ologbo, yanlu, yanu.
 catch, *v.* mú: catch fire, gbina, dżoran.
 catch'ing, *n.* imu: catching fire, adżoran.
 ca'terpillar, *n.* kòkoro.
 cat'tle, *n.* ọsin.
 cause, *v.* da ... silẹ, so, sọdi.
 cause, *n.* edi, idasilẹ, idí, itori, ọraṅ.
 cause'less, *a.* ainiṣi, laisẹ.
 cau'tion, *n.* kilọ.
 cau'tioner, *n.* olobó.
 cave, *v.* yà.
 caw, *v.* liọṅ.
 cease, *v.* dá, dabọ, dake, dase, dekuṅ, kpa, rolẹ, sibi, sunkomu, wawọ, ye.
 cease'less, *a.* aida.
 ceil'ing, *n.* adza: ceiling over a grave or pit, adzailẹ.
 cen'sure, *v.* fẹfẹ, tẹ ... lefẹ, fesi, ẹu ... lòhun.
 cen'tipede, *n.* tanitani sọkọ.
 cen'tral, *a.* ariṅ, tí ariṅ.
 cen'tre, *n.* ariṅ.
 cer'tain, *a.* danilodzú: certain ones, awọṅkán, melokán.
 cer'tainly, *adv.* dadzúdadzú.
 cer'tainty, *n.* aisiyemedzi.
 cessa'tion, *n.* ekuṅ, yiye.
 chaff', *n.* afenọ, ekpo, iyangbo.
 chaff'y, *a.* elekpo.
 chagrin', *v.* ya ... niha.
 chagrin', *n.* abámọ.
 chain, *n.* ẹwoṅ.
 chain, *v.* di ... lẹwoṅ.
 chair, *n.* aga, ógún.
 chalk, *n.* eṣun.
 cham'ber, *n.* iyẹwu, yẹwu.
 chame'leon, *n.* agemọ, oga orisa.
 chance, *n.* abakpade, akóṣebá, alabikpade, ariyko, ikóṣebá.

chance, *v.* šalabákpade.
change, *v.* di, kpalòkanjà, kpa-
 rada, yè, yèra.
change, *n.* ayidà.
change'able, *a.* alaiduro.
chan'nel, *n.* awowo, ibu, ibubu,
 ikpa, kòpòrò, kòpò, òna.
chap, *v.* là.
chap'ter, *n.* ori.
cha'racter, *n.* isè.
characteris'tic, *n.* iwà.
char'coal, *n.* edú.
charge, *v.* fòrámò, kugbu: *to*
charge for, diyele.
charge, *n.* ilo, asè, isè.
cha'ritable, *a.* onfèni, olòrè
 ànu.
cha'rity, *n.* ifèni, orè ànu.
charm, *n.* tu...lodzú.
charm, *n.* ade, ògun, tira.
chase, *v.* dè, lé, tokpa.
cheap, *a.* kpò, kò wò.
cheat, *v.* rẹ...džè, tándze, ya
 ...ndžè: *to cheat in play*, šo-
 džoro.
cheat, *n.* ayandžè, irenidžè.
cheat'er, *n.* arenidžè: *a cheater*
in play, odžoro.
check, *n.* keke.
checked, *a.* abilà, ètu.
cheek, *n.* èrèkè.
cheer, *v.* da...laraya.
cheer'ful, *a.* daraya, tudžuka.
cheer'fulness, *n.* arayá, ida-
 raya.
cheese, *n.* wákasi, wàrakasi.
cher'ish, *v.* kè.
chest, *n.* aiya, igè, òkagaiya.
chew, *v.* fi...ròp, ròp, wè: *to*
chew tobacco, di.
chick'en, *n.* adirè, adìè.
chide, *n.* bodžumò.
chief, *a.* kpàtaki.
chief, *n.* olú, olori.
chief priest, *n.* akpini, idžigbo.
child, *n.* ewe, madžesi, omò,
 omòde.
child hood, *n.* ewe, iwà omò.
child'ish, *a.* bi omòde.
child'ishly, *adv.* džegbedžegbe.
child'less, *a.* ailomò.
chill, *v.* še...légiri.
chil'iness, *n.* egiri.
chil'ly, *a.* segiri.
chimpan'zee, *n.* inaki, iro.
chin, *n.* àgbò.
chip, *n.* asàgi.
chi'sel, *n.* ikò.

choice, *n.* iwù.
choke, *v.* fè...lodzu, fòp, fòp-
 kpa, fòp...loròp.
choose, *v.* yàn.
chop, *v.* kè, kègi.
chop'per, *n.* akegi.
cho'sen, *n.* ayanfè.
Chris'tian, *n.* nasàra.
chro'nicles, *n.* ologbò.
church, *n.* adžò, akpedžò.
churn, *v.* mì wara.
cigar', *n.* saròta.
cim'eter, *n.* agada.
cin'ders, *n.* idàro.
cir'cle, *n.* agbo, ayika.
cir'cular, *a.* alayika.
cir'cumcise, *v.* kòlà, kò...
 nilà.
cir'cumcised, *a.* onilà.
circumci'sion, *n.* ilà.
cir'cumstance, *n.* aiye, iwà,
 ikpa.
cir'cumstanced, *a.* onlwa,
 onikpa.
ci'tizen, *n.* arálè, arálu, çlòtò.
ci'ty, *n.* ilu.
claim, *v.* fi...kpè: *he claimed*
the horse, ó fi èšin kpè tí rẹ.
clam, *n.* ikara.
cla'mor, *n.* ariwo.
cla'morously, *adv.* kéké.
clap, *v.* kpakpè, šakpè.
clap'ping, *n.* akpè.
class, *n.* iru.
claw, *n.* ekan, ekana.
claw, *v.* džà...lekana.
clawed, *a.* abekana.
clay, *n.* orò, èfun.
clean, *a.* awemò, awenò, mò.
clean, *v.* wè, wè...nò.
clean'ly, *adv.* tonitoni.
clean'ness, *n.* aileri, mimò.
cleanse, *v.* fò, wè...mò, wè...nò.
cleans'ed, *a.* awenò.
cleans'ing, *n.* ifò.
clear, *v.* še...mò: *to clear land*,
 šangbè; *clear off*, as clouds, tú.
clear, *a.* mò.
clear'ly, *adv.* kede, toto.
cleave, *v.* bumò, di...mò, fà
 ...mò, faramò, kumò.
cle'mency, *n.* lākiri.
climb, *v.* guṅ.
cling, *v.* mò, di...mò.
clip, *v.* rẹ.
clock, *n.* ago, agogo.
clod, *n.* akpala, ogulútu.
close, *v.* di, kpade, sé.

close, *a.* itosi: *close by*, dedè,
 nitosi, nikusa.
close'ly, *adv.* buruburu, giri,
 girigiri, moṛa, motimoti, kpì-
 kpìj, rẹrẹ, sìnšìn, timòtimò.
clo'set, *n.* akoròp, kòlòfìj.
cloth, *n.* asò: *dealer in cloth*,
 alašò.
clothe, *v.* dašòbò, še...lòšò,
 wò...lòšò.
cloth'ing, *n.* asò.
cloud, *n.* àwosaua, ikuku, saṅ-
 ma, sama.
cloud'iness, *n.* gudègudè.
cloud'less, *a.* toto.
clo'ven, *n.* èlà.
clo'ven-footed, *a.* èlèšè èlà.
club, *n.* adžoro, ogo, tombà.
clum'sily, *adv.* gbogodò, gbòp-
 gbòp gboggbòp.
clum'sy, *a.* gbogodò.
clust'er, *n.* odidi.
coadj'u'tor, *n.* abánišè.
coa'gulate, *v.* di, sùn.
coal, *n.* èšena, oguna, edú.
coarse, *a.* aikuna.
coast, *n.* ebute, ibadò.
coast'wise, *n.* ibubu.
coat, *n.* akáso èwu, toro.
cob, *n.* (*of corn*), girigiri, kùku.
cock, *n.* ákukò: *cock of a gun*,
 agemò.
cock'atoo, *n.* àluko.
cocked, *a.* akò.
cock'roach, *n.* àyan.
co'coa-nut, *n.* agbòp.
cocoon', *n.* akpolúkutu, ekuku.
cof'fin, *n.* kposi.
cohab'it, *v.* bá...sù.
cohabita'tion, *n.* abásù.
coil, *v.* See *wind*.
coin'cidence, *n.* atibá, iba.
co'lander, *n.* adígbaro, adiro.
cold, *n.* amudi, otu, otutu.
cold, *a.* nini, kpotutu, tutu.
co'lie, *n.* owoko.
col'lar, *n.* idiròp: *a dog's collar*,
 egì.
col'lar-bone, *n.* èka.
collect', *v.* gba, ko, kodžò, rọ,
 šndžò.
collect'ed, *a.* akótán.
collec'tion, *n.* akokpò, šísá.
collec'tor, *n.* asíšá.
colli'sion, *n.* ikpade lù.
coloniza'tion, *n.* ido, itèlo.
co'lor, *n.* ase, asè, èsò, àwò.
co'lored, *a.* alawò.

colt, *n.* omo ẹsin.
co'lumn, *n.* ọwoṅ.
comb, *n.* oya: *comb of a house*, roof-ridge, ọta.
comb, *v.* ya.
combina'tion, *n.* idawọkpò, idikpò.
combine', *v.* dawọkpò.
come, *v.* de, wá: *to come by*, pass, ẹ; *come down*, sò, sòkale; *come in*, wólé, wónó.
come'liness, *n.* iye.
com'fort, *a.* li ẹwa.
com'fort, *v.* de...lara, rẹ, tẹ...loron, tù...ninó.
com'fort, *n.* domdomaye, itunó.
com'fortably, *adv.* kpete-kpere.
com'forter, *n.* atunininó, olurẹ.
com'forting, *a.* atituninó.
com'ing, *n.* atibò, bò, bówáh.
command', *v.* kpaše, kpa...laše, ọlori.
command'er, *n.* ọlori.
command'ment, *n.* aše.
commence', *v.* kpileše, ẹẹ.
commence'ment, *n.* ibẹre, idasilẹ, ikpileše.
commend', *v.* yin, buyin fu.
commisera'tion, *n.* ọnú.
commis'sion, *n.* aše ikọ.
commit', *v.* fi...le loṣo.
com'mon, *a.* okporo, kpò.
commune', *v.* bú...sòro.
commu'nicate, *v.* ràn.
compact'ly, *adv.* gbámgbam.
compan'ion, *n.* ẹgbẹ, ẹlẹgbẹ, ẹnikedži, ẹro, odžugba.
compan'ionship, *n.* adžumo.
com'pany, *n.* ẹgbẹ, ẹwo.
compare', *v.* farawe, fi...we.
compar'ison, *n.* iwe.
com'passes, *n.* inakiri.
compas'sion, *n.* ọnú, irado, ironu, iyonu.
compas'sionate, *a.* ọnú, yó.
compel', *v.* lé...še.
compel'led, *a.* alaiğbodo.
com'pensate, *v.* san fu.
com'pete', *v.* didže, dudže.
competi'tion, *n.* idže.
com'plain', *v.* sò, ọaroye, ọsò, widžo.
complaint', *n.* ọsò.
complete', *a.* kpe, ọetan, tọto.
complete'ly, *adv.* kpatakpata, tán.

comple'tion, *n.* akodža, ašetán, itan.
com'plicated, *a.* di.
com'pliment, *n.* ọki.
com'prehen'sible, *a.* ye.
com'rade, *n.* See *companion*.
conceal', *v.* de...mólẹ, fi...sin.
conceal'ment, *n.* adžinsinsin, ibomólẹ.
conceive', *v.* loyún, yún.
concep'tion, *n.* iyun.
concern'ed, *a.* nisi.
concern'ing, *prep.* nidi, nidityi, niti, nititi, nitori, nitoriti, sikpa, ti.
conch, *n.* karawon.
conclude', *v.* kpari, kpinu, kpinjahun.
conclu'sion, *n.* ikpinu.
con'cord, *n.* isọkan.
concord'ant, *a.* sọkan.
con'cubine, *n.* ale.
condemn', *v.* dadžólù, da...lẹbi, de...bi, fi...džólù, (*to death*) fi...džewo alye, si...ladže.
condemna'tion, *n.* dida ẹbi, ẹbi, idadžólù.
condemn'ed, *a.* džebi.
condi'tion, *n.* alye, ilá.
conduct', *v.* hùwà.
con'duct, *n.* hihù, iwà, ihùwà.
con'ney, *n.* agára, kumbu.
con'federacy, *n.* adakpò.
confe'derate, *a.* dakpò.
confedera'tion, *n.* idakpò.
confer', *v.* ba...sokpò, damọran.
con'ference, *n.* ibadọkpò.
confess', *v.* džewo.
confes'sion, *n.* idžewo.
confidant', *n.* ore okan.
confide', *v.* gbẹkẹlẹ.
con'fidence, *n.* eke.
con'fident, *v.* dadžú, gbodžulẹ.
confine', *v.* di, de.
confirm', *v.* dielesemulẹ, di...kalẹ, fi...mulẹ, mulẹ.
confirma'tion, *n.* imulẹ.
con'fiscator, *n.* abole, bolebole.
con'flict', *v.* ẹe odi si.
con'fluence, *n.* abadò.
confound', *v.* da...lámú, kpa...kpò.
confound'ed, *a.* dámú.
confound'ing, *a.* abudža.
confront', *v.* ko, kọdžusi, ko...lodžu.

confuse', *v.* da...lámú, dámú, da...ru, kpa...niye.
confu'sedly, *adv.* dżagbadža-gba, dżudidžudi, rúrú, wuru-wuru.
confu'sion, *n.* ọnú, adámú idámú, awudžu, rudurudu.
congl'o'merate, *v.* ọsú.
conglomera'tion, *n.* ašu, isú.
con'gregate, *v.* kpèdžo.
congrega'tion, *n.* adžo, idžo, awudžo.
congru'ity, *n.* abade.
conjec'ture, *v.* mamòdža.
con'jure, *v.* kpidaṅ.
connect', *v.* dikpò, sokpò.
connive', *v.* modžukuro.
con'quer, *v.* dá, ẹgun, ẹte.
con'queror, *n.* olńsẹte.
con'science, *n.* imòninó.
consent', *v.* gbà.
con'sequence, *n.* igbehin.
consi'der, *v.* gbèro, mèro, gbimò, mete, ọmọran.
consi'derately, *adv.* tirotiro, toyetoye.
considera'tion, *n.* èro, igbèro, ironó.
consist'ent, *a.* ibade, abade.
consola'tion, *n.* itu ẹdọ, itunó.
console', *v.* tu...ninó, tu...lẹdọ.
conspi'cuous, *n.* yodžu, yori.
conspi'cuously, *adv.* li gbaję-gba.
conspi'racy, *n.* abamólẹ, imólẹ.
conspi'rator, *n.* amólẹ.
conspire', *v.* ẹe amólẹ, dirikisi, mólẹ, rikisi, ọawò.
con'stancy, *n.* itirinmólẹ.
con'stant, *a.* aidá.
con'stantly, *adv.* li aidá.
constella'tion, *n.* yoyo.
con'stitute, *v.* ọnidi.
constraint', *n.* ifiyandžúše, iyanđžu.
con'sul, *n.* adžẹlẹ.
consult', *v.* bániò, báro, day...wò, gbèro, gbimò: *consult an oracle*, dá...wò.
consulta'tion, *n.* adžónró, ibáro, idáwò.
consume', *v.* dže, džokpa, dżonirun, dżorun, kparun, rún, tó.
con'summate, *v.* kpari, ọetan.
con'tact, *n.* agbako.
conta'gious, *a.* ràn, onràn, gbẹ.

- contain'**, *v.* gbà.
contemn', *v.* şełeja.
contempt', *n.* abukùñ, alò, ègan, èya, ibukùñ, igàn, ikpòsi, iwòsi, suti.
contemp'tible person, *a.* abése.
contemp'tuousness, *n.* igàn.
contend', *v.* dzà.
content'ed, *a.* bàlè.
conten'tion, *n.* aságon.
conten'tious, *a.* aságon, ša-gon.
content'ment, *n.* ibalè.
cont'est, *n.* idžadu, idžakpati.
contigu'ity, *n.* egbe, itosi.
cont'inance, *n.* inaraduro.
conti'nual, *a.* še iwadžu.
conti'nually, *adv.* titi.
contract, *v.* šonki: *to contract words*, dakpè.
contract'ion, *n.* isonki, adakpè, idakpè.
contra'ctor, *n.* adehun.
contradict', *v.* bá... džiyan, gbo... lenu, dzakoro, dža... nikoro, džiyan.
contradic'tion, *n.* iyan.
con'trarily, *adv.* lodi.
con'trary, *a.* lo, odi si, ta... laiya.
contri'bute, *a.* dává, fisi.
contri'bution, *n.* idawó.
contri'butor, *n.* adawó.
con'trite, *a.* See *humble, meek*.
contri'tion, *n.* ironókpiwada.
contri'vance, *n.* ero.
control', *v.* šakoso.
control', *n.* akóso, ikáwó.
convene'. See *congregate*.
conve'nient, *a.* wò.
conversa'tion, *n.* èro, isò-ro.
converse', *v.* sòro.
conver'sing, *a.* adžoso.
conver'sion, *n.* iyikpada.
convert', *v.* kpa... lókandà, yi-kpada.
con'vict, *v.* da... lèšé.
convince', *v.* so asoye.
convul'sion, *n.* opepe.
cook, *n.* sè.
cook, *n.* alásè, asásè, asèndžé.
cool, *v.* fèri, rò, tu.
cool, *a.* tu, tutu.
cool'ly, *adv.* šòp.
cool'ness, *n.* ètu.
co-o'perate, *v.* bá... šé.
- co-ope'ration**, *n.* abasé, adžu-mo.
co-o'perator, *n.* abanise.
cop'per, *n.* baba.
co'pious, *a.* wowo, kpò.
co'pulate, *v.* dó, šadó.
copula'tion, *n.* idó.
co'py, *v.* tokpèrè.
co'ral, *n.* iyòp.
cord, *n.* obara, ošáy.
cork, *n.* cdidi.
cork'wood, *n.* afèrè, afoforo.
corn, *n.* agbado, oká.
cor'ner, *n.* eti, igon, ikangun, odžigbon, ote.
corn'floor, *n.* ikpaka.
corn'silk, *n.* idžere, irukere.
corn'stalk, *n.* kpókporò.
corn'starch, *n.* ekò.
corn'tassel, *n.* ire.
corpse, *n.* okú.
cor'pulent, *a.* lara.
correct', *v.* tó, kpé.
correct', *a.* kpé.
corrupt', *v.* ba... dže.
corrupt'ed, *a.* dibadžé.
corrupt'ible, *a.* ni ibadžé.
corrup'tion, *n.* ibadžé.
corrupt'ness, *n.* abadžé.
cost, *n.* iye, elo iye rè? *how much did it cost? ó li owó kpi kpò, or, owó rè kpò, it is costly.*
cos'tive, *a.* inó di, inó rè di, *he is costive.*
cos'tiveness, *n.* idinó.
cost'ly, *a.* li owó.
cot'ton, *n.* owú, akešé.
cot'ton-seed, *n.* kere owú.
cot'ton-tree, *n.* šraba.
cotyle'don, *n.* awé.
cotyle'donous, *a.* alawé.
couch, *n.* ibirogboku, irogboku.
cough, *v.* luko.
cough, *n.* ikò.
could, *aux.* lè.
coun'cil, *n.* adžórò.
coun'sel, *v.* šimòrañ.
coun'sellor, *n.* warifa.
count, *v.* kà.
coun'tenance, *n.* odžú.
coun'ter, *n.* onká.
count'less, *a.* ainiye.
coun'try, *n.* ilè, ilu.
cour'age, *n.* aiberu, aifoya, igboiya, igbodžu.
courage'ous, *a.* alaiberu.
courage'ously, *adv.* fi aiberu.
course, *n.* èšé, ikpa, òna.
- court**, *v.* fè, fè... niyawo.
cour'teous, *a.* onikpele.
co'venant, *v.* dimò.
co'venant, *n.* adimò, madžemu.
co'venant-breaker, *n.* atu-dimò, otumò, otudimò.
co'ver, *v.* bò, bóra, dašòbò, de... molè: *cover with a lid*, de.
co'vered, *a.* olò.
co'vering, *n.* ibóra.
co'vet, *v.* šodžukokoro.
co'vetous, *a.* odžunlá.
co'vetously, *adv.* fi odžu-kokoro.
co'vetousness, *n.* odžukokoro.
cow, *n.* malú.
cow'ard, *n.* aberukeru, odžo.
cow'ardice, *n.* odžo.
cow'ardly, *adv.* bòdžo, lodžo.
crab, *n.* akàñ.
crab'bed, *a.* oyororo.
crab'bedness, *n.* iroro.
crack, *v.* kpa, šán.
craft, *n.* erú.
cram, *v.* ki... yó.
crane, *n.* ošé: *crested crane*, águfoñ.
craw'fish, *n.* ede.
crawl, *v.* fà, rá, rako, rakòro, wò.
cr'a'ziness, *n.* gbèregbère.
cr'a'zy, *a.* asiñwin, siñwin.
cream, *n.* ori wara.
create', *v.* dá, šedá.
crea'ted, *a.* idá.
crea'tion, *n.* èdà, ođžo lwà.
crea'tor, *n.* èledá, onidá.
crea'ture, *n.* èdá.
cre'dit, *v.* da... láwin, gbà... láwin.
cre'dit, *n.* àwinj.
credu'lity, *n.* igbòkugbò.
cre'dulous, *a.* onigbòkugbò.
creek, *n.* itò.
creep, *v.* rá, rako, rakòro.
creep'ing, *a.* ti rakòro.
crib, *n.* abá, aká, aró.
crick'et, *n.* antete, édoló, olo-gayrañ.
cri'er, *n.* akede.
crime, *n.* èšé.
crim'son. See *scarlet*.
cripp'le, *n.* arò.
crip'ple, *n.* da... lèšé, da... laro.
cro'codile, *n.* oní.
crook, *v.* See *bend*.
crook'ed, *a.* aló, wiwò.

crook'edness, *n.* alító, iwó, wiwó.
crop, *n.* ère, ikore.
crop'-ear, *n.* aketi.
cross, *n.* agbelébu.
cross, *v.* bu, rekólzá.
cross'bow, *n.* akatan'kpo.
cross'bowman, *n.* alakatan'kpo.
cross'ing, *a.* ebu.
cross'road, *n.* abudzá òna, akedzá òna.
cross'wise, *a.* èbú, ibūbu, nibu, nibubu: *to place crosswise*, gbe...lebu.
crouch, *v.* lošo.
crow, *n.* kánakána, alukan'riy, hōhō.
crow, *v.* kọ.
crowd, *v.* fọnkpo, gbatí, ha...laye.
crowd, *n.* adzó, ifọnkpo, ihagaga, iwodzó.
crowd'ed, *a.* gaga, há.
crow'n, *v.* da...li ade, de...lade.
crow'n, *n.* ade: *of the head*, atari.
crow'n'ed, *a.* alade.
cru'cible, *n.* kóro.
cru'cify, *v.* kan...mọ agbelebu.
cru'el, *a.* kánó, onikánó.
cru'elly, *adv.* fi ikánó.
cru'elty, *n.* adanikpa, ikà, ikánó.
crumb, *n.* erún.
crum'ble, *v.* ra...kuna.
crush, *n.* kpeńsan.
crush, *v.* še...ni kpeńsan.
crust, *v.* eka, ihahọ, tẹhij-gbeša.
cry, *v.* sọkun: *cry aloud*, bú, ke, kigbé, kpóhnrere.
cry'ing, *n.* ekún.
cu'bit, *n.* igbówó.
cud, *n.* adzẹkpo.
cud'gel, *v.* da...nigi.
cud'gel, *n.* kùmo, olugboro.
cull, *v.* ša...yay.
cul'tivate, *v.* rò, roko.
cultiva'tion, *n.* iroko.
cul'tivator, *n.* aroko. See *farmer*.
cun'ning, *a.* awọn, gbóy, ọ-gbóy.
cun'ningness, *n.* ọgbóy'kọ-
 gbọy.

cun'ningly, *adv.* fi ọgbóy.
cup, *v.* gbádžẹ.
cup, *n.* ago, ife.
cure, *v.* šawótáj, táy.
cur'ed, *a.* awótáj.
curl, *v.* kako, we.
curl, *n.* iwedžẹ.
cur'rent, *n.* isan, isan ódo.
cur'ry, *v.* gbo, kigrin.
cur'rycomb, *n.* oya ešinj.
curse, *v.* fi...bú, fi...re.
curse, *n.* ebu, egún, ekpe, gígún, ire, iregun.
curs'ed, *a.* elegun, elekpe: *thou art cursed*, ire ni fu ọ.
curs'ing, *n.* egun.
cur'tain, *n.* ašọ tita.
curve, *n.* bi ošumare.
curv'ed, *a.* bi ošumare, ološumare.
cush'ion, *n.* tintim.
cus'tom, *n.* àra, áša, iše.
cus'tom-house, *n.* bode, ibode, idena.
cus'tom-house officer, *n.* oni-bode.
cus'tomer, *n.* abára.
cus'toms, *n.* owóbode.
cut, *v.* be, ge, ke, kpa, ràn, rẹ, wó: *to cut in two*, da...medži, da...lagbedemedži; *to cut off*, ke...kuro, ke...sọnọ, šinj, ýòyò.
cut'lass, *n.* ida.
cy'cle, *n.* ayidá.
cylind'rical, *a.* šú.

D.

dab, *v.* gay.
dag'ger, *n.* ašoró.
dai'ly, *a.* idžóggbogbo, odžodžumó, odžodžó.
dai'ly, *adv.* lidžóggbogbo, lodžodžumó.
dam, *v.* sedò.
dam, *n.* isedò.
dam'age, *v.* še...ni džamba.
dam'age, *n.* alusiń, džamba.
damn, *v.* da...lẹbi.
dam'nable, *a.* adžẹbi.
dam'ned, *v.* džẹbi, dāmú.
damp, *a.* li irin, tutu.
damp'ness, *n.* irin, irinmi, irinjłe.
dam'sel. See *maid*.
dance, *v.* džó.
dan'cer, *n.* alarin'łzó, arinjłzó.

dan'dy, *n.* bokini, oge.
dan'ger, *n.* ewu.
dan'gerous, *a.* lewu, di ewu.
dare, *v.* daša, gbodo.
dare, *n.* ọgbodo.
dark, *a.* šu, šisu, šokun.
dark'ly, *adv.* biri, biribiri.
dark'ness, *n.* biri, biribiri, okun, okun'kun.
dash (*down*), *v.* sọ...lẹ, fi...sọlẹ, šan...lẹ, gbe...šanjłe.
daub, *v.* kun, šaj.
daugh'ter, *n.* omọbiri.
daugh'ter-in-law, *n.* ayamọ.
dawn, *v.* modžumo.
dawn, *n.* afemodžumo, fadžere, imodžumó, odžumó, ýe.
day, *n.* idžó, odžó, odžó.
day'light, *n.* ošáj.
daz'zle, *v.* ran...lodžu.
daz'zlingly, *adv.* džeredžere maranjarań.
dead, *a.* kú, dake, okú, wó.
deaf, *a.* aditi, deti, diti.
deaf'en, *v.* di...leti.
dear, *a.* wọń, šowọń, olufẹ, ayo.
dear'ness, *n.* ọwọń.
dearth, *n.* ọdá.
death, *n.* ikú, okú.
death'like, *adv.* bi okú.
debt, *n.* igbese, gbeše, (*ancestral*) adasan.
decay, *v.* ra.
deceit', *n.* agalamaša, arekunda, eńi-ętan, ọrọ.
deceit'ful, *a.* šetan.
deceit'fully, *adv.* fi ętan, li ętan.
deceive', *v.* tán, tándžẹ, tán...džẹ: *deceived*, atitán.
decei'ver, *n.* ełetan, eđale.
de'cent, *a.* bokini.
decide', *v.* kpinn.
deci'sion, *v.* ikpinu, didadžó, imó.
declare', *v.* wi, tenumó.
decline', *v.* rẹlẹ, fi.
de'corate, *v.* wẹ, še...lọšọ.
decora'tion, *n.* ošọ, ona.
decree', *v.* lána, lá...lọna.
deep, *a.* džin, gbon, džigogron, džinle, ọgbọy.
deep'en, *v.* še...džin.
deep'ness, *n.* džidžin, ọgbọy.
defence', *n.* abó, igbidža.
defend', *v.* dábobó, gbídža: *to defend a cause in court*, gbá...rò.
defend'er, *v.* adábobó, alábó.

- defence'less, *a.* aibò, alabò.
 defi'ciency, *n.* obukun, ibukun.
 defi'cient, *a.* bukun, di.
 defile', *v.* ri, ba...džé, še...
 leri.
 delay', *v.* džafara, fa...ščin,
 rodžú.
 delight', *v.* še didòñ inò, še inò
 dòñ.
 delight', *n.* inò didòñ.
 deli'ver, *v.* fi...le lowó, fi...
 šu, ko...fu, šowó, yó.
 deli'vicer, *n.* olígbalá, olugbà,
 ełegbà.
 delude', *v.* tan...džé.
 de'luge, *n.* ikòñ omi.
 demand', *v.* bère.
 de'mijohn, *n.* idé.
 demo'lish, *v.* wó...lulé, kpa-
 run.
 de'mon, *n.* ebilisi.
 den, *n.* ihò, ibodži.
 deni'al, *n.* iyàn.
 dense, *a.* ki.
 den'sity, *n.* iki.
 deny', *v.* dù, sè, džiyàn.
 depart', *v.* ya, yera, lóh.
 depend', *v.* gbekèlé, gbokanlé.
 depend'ence, *n.* igbèkéle.
 depo'sit, *v.* gbe...kàlé, kàlé.
 deprive', *v.* gbà...lowó.
 depth, *n.* džindžin, idžinlé,
 gbongbòñ, ogbòñ, ibu, ibubu.
 deride', *v.* yosuti sí.
 deri'sion, *n.* iyosuti sí.
 descend', *v.* sò, sò...kalé, bè,
 wòñ.
 descend'ant, *n.* omò, (*in plu-
 ral*) iru omò.
 descent', *n.* isòkalé, gègère.
 describe', *v.* sò or wi bi...ti ri.
 desert', *v.* salòh.
 de'sert, *n.* agándžin, agindžin.
 desert', *n.* ère, igbese.
 desert'er, *n.* isańsa, asalòh.
 deserve', *v.* džère, džé.
 desire', *v.* fè.
 desire', *n.* ifè.
 desist', *v.* džekun.
 de'solate, *v.* dáhoro, sò...dá-
 horo.
 de'solated, *a.* ahoro, alahoro.
 de'solateness, *n.* idahoro, ófo.
 desola'tion, *n.* ahoro, idahoro.
 despise', *v.* gàn, kegàn, šaho,
 bu...kún, šéle'ya.
 despised', *a.* gígàn, elenini, ełe-
 gàn.
 despi'ser, *n.* alabukún, gani-
 gani, ełegàn.
 despoil', *v.* ba...džé, ko...
 lèru.
 de'stitude, *a.* alainf.
 destitu'tion, *n.* aini.
 destroy', *v.* ba...džé, lù...
 bołé, kparun, kpare, rún.
 destroy'er, *n.* alákparun.
 destruc'tible, *a.* omibadžé.
 destruc'tion, *n.* ibadžé, afo-
 badžé, ahoro.
 detach', *v.* yà...sòto, yà...si
 (iše kán).
 detach'ed, *a.* ełà.
 detail', *v.* róbere.
 detain', *v.* da...duro.
 detain'er, *n.* adaduro, adani-
 duro.
 deten'tion, *n.* diduro, idaduro.
 deter', *v.* kò, daiyafò.
 deve'lope, *v.* dagba, yori.
 de'viate, *v.* yisakpa kán, yi li
 òna.
 device', *n.* èro, ete, idámorun.
 de'vil, *n.* èsu, ebilisi.
 devise', *v.* humò, kpete.
 devo'ted, *a.* olufòkan sí.
 devo'tedness, devo'tion,
 ifòkan sí, afòkan sí.
 devour, *v.* kpa...džé, džerun,
 mu...džé.
 devour'er, *n.* akpadžé, akpa-
 nidžé.
 devour'ing, *a.* adžokparun.
 devout', *a.* fòkan sí, olufòkan sí.
 devout'ness, *n.* ayaba.
 dew, *n.* iri.
 dex'trous, *a.* ofe.
 dia'meter, *n.* ibu, ibubu.
 diarrhe'a, *n.* isunó.
 die, *v.* kú, wó.
 dif'fer, *v.* yato.
 dif'ference, *n.* oto, iyato.
 dif'ferent, *a.* yato, iyato, lotó.
 dif'ferently, *adv.* lotó, li oto.
 dif'ficult, *a.* šoro, deči, gbè,
 kangí, luba.
 dif'ficulty, *n.* abadžo, ahano,
 diwo, imira, okikirin, oro, isoro.
 diffuse', *v.* tan...kàlé, rò...
 kàlé, tu...ká.
 dig, *v.* wà, walé.
 dig'ger, *v.* iwale.
 di'latory, *a.* dile, še genegene,
 džáfara.
 di'latoriness, *n.* áfara, gené-
 gene, ilile.
 di'ligence, *n.* aišeméle.
 di'ligent, *a.* aišeméle, kò še-
 méle, alaišeméle, alaidžafara.
 di'ligently, *adv.* giri, girigiri.
 dim, *a.* še baibai.
 di'mity, *n.* gè.
 dim'ly, *adv.* baibai.
 din'ner, *n.* asè-òsán.
 dip, *v.* bò, kpoñ, ron, fi...bo,
 te...bo.
 direct', *v.* fònahàn, džure, tò-
 kun, tó.
 direc'tor, *n.* afònahàn, atòdžin,
 oluto.
 dirt, *n.* ègurin, erupke, eri.
 dirt'y, *v.* kèri, še...lèri.
 dirt'y, *n.* ełeri.
 disagre'able, *a.* alwu, še aiwu,
 yó...lènu.
 disagree', *v.* še alkpade, še
 alre.
 disappear', *v.* di ófo, še ailhàn,
 wò.
 disappoint', *v.* dà, dà...lara,
 dà...lodžin.
 disappoint'ed, *v.* didži.
 discern', *v.* ri, woye.
 discern'ment, *n.* iye, oye,
 iwoye.
 discharge', *v.* da...silé, ran
 ...lòh.
 disci'ple, *n.* omò-ghin.
 disclose', *v.* šikpaya.
 disclo'sure, *n.* ašikpaya.
 discour'age, *v.* daiyafò, ko...
 lono.
 discour'aged, *a.* fòya, afòya.
 disco'ver, *v.* lu, ri.
 disco'very, *n.* aširi, etu.
 discreet', *a.* moye.
 discreet'ly, *adv.* toyetoye.
 discuss', *v.* sò awiye, wadi.
 discuss'ion, *n.* aro iye, aroye,
 iwadi.
 disease', *n.* aisán, aròñ.
 disgrace', *v.* fi...šesin, še...li
 até, še nibukún.
 disgrace', *n.* até, eče, ibukún,
 esin.
 disgraced', *a.* tẹ.
 disgrace'ful, *a.* aseša.
 disguise', *v.* kparadà.
 dish, *n.* dasa, awokpokó.
 dishonest'en, *v.* daiyafò.
 disho'nesty, *n.* ogbonkògbon,
 arekereke.
 disho'nor, *v.* še...labukún.
 See *disgrace*.

disho'nable, *a.* ailólá, ainiyín.
disinter', *v.* lú.
dislike', *n.* alí.
dismiss', *v.* dzòwò... lówò, tú.
dismount', *v.* sò, sòkale.
disobe'dience, *n.* afoògbò,
 aigbo, aigboran.
disobe'dient, *a.* alaiǵboran,
 olukoti.
disobey', *v.* kò, še aigbo.
disor'der, *v.* ba... dze, tu...
 ká, ru... sòke.
disor'derly, *adv.* šakpašakpa.
disown', *v.* kò, kò... silè.
dispatch', *v.* ran, ran... nišè.
dispel', *v.* tu... ká.
dispense', *v.* kpín... fu.
disperse', *v.* fón... ká.
display', *v.* še fari hàn.
display', *n.* ašehàn, fari.
dispose', *v.* See *dispense*.
dispo'ser, *n.* onikpín.
disposi'tion, *n.* (of mind), iwà.
dispute', *v.* šaroyo, džijan.
disput'ing, *n.* aroye.
dissem'ble, *v.* šetan, še četan.
dissem'bler, *n.* četan, aláyi-
 dáyidá, ašeyéšate.
dissimula'tion, *n.* čtán, išetan,
 ibodžu.
dis'sipate, *v.* ra: to *dissipate*
heat, cool, be.
dissolve', *v.* yo, fi... yo.
dis'taff, *n.* keke.
dis'tance, *n.* idžina, odžina,
 džindžin, okere.
dis'tant, *a.* džin, idžina, kanri,
 rere.
dis'tantly, *adv.* tian, li okere.
distil', *v.* roguj, sé.
distinct', *a.* gbangba, loťo.
distinct'ly, *adv.* li gbangba.
distin'guished, *a.* lú, oloruko.
distress', *v.* wò, šise, še... ni-
 kpondžu.
distress', *n.* ise, ikpondžu.
distri'bute, *v.* bà... ká, kpín
 ... fu.
distrib'u'tion, *n.* ikpínfu, iwà.
distri'butor, *n.* odžuwa.
dis'tri'ct, *n.* aló, odo.
disturb'er, *n.* otónkpanyan.
ditch, *n.* ekpòro, lho, korowo,
 koto, yara.
dive, *v.* ri.
divide', *v.* bówò, da... medži,
 da... lagbedemedži, kpalà, kpín,
 wari.

divi'der, *n.* alakpín, olukpín.
divine', *v.* šeanwò, še alawò.
divi'ner, *n.* alawò.
divi'sion, *n.* iyakpa, idanikpa,
 ikpín, odo.
divorce', *v.* kò... silè (Mat. 5,
 31).
divorce', *n.* ikosilè.
diz'zy, *a.* šoyi.
diz'ziness, *n.* oyi.
do, *v.* še.
do'cile, *a.* leti.
doc'tor, *n.* ologun, onišogun,
 alufà.
doc'trine, *n.* iko, ikòkukò.
do'er, *n.* oluše.
dog, *n.* adža: *old dog, ogi; wild*
dog, adžako.
dog, *v.* dełža.
dog'gish, *a.* bi adža, adžagadi-
 džigan.
domes'tic, *a.* ilé, ti ilé, osin.
domes'ticate, *v.* šin, rò...
 lodžu.
domineer', *v.* šin, lò ikpa sí.
done, *a.* tán, šetán.
door, *a.* ekun, ilekun, ašè.
do'tage, *n.* aran.
dou'ble, *a.* šekpo.
dou'ble, *v.* še... nikpo.
dou'bled, *a.* ašekpo.
dou'ble-dealer, *n.* agábagèbe,
 ašeyéšate.
doubt, *n.* aniani, iyemedži.
doubt, *v.* šiyemedži, šaniani.
doubt'ful, *a.* šaniani.
dove, *n.* adaba, ataba.
down, *adv.* lè, lelè, lùlè, nilè,
 silè, nisalè, lódo.
down, *n.* (feathers), ihùlu.
down'ward, *adv.* sisalè.
doze, *v.* sùnye, togbe, wo.
drafts, *n.* didi.
drag, *v.* wò, šan.
dra'gon, *n.* èrè.
draim, *v.* roguj.
draught, *n.* akòkpò.
draw, *v.* fà, fà... kpada *or* se-
 hin, fà... tí, fà... yo, yo, kpòj-
 mi.
draw'er, *n.* ifà.
draw'ing-knife, *n.* ifági.
drawn, *a.* ofa, fifa, fifayò.
drawn, *v.* kòno, benu.
drawn, *v.* onò, iberu.
dream, *v.* lalá, lá.
dream, *n.* alá, odžu alá, odžu
 ran.

dregs, *n.* gededede.
dried, *a.* iyangbe, ogbe.
drill, *v.* kpèro.
drink, *v.* mọ, mu, mọti.
drink'er, *n.* omoti.
drip, *v.* kán, ro, sèmi, soñmi.
drive, *v.* lé, dari.
drop, *v.* bo, dža, džasi, džò, kán,
 ro, tó.
drop'sical person, *n.* mádimi-
 lórun.
drop'sy, *n.* asonkòń, ogodúgbè,
 akelè.
dross, *n.* idaro.
drought, *n.* odá.
drown, *v.* ri.
drum, *n.* ilú: different kinds
 are called, akpinti, báta, dońdoń,
 gangan, gbèdu, koso, ogidigbo,
 šekere.
drum'cord, *n.* òkpa.
drum'mer, *n.* olùbata, olù-
 kpinti, &c.
drunk, *a.* mọkpara, motiyó.
drunk'ard, *n.* omoti, mọtimoti.
drunk'ennes, *n.* amọkpara,
 amọdži.
dry, *a.* gbe, kirikpa: *to be dry,*
be a drouth, dá.
dry, *v.* sá, sá... lorun *or* sorun.
dry'ness, *n.* gbigbe, okirikpa.
duck, *n.* kpekpèye.
dull, *a.* ainú, gò, kú, wuwu.
dull'ness, *n.* ainú.
dumb, *a.* yadi, odi.
dumb, *n.* odi, kekekpá.
dun, *v.* dogoti, šin.
dun, *n.* ològo.
dunce, *n.* onǵò.
dung, *n.* imi, igbe.
dung'hill, *n.* atan, erekéti.
du'rab, *a.* tó.
dust, *n.* ekuru, iyekuru, erukpe.
dust'y, *n.* clerukpe, elekuru.
du'ty, *n.* isin-ise, isin.
dwarf, *n.* arara.
draught, *n.* dzoko, gbe, tedò.
dwell'er, *n.* agbe.
dwell'ing, *n.* ibudžoko.
dye, *v.* re, sè: *to dye blue, daro.*
dye, *n.* aró, ose.
dys'entery, *n.* žrip.

E.

each, *pron.* olúkulu.
ea'gle, *n.* idi.

ear, *n.* eti: *car of corn*, ẹta.
 eared, *a.* abéti.
 early, *adv.* kùtukùtu, tete, lùfẹ.
 earn, *v.* d̀z̀èrè, d̀z̀ẹ.
 ear'nest, *a.* f̀ỳkànsí.
 earth, *n.* ilẹ, erukpẹ.
 earth'ly, *a.* elerukpẹ.
 earth'quake, *n.* isẹlẹ.
 earth'y, *a.* elerukpẹ.
 ease, *n.* ità, itura: *at ease*, lelẹ.
 ease, *v.* r̀ò, t̀ù.
 eas'ily, *adv.* f̀i, f̀utefutẹ, kpẹsẹ.
 east, *n.* ilà orun, gabasi, atiwa-
 od̀z̀o.
 eas'y, *a.* aṅfani, r̀onr̀on, ya.
 eat, *v.* d̀z̀ẹ, d̀z̀ehun.
 eat'able, *a.* d̀z̀id̀z̀ẹ.
 eaves, *n.* ẹnu oṣoro, gbagbàro.
 ebb, *v.* f̀à.
 ebb'ing, *n.* ifi.
 ebb'tide, *n.* isa.
 e'cho, *n.* gbòbunḡgbòhun.
 edge, *n.* eti, od̀z̀u.
 e'ducate, *v.* t̀ò.
 effect', *n.* amuwáb, aṣẹ, id̀z̀ẹ.
 effect', *v.* ẹ.
 effe'minate, *a.* bi ẹbiri.
 effervesce', *v.* ho.
 ef'fort, *n.* owere.
 egg, *n.* ẹyin.
 egg'-plant, *n.* ikàṅ.
 e'gret, *n.* lekeleke.
 eight, *num.* ẹd̀z̀o, m̀ed̀z̀o.
 eighth, *num.* k̀ed̀z̀o.
 eight'y, *num.* oggrin, ọrin.
 ei'ther, *conj.* tabi.
 eject', *v.* ẹ̀, yin.
 eject'ed, *a.* ẹ̀.
 elas'tic, *a.* l̀ẹ, l̀ẹl̀ẹ, l̀ò.
 elas'ticly, *adv.* m̀ed̀z̀anme-
 d̀z̀an.
 el'bow, *n.* igb̀oywọ.
 eld'er, *n.* àgba, agbalágbà, ala-
 gba, egb̀on.
 eld'est, *a.* akòbi, arẹmọ.
 elect', *n.* ayanfẹ.
 e'lephant, *n.* al̀z̀inaku, erin.
 e'levated, *a.* ru.
 ele'ven, *num.* okanla, m̀okanla.
 eloquent, *a.* l̀òrò, oniṣiti, ol̀òrò.
 else'where, *adv.* nibomiray.
 ema'ciate, *v.* mu...ru, sọ...
 ru.
 eman'cipate, *v.* da...silẹ.
 embark', *v.* ẁòkọ.
 embar' rass, *v.* d̀ámm.
 embel'lish, *v.* fin.

embrace', *v.* fa...m̀ora, f̀owọ-
 kọ, gba...m̀ora.
 embroi'der, *v.* ko...ni maikira.
 embroi'derer, *n.* agunà.
 embroi'dery, *n.* maikira.
 em'bryo, *n.* ol̀ẹ.
 eme'tic, *n.* iruya.
 e'migrate, *v.* ẹatikpo.
 e'minence, *n.* elẹ.
 emis'sion, *n.* itu d̀z̀ade.
 emit', *v.* tu...d̀z̀ade.
 employ', *v.* kpè...sẹ.
 employ'ment, *n.* ikpẹsẹ.
 emp'tiness, *n.* àsan, ọfọ.
 emp'ty, *v.* bọ, da...ǹò, yi...
 daǹò.
 emp'ty, *a.* aikón, fo, ẹfo.
 emp'ty-handed, *a.* ẹ̀ayẁò.
 e'mulate, *v.* did̀zẹ, dud̀zẹ, fara
 ...wẹ.
 emula'tion, *n.* id̀zẹ.
 ena'ble, *v.* mu...tò ẹ, fi agbara
 fu.
 enact', *v.* là...l̀ona, kpasẹ,
 s̀òfin.
 encamp', *v.* d̀ò, gun, t̀edò: *to*
encamp against, sagati.
 encamp'ment, *n.* budo, ibudo,
 ido.
 encir'cle, *v.* gbadi, yika.
 enclose', *v.* ka...m̀ò.
 encom'pass, *v.* bu...kà.
 encoun'ter, *v.* ko...l̀ona, koti.
 encour'age, *v.* gbà...niyan-
 d̀z̀u.
 encour'aged, *a.* gberi.
 encour'agement, *n.* igberi,
 okunfa.
 end, *n.* ẹkun, ikù, ikeliu, ikongu,
 ogb̀on, okpin: *the end of life*,
 atubòtán.
 end, *v.* kpari, kpẹkun.
 endea'vor, *v.* dagẁò.
 end'ed, *a.* fin, tán.
 end'ing, *n.* akod̀za.
 end'less, *a.* ainikpẹkun.
 endu'rance, *n.* itọ.
 endure', *v.* foriti, kpanra,
 gbiyand̀z̀u, ran, t̀ò, wà.
 en'emy, *n.* ọta, abinokú.
 engrave', *v.* fin.
 engra'ver, *n.* afin, afina, ibuke:
engraver of calabashes, afingba.
 enig'ma, *n.* alo.
 enig'matist, *n.* akpalọ.
 enjoy', *v.* d̀z̀ẹ: *to enjoy the*
world, d̀z̀aiye.
 enlarge', *v.* iẹ, sọ...digboro.

enlight'en, *v.* ẹ inlẹ.
 enliv'en, *v.* da...laraya.
 en'mity, *n.* isẹtẹ, ọtẹ.
 enough', *a.* t̀ò.
 enrage', *v.* t̀ò, mu...binọ.
 enrich', *v.* sọ...d̀orò.
 en'sign, *n.* asia, okpagun.
 enslave', *v.* sọ...deru.
 entan'gle, *v.* di, kagba, ko.
 entan'gled, *a.* ahámora, atá-
 m̀ora, did̀z̀u, há.
 entan'glement, *n.* ahámó.
 en'ter, *v.* b̀ò, ẁò, ẁoǹò: *to*
enter a house, ẁolẹ; *enter into*
one, ẁo...lara, ẁora.
 entertain', *v.* mu...ẁò, ẹ...
 k̀alad̀z̀o.
 entice', *v.* tán, tán...d̀zẹ.
 entire', *a.* ni gbogbo, ẹkọn.
 entire'ly, *adv.* darudaru, lulu,
 kpatakpata, kpi, raurau, ẹ́aka,
 ẹ́asa, tefetele, tutu, yayan.
 entreat', *v.* b̀ẹ, b̀ẹb̀ẹ, ẹ́ikpẹ.
 entrea'ty, *n.* ẹ̀bẹ, ibẹbẹ, ikpẹ.
 enve'lope, *v.* gbà.
 en'vier, *n.* ọlara.
 en'vious, *a.* ọlara.
 en'vy, *n.* h̀ẹ, h̀ẹẹ, id̀z̀owu,
 ilara, od̀zunlá.
 en'vy, *v.* ẹ ilara.
 e'paulet, *n.* akán.
 epide'mic, *n.* ad̀zaka, ad̀zákàlẹ.
 e'pilepsy, *n.* warakpa.
 epilep'tic, *n.* oniwarakpa.
 e'poch, *n.* od̀z̀o isi.
 e'qual, *a.* dogba.
 e'qual, *n.* irọ, od̀z̀ogba, ọ́gba.
 equal'ity, *n.* aitaru, egb̀era,
 ọ́gba.
 e'quity, *n.* al̀sẹgbe.
 equi'vocate, *v.* kpuro.
 equivo'cation, *n.* ọ́rò.
 e'ra, *n.* isi.
 era'dicate, *v.* tu...ni gbongbo.
 eradicat'ion, *n.* itu.
 erase' v. ǹò...ǹò, kparun.
 erect', *v.* gbé...r̀ò.
 erect', *a.* aburo.
 erect'ly, *adv.* gangan, ẹ́an.
 erect'ness, *n.* gangan, óró.
 erelong', *adv.* k̀ò kpẹ.
 err, *n.* ẹ́na, ẹ́ise, yakpa.
 er'rand, *n.* isẹ.
 erro'neous, *a.* leṣi, eleṣi.
 er'ror, *n.* eṣi, isise, ẹ́isi.
 er'rorist, *n.* aládámù, ọ́sín,
 ẹ́isi.
 escape', *v.* d̀zàb̀ò, d̀zàlá, là.

escape', *n.* adzabò, adzàlà, asulà, ilà, yò.
 escort', *v.* sijn.
 espouse', *v.* fè... fù, fè... siona.
 establish', *v.* di eḷeṣe mulḷ, di ... kàlè, fi... mulḷ, gbe... kàlè, kàlè.
 established', *a.* di eḷeṣe mulḷ, fi eṣe mulḷ.
 esteem', *v.* fi... kpè nkan.
 estimate', *v.* dáyelè, dýelè.
 estranged', *a.* še iyakpa, še... lèmq.
 eunuch', *n.* bāfiṅ, ibafiṅ, iwéfa, okobó.
 euphor'bia', *n.* oṛò.
 evacuate', *v.* boṣe, šu, yagbè.
 even', *adv.* aní, gege, maso, bi ... tilè, tilè.
 even', *a.* kuna, dogba.
 evening', *n.* alé, asàlè, iralé.
 event', *n.* abákpaḍe.
 ever', *adv.* lai, lailai.
 everlasting', *a.* ainikpekun, aiyeraiye, aiyetitilai.
 everlastingly', *adv.* ataiyeraiye.
 every', *pron.* dede, gbogbo, olúkùlùku.
 evidence', *n.* idžeri.
 evident', *a.* hàn dadžu or nigbangba.
 evidently', *adv.* dadžudadžu, nigbangba.
 evil', *n.* ibi, tulasin.
 evil', *a.* burn, buburu.
 evil-do'er', *n.* isóraj.
 evilness', *n.* iburu.
 ewe', *n.* abò agutan.
 exact', *v.* bère.
 exactly', *adv.* ge, gbako.
 exaggerate', *v.* sò asodòṅ.
 exaggerater', *n.* alasodòṅ.
 exaggeration', *n.* abumò, asodòṅ, osò.
 exalt', *v.* gbe... ga, gbe... leke.
 exalt'ed', *a.* gbighè leke, oga.
 examine', *v.* tḷṣe, wali.
 example', *n.* akpere.
 excavate', *v.* wò.
 exceed', *v.* džu, še džu.
 exceedingly', *adv.* fà.
 excel', *v.* bóri.
 except', *v.* fi... lè or si akpankan.
 except', *conj.* aff, affibi, ayanšebi, bikòšè, bikòšèkpà.

excess', *n.* asèdžù.
 exchange', *v.* kpàro, kpasi-kpàro.
 excite', *v.* ro.
 excitement', *n.* sonasi.
 exclude', *v.* ti... sode.
 excommunicate', *v.* kò... lè or silè.
 excuse', *v.* še gáfara, wawí.
 excuse', *n.* ariwí, awawí, iwawí.
 execute', *v.* še.
 executor', *n.* akpani, olu, kpa, olukpani, oḷòdžà, oṭaḷòdžà, tètù.
 exertion', *n.* idajrawò.
 exhibit', *v.* fi... hàn.
 exhibition', *n.* affhàn.
 exhort', *v.* gbà... niyaydžu.
 exhortation', *n.* iyaydžu.
 exist', *v.* mbè, wà.
 existence', *n.* iwà.
 expand', *v.* tegbengbe.
 expect', *v.* daba, fòdžasòna, retí.
 expectation', *n.* aba, afodžusòna.
 expect'ing', *n.* aba, afodžusòna.
 expenditure', *n.* adžina, idžina.
 expenses', *n.* adžina.
 experience', *n.* iriri, imò.
 explain', *v.* ladi, rḷ, sòlì, soye.
 explain'er', *n.* alawiye.
 explanation', *n.* akawe, asoye awiye.
 explode', *v.* tì.
 expose', *v.* šikpaya.
 exposed', *a.* ru.
 expound', *v.* tu imò, sò itumò, sòdì.
 express', *n.* asingba.
 extend', *v.* gbàlè, gbilè, kè, nà.
 extension', *n.* èta, iga, ninà.
 extent', *n.* nìrà.
 extenuation', *n.* ariwí, iwawí.
 exterminate', *v.* kpa... ruu.
 external', *a.* ode.
 extinguish', *v.* kpa, kpare, kparuu.
 extol', *v.* gbe... leke, kokiki, yij... logo.
 extort', *v.* lónilòwògbà.
 extortion', *n.* ireḍže.
 extort'ioner', *n.* alónilòwògbà.
 extract', *v.* fà... yò, yàn.
 extravagance', *n.* inaku-na.

extra'vagant', *a.* alašòdžu, asòdžu.
 extra'vantly', *adv.* džaiye.
 extrem'ity', *n.* ikangun.
 exult', *v.* šogo.
 eye', *n.* odžu.
 eye', *v.* wò, fòdžuwò, fòdžuba.
 eye'ball', *n.* eyiṅ odžu.
 eye'brow', *n.* bebe odžu.
 eye'lash', *n.* ikpekpedžu.
 eye'lid', *n.* ikpekpedžu.
 eye'servant', *n.* odžulafeni, rere odžu.
 eye'service', *n.* ifodžufè.
 eye'witness', *n.* eḷeri, odžuri.

F.

fa'bricate', *v.* daḷò.
 fabrication', *n.* awòlèhù.
 face', *n.* odžu.
 face', *v.* kòdžusi.
 fade', *n.* (door), alugba.
 fade', *v.* kpare, rḷ, éa, ši, tí.
 fading', *a.* iši.
 faeces', *n.* igbè, igboṣe, imi.
 fail', *v.* dā... sa, da... še, deḷi, ka, šàki, tí, tu.
 fail'ure', *n.* alašè, abati, adámáhlèše, ašekun, ètí, idèti, oki yiyè.
 faint', *v.* dakú.
 fair', *a.* (weather), mò; (action), tḷ.
 fail'ry', *n.* adža, aron, oṛò.
 faith', *n.* igbagbo.
 faith'ful', *a.* alòtò.
 faith'fulness', *n.* otito.
 faith'less', *a.* alaigbagbo.
 fal'con', *n.* asà.
 fall', *v.* šubu, boḷè : to fall upon, dali, wòlù; fall down, wòlè; fall into, as a hole, dži, džin, wò.
 false', *a.* eke, li eke.
 false'hood', *n.* irḷ, almsò, eke.
 false'ness', *n.* ašeleke.
 fame', *n.* okiki.
 fa'mily', *n.* aralé, orilè.
 fa'mine', *n.* iyaj.
 fa'mish', *v.* fèbikpa.
 fa'mous', *a.* olókiki, olorukò.
 fan', *n.* abèbè, àtè, edžudžu.
 fan', *v.* fè : to fan away, fèwò.
 fan'cifully', *adv.* howòlòwò.
 far', *a.* džina, okere, rere, tian.

fare'well, *n.* idagbere: *to bid farewell*, da ghere.
fari'na, *n.* gari.
farm, *n.* oko.
farm, *n.* roko.
farm'er, *n.* aghe, aiaroko.
farm'house, *n.* ahere.
fash'ion, *n.* alarabára, àra, àsá, ísè, orò.
fast, *n.* àwè.
fast, *v.* gbàwè, dèngò, ronò.
fast, *adv.* kan'kau.
fast'en, *v.* dimò, ti.
fast'er, *n.* aláwè.
fat, *n.* grá.
fat, *a.* saura: *to grow fat*, sebo.
fa'ther, *n.* babá, o'ba.
fa'therless, *a.* alamibaba, ko-mibaba.
fatigue', *v.* kpa...larè.
fatigue', *n.* àrè, ikonra.
fatigued', *a.* gāsa.
fat'ness, *n.* grá.
fat'ted, *a.* abòkpa.
fault, *n.* èbí, ísísè.
fault'finding, *a.* èfè.
fault'less, *a.* aláṣè.
fa'vor, *n.* odzúrere.
fa'vor, *v.* ṣelore, ṣodzúrere.
fa'vorably, *adv.* lodzúrere.
fear, *n.* eru, ibèru, ididzì, idzai-ya.
fear, *v.* bèru, fòya, kono, sá.
fear'ful, *a.* li eru, alèru.
fear'fulness, *n.* ikpaiya.
fear'less, *a.* aibèru, alai'bèru.
fear'lessness, *n.* aibèru.
feast, *n.* asè, idana, isàse.
feast, *v.* sàse, adzò odùn.
fea'ther, *n.* iyé.
fea'thered, *a.* gunyè, abiyé.
fea'thery, *a.* abiyé.
fee'ble, *a.* hù, kolera.
feed, *n.* idzè.
feed, *v.* bo: *to feed upon*, dze...lara.
feed'er, *n.* olubo.
feel, *v.* fowòba.
fel'lowship, *n.* idakpò.
fe'lon, *n.* akádàn.
fe'male, *n.* àbo: *female of* beasts, obi.
fence, *n.* akògbà, o'gbà.
fence, *v.* kogbà.
ferment', *v.* hó.
fer'o'cious, *a.* asoro.
fer'ryman, *n.* o'loko.
fer'vent, *a.* gbóna.

fes'ter, *v.* gbini'kou.
fes'tival, *n.* adzò odùn.
fetch, *v.* mu . wáhi.
fe'tidness, *n.* ilòlo.
fet'ter, *n.* adzàe, ṣe'keṣe'ke.
fe'ver, *n.* iba.
few, *a.* adu, diè, fèfè.
fib, *n.* idafè, irò.
fib, *v.* kpuro.
fi'brous, *a.* yi.
fic'tion, *n.* idaso.
fid'dle, *n.* duru.
fid'dler, *n.* oluduru.
field, *n.* adzuba.
fierce, *a.* asò.
fierce'ness, *n.* oro.
fi'ery, *a.* munú, onina.
fife, *n.* fere.
fi'fer, *n.* afo'fere.
fi'fteen, *num.* èdògun.
fi'fteenth, *num.* ke'edogun.
fi'fteenth, *num.* o'ladota.
fi'fth, *num.* karun, èkarun.
fi'fth, *num.* adota.
fi'g'tree, *n.* aba, asofeyedzè, odán.
fight, *v.* dzà.
fight, *n.* idzà.
fight'er, *n.* adzà.
file, *n.* ayun.
fill, *v.* bu...kòṅ, fi...kòṅ, mu...kòṅ.
fil'ter, *n.* asèmi.
fil'ter, *v.* sèmi, so'ṅmi.
filth, *n.* egurin, egbín, èri, erin, egbin.
filth'iness, *n.* elèri.
filth'y, *a.* boṅ, elèri, o'boṅ.
fin, *n.* lèbè.
fi'nal, *a.* asétán.
fi'nally, *adv.* akótán, lákotán.
find, *v.* bá, ri.
find'ing, *n.* atiri.
fine, *v.* tà.
fine, *a.* fèfè, fèfèfèfè, kuna, wé.
fine'ness, *n.* iwè.
fin'ger, *n.* ika: *the little finger*, omodin.
fi'nish, *v.* kpari.
fi'nished, *a.* tán.
fi'nisher, *n.* olukpari.
fire, *n.* ina.
fire, *v.* tinabò.
fire'fly, *n.* immamuna.
firm, *a.* aiyi, alaiyi.
fir'mament, *n.* ofurufu.
firm'ly, *adv.* giri, girigiri.
firm'ness, *n.* aiyèse, o'lo, imulo.

first, *a.* akòkan, síwadzu, tete.
first, *adv.* lèkan, lèrikan, tete, tete'ko.
first'born, *n.* akòbi, arèmo, atetebi.
first'fruits, *n.* akòso.
fish, *v.* dedzá, kpèdzá.
fish, *n.* èdzá.
fish'erman, *n.* akpèdzá.
fish'hook, *n.* iwò.
fist, *n.* ikuku.
fit, *a.* ye.
fit, *v.* bà...bade, muba.
fit'ly, *adv.* gbako.
fit'ness, *n.* abade, èyè, ibade, iyé.
five, *num.* arun.
flag, *n.* àsia, o'kpagun.
flake, *n.* iforifò.
flame, *n.* alò, o'wò-ina.
flannel, *n.* kubusu.
flash, *v.* dà, kò.
flat, *a.* be'le, be'lebe'le, bèrè, dàba, fèfè, kpe'lebe.
flat'ness, *n.* atè.
flat'ten, *v.* tè.
flat'ter, *v.* kpòṅ.
flat'terer, *n.* aláso'dòṅ, akun-yungbà.
flat'tery, *n.* asò'dòṅ, èkpòṅ, òki.
flaw, *n.* idadzì.
fla'vor, *a.* didòṅ.
flay, *v.* fo.
flea, *n.* egboṅ, imure.
fledged, *a.* gunyè.
flee, *v.* sá, salòṅ, ri...sá.
flee'ing, *n.* asalá.
flesh, *n.* eraj.
flesh'y, *a.* alara.
flick'ering, *a.* ṣèmbè.
flight, *n.* asá, ida, osá.
float, *v.* gba.
flock, *n.* agbo, o'wò, yoyò.
flock, *v.* wò.
flog, *v.* nà.
flood, *n.* isán, kikòṅ omi.
flour, *n.* yam-flour, èlubo; wheat-flour, iyèfun.
flou'rish, *v.* gbà, gbilè, gbò, ru.
flow, *v.* sòṅ, súy, sán.
flow'er, *n.* èdà, itana.
flow'ing, *n.* sísan.
flu'ent, *a.* danu.
flute, *n.* fèrè.
fly, *n.* èsín'sín.
fly, *v.* fò.
foam, *v.* hó.

foam, *n.* fofo.
foam'y, *a.* kputu, olofofo.
foe'der, *n.* haba.
foe, *n.* ọta: *a deadly foe*, ọta-
ọkan.
fog, *n.* kúruku, owuśuwuśu.
fold, *v.* ká, we.
fol'low, *v.* tò, tò...lèhin, tò
...lòh, tòkpa, telé, lekpa, ke-
hin, kalòh, gbèhin, bí.
fol'lower, *n.* ọmọ-ehin.
fol'lowing, *n.* atelé.
fol'ly, *n.* aigbon, awere, iwere.
fon'dle, *v.* te.
food, *n.* onđe, idđe, dídídđe, fe-
džefedže.
fool, *n.* asinjwin, aśiwere.
fool, *v.* mu...go, kpa...lokpé.
fool'ish, *a.* še iwere.
fool'ish (be), *v.* were, še iwere.
fool'ishly, *adv.* botiboti, dze-
gbedžegbe, še iwere, redeređe,
wanranwanran.
foot, *n.* ẹse.
foot'race, *n.* asadidže.
foot'step, *n.* ikpase.
foot'stool, *n.* akpoti-itise, itise.
fop, *n.* oge.
for, *prep.* bá, de, fi, fu, mikpo,
niti, nitori, nitorití, tí.
for, *conj.* nitori, nitorití, sá.
forasmuch', *adv.* bí ó tí še kpé.
forbear', *v.* dẹkan.
forbid', *v.* da...lekan, da...
leśe, so...lòfin.
force, *v.* lé.
force, *n.* ele.
for'cible, *a.* kpátí.
for'cibly, *adv.* kpatikpati.
fore'finger, *n.* imogunđžu.
for'eign, *n.* adžedži.
foreknow'ledge, *n.* amòđtelé,
imòđtelé.
fore'most, *a.* akokan, tí šadžu.
forerun'ner, *n.* aśadžu.
foresee', *v.* ri...tele.
foreshow', *v.* fi...hàn telež.
fore'sight, *n.* iwoye.
for'est, *n.* egan, igbo.
foretell', *v.* wi...telež.
foretel'ler, *n.* alabalaśe.
foretel'ling, *n.* aťóśé.
fore'ver, *adv.* àbada, fàbada, fe,
lai, lailai, titi, titiaye.
forget', *v.* gbagbe.
forget'ful, *a.* kuye, okuye.
forget'fulness, *n.* agbe, igba-
gbe.

forget'ter, *n.* onigbagbe.
forgive', *v.* dari...dži, fi...
dži.
forgive'ness, *n.* afidži, ilari-
dži, ifeśedži, ofidži.
fork, *n.* agúndžé: *fork of a tree*,
akasó, kpalaka.
fork, *v.* še akasó, ya akasó.
for'ked, *a.* makálu.
form, *n.* iwọ.
for'mer, *a.* iśadžu, tí šadžu.
for'merly, *adv.* niśadžu.
for'mer rains, *n.* akórò.
for'nicate, *v.* šalo, šagbere.
fornica'tion, *n.* agbere.
for'nicator, *n.* aśado, aśagbere.
forsake', *v.* fi...lẹ, fi...silẹ,
kọ...lẹ, kehindási, še...ke-
hindá.
forsa'ker, *n.* akehindási.
forsa'king, *n.* okehindá.
forth, *adv.* džade, lóh.
fortifica'tion, *n.* odi, agbara.
for'tified, *a.* ololi.
for'tify, *v.* sagbaraka.
for'tune, *n.* adže, orobo, šaluga.
for'ty, *num.* ogodži, ódži.
for'ward, *adv.* siwa, siwadžu.
for'ward, *a.* šadžu, aśadžu.
fos'ter-child, *n.* agbabọ.
fos'ter-pa'rent, *n.* obọ.
foul, *a.* elẹri, kikan.
found, *n.* so...lẹ.
founda'tion, *n.* ikpilẹ, ikpilẹśe,
itelež.
foun'tain, *n.* iru, ison, odžuson,
orison.
four, *num.* erin, merin.
four'fold, *adv.* ni merinmerin.
fourth, *num.* kerin, ekerin.
fra'gile, *a.* elege.
frag'ment, *n.* eté, elá, erún.
fra'grance, *n.* adžon.
fra'grant, *a.* aladžon.
fraud, *n.* irenidže.
free, *a.* fà, omira.
free, *v.* da...nide.
free'dom, *n.* ilara, imira.
free'ly, *adv.* fà, tókantòkan.
free'man, *n.* alara, omnira.
freeze, *v.* sùn.
fresh'et, *n.* arnkon, ikonlò.
fresh'ness, *n.* tutu.
fret'fulness, *n.* inqibi.
friend, *n.* ore, ayanje, enikedži.
friend'ly, *adv.* bá...re, rẹ.
friend'ship, *n.* ibare, ire.
fright, *n.* adidži, ididži, idži.

fright'en, *v.* ba...lern, deruba,
da...giri, da...nidži, daiyafò,
mu...beru, dži.
fright'ened, *a.* didži.
frog, *n.* iwe, okpolo.
from, *prep.* ati, bá, kuro ninọ,
niti, nitiń, tí, tí, tila, tinọ, tori.
front, *n.* iwadžu.
front'ier, *n.* ateteba.
front'ing, *a.* ikodžasi.
frown, *v.* fẹ, fẹdžá.
fruit, *n.* eso.
fruit'ful, *a.* aleso, eleso.
fruit'fully, *adv.* džigbini.
fruit'less, *a.* aileso.
fry, *v.* di, dij, yan.
fulfil', *v.* mu...śe.
fulfil'led, *a.* še.
fulfil'ment, *n.* afośe, aśe.
full, *a.* kọp, yó.
ful'ly, *adv.* tọtọ.
ful'ness, *n.* ekón, ikon.
fun'nel, *n.* ero.
fu'rious, *a.* šoró.
fur'nace, *n.* ebu, ilana, ileru.
fur'niture, *n.* elo, olun elo.
fur'row, *n.* gẹgele.
fu'ture, *n.* ehin ọla.
fu'ture, *a.* ọla, tí mbọ.
futu'rity, *n.* igba tí mbọ, odžó
ọla.

G.

ga'ble, *n.* ẹkule, ikù, ikùle,
kọbl.
gad'fly, *n.* iru.
gain, *n.* ère, ifà, iwadže: *dis-
honest gain*, erekere.
gain, *v.* džère, dže, wadže; (*a
prize*), lakọ.
gain'say, *v.* sọ odi sí.
gait, *n.* eré, iré.
gall, *n.* oróro, idakpa.
gal'lop, *v.* dogiri.
gal'lop, *n.* ogiri.
gang, *n.* owọ.
gap, *n.* eto.
gape, *v.* yán.
gar'den, *n.* ágba, ogbà.
gar'den, *n.* šogbà.
gar'dener, *n.* oluśogba, ologbà.
gar'land, *n.* mariwò.
gar'ment, *n.* abòra: *loose gar-
ment*, agbada, akáso ẹwu.
gar'nish, *v.* še...lośo.
gate, *n.* emu ọna, odžú ọna.

gui'dance, *n.* afihàn.
 guide, *v.* še amòna, fòmahàn, tó tokun.
 guide, *n.* afòmahàn, amòna, atòku.
 guile, *n.* ètan.
 guile'ful, *a.* èlètan.
 guile'less, *a.* alletan.
 guilt, *n.* ère, èbi.
 guilt'iness, *n.* idžèbi, èlèbi.
 guilt'less, *a.* alèbi.
 guil'ty, *a.* džèbi, šin.
 gui'nea-corn, *n.* okà: *red gui-nea-corn*, baba; *white gui-nea-corn*, bomo.
 gui'nea-fowl, *n.* ètu.
 gui'nea-worm, *n.* sòbia.
 gul'ly, *n.* èrè.
 gum, *n.* odžina.
 gums, *n.* èrigi.
 gun, *n.* ibon.
 gun'lock, *n.* okò ibon.
 gun'powder, *n.* ètu.
 gush, *v.* rú, tú.
 gut, *n.* ifon.
 gut, *v.* tufon.
 gut'ter, *n.* odžu-agbara.

H.

ha'bit, *n.* isè, aša.
 habita'tion, *n.* ibudžòko.
 hack, *v.* šá.
 had, *v.* tí.
 ha'des, *n.* ikpo-okú, orun.
 hail, *n.* èwo, wowe, yinyin, nli.
 hair, *n.* iron.
 hair'less, *n.* ailiron.
 hair'pin, *n.* ikoti.
 hair'y, *a.* abiron, oniron, liron.
 half, *n.* àbò, idadži, idamedži.
 hall, *n.* banga, bása.
 ha'lo, *n.* ayika.
 halt, *v.* deše.
 hal'ter, *n.* ikperè.
 ham, *n.* itan.
 ham'let, *n.* ereko.
 ham'mer, *n.* mataká, olú, omopwu, iyawu.
 ham'mer, *v.* lù fi mataká lù, kàn.
 hand, *n.* owó.
 hand'breadth, *n.* ibuatèlèwo.
 hand'ful, *n.* ikóywo.
 hand'kerchief, *n.* gele, inždzu.

han'dle, *n.* (*of a knife*), ekuñ, ekukun.
 hand'some, *a.* dara, èlèwà.
 hang, *v.* fi...ha, fi...kò, gbè...ha, hàn, kagba, kò, romó, so, soloron, sorò, tẹ...bò.
 hap'ly, *adv.* sešì.
 hap'pen, *v.* šalabákpade, šè.
 hap'piness, *n.* ayò.
 hap'py, *a.* layò.
 ha'rass, *v.* gùn, yò...lenu.
 hard, *a.* dakpara, kikun, kirikpa, ko, lé.
 hard'en, *v.* mu...dakpara, mu...lé.
 hard'ness, *n.* ele, okikirin, ekitrikpa, oro.
 hark, *v.* gbó.
 har'lot, *n.* kpanšaga.
 harm, *n.* tulash, alush.
 harmat'tan, *n.* oyó.
 har'ness, *v.* ha...móra.
 har'nessed (in armor), ahamóra, atamóra.
 harp, *n.* dũru.
 harp'er, *n.* oлдũru.
 harsh, *a.* džagan, kanó, rdro.
 harsh'ly, *adv.* ranram, ramuranu.
 har'vest, *n.* ikodžò-oko, ikore.
 har'vest, *v.* kore.
 has, *v.* tí.
 hash, *n.* ožbè.
 haste, *n.* itara, iwara.
 has'ten, *v.* hš, še iwara, kanždu, ya, yara, šisè, tagere, talždu.
 has'tener, *n.* ikayždu.
 has'tily, *adv.* kankan, wiriwiri, tãra.
 hat, *n.* àkata, akètè, atè: *a rain hat*, agbèdži.
 hatch, *v.* kpa.
 hatch'et, *n.* àke.
 hate, *v.* korira.
 ha'tred, *n.* agon, irira.
 ha'ter, *n.* akéri, akorira, ašotè.
 have, *v.* li, ni, ri, ti.
 hawk, *n.* awodi.
 hay, *n.* sakasáka.
 haz'ard, *n.* idaše.
 he, *pron.* á, í, ó, ó, oy, on.
 head, *n.* eri, ori.
 head'band, *n.* iweri.
 head'long, gbongbong, li ogode-mge, okiti.
 head'longness, *n.* ogedemge, ogodegbe.
 head'man, *n.* olori.

heal, *v.* še diła ará, džina, mu-džina, mu...larala, wò...džina.
 health, *n.* diła ará, sañ.
 health'ful, *a.* yè.
 health'iness, *n.* yiyè.
 health'y, *a.* lé, lera, onilera, sañra.
 heap, *n.* bebe, òkiti, òkitiogun.
 heap, *v.* be, kodžò, šuru.
 hear, *v.* gbòhun, gbó: *to hear news*, gbòhin, gbòhun; *to hear of*, gburo, gbòran.
 hear'er, *n.* alafetigbó.
 hearing, *n.* gbìgbò, igbó.
 hear'ken, *v.* de'ti, de'tisilè, feti, gbóti.
 hear'say, *n.* awigbó.
 hearp, *n.* aija, òkan.
 hearth, *n.* àro.
 hear'tily, *adv.* tinòtinò, tokan-tokan.
 hear'twood, *n.* akudin.
 heat, *n.* erun, gbìgbona, oru.
 heat, *v.* fi...gbona.
 heat'ed, *n.* ariñ.
 heat'hen, *n.* iworo, kéferi.
 heat'ven, *n.* oke erun, orun.
 heat'vily, *adv.* ti, koti.
 heat'vy, *a.* wuwo.
 hedge, *n.* aghiyikágbà, akógbà.
 hedge hog, *n.* oyá.
 heed, *v.* gbó.
 height, *n.* aga, jga, giga, oke: *great height*, gigagiga, gongogon.
 heir, *n.* adžogun, arole: *heir apparent*, daudu, magadži.
 helms'man, *n.* atoko.
 help, *n.* agbà, agbáše, agbátan, aráñnilówo, arajše.
 help, *v.* gbà...lòwo, gbè, kpade, ran, ranlòwo.
 help'er, *n.* abaniše, agbani, alá-baše, alarajše, aráñnilówo, arajše, èlègbà, olugbani, olú-ranlòwo.
 helve, *n.* erú.
 hem, *n.* isèti.
 hem, *v.* še...leti.
 he'morrhage, *n.* ogbè iuó.
 hen, *n.* agbebo.
 hence, *adv.* niñi, niñiyi, niñin, niñiyi.
 hence'forth, *adv.* ati isisiyilòli.
 her, *pron.* á, é, é, í, rè.
 her'ald, *n.* ilari.

herb, *n.* ewé, ewébé, ewéko, efo.
 herd, *n.* owó.
 here, *adv.* ihin, nibi, nibiyi, nihin, nihinyi, sibi, sibiin, sabinyi.
 hereafter, *adv.* nigbchin.
 he'sesy, *n.* adamò, idamò.
 he'retic, *n.* aládamò.
 here'tical, *a.* damò, adamò.
 here'tofore, *adv.* ri, midželo.
 he'ro, *n.* oga.
 hes'itate, *v.* šiyemedži.
 hew, *v.* ke, kegi.
 hew'er, *n.* akegi.
 hibis'cus, *n.* išakpa.
 hic'cough, *n.* sikisiki, siksik.
 hid (be), *v.* lùmò, kpaunò.
 hid'den, *a.* ikòkò.
 hide, *v.* bà, ri, kpaunò, sakpaunò.
 hide, *n.* àwò, bata.
 hid'ing, *n.* iba.
 high, *a.* ga, gèle.
 high'ly, *adv.* reke.
 high'wayman, *n.* agana, alá-bamòlè.
 hill, *v.* kò, kòlè.
 hill, *n.* òkè, okiti èbe.
 hilt, *n.* ekun, ekukun.
 him, *pron.* à, è, ê, í, ò, ô, ù, on, on.
 him'self, *pron.* onná.
 hin'der, *v.* dina.
 hin'derance, *n.* idena, ikòšè.
 hind'most, *a.* chin.
 hint, *v.* fodžukpe, lukoro, šòbò.
 hint, *n.* obò.
 hint'er, *n.* olobò.
 hip, *n.* ibadi: *hip-joint*, igbarokò.
 hippo'potamus, *n.* erinmi, osè.
 hire, *v.* gba... wò.
 hire, *n.* oya.
 hired', *v.* agbawò.
 hire'ling, *n.* alagbàšè, alagbàrò.
 his, *pron.* rè, tere, tirè.
 hit, *n.* ibá, lù.
 hit, *v.* lù.
 hith'er, *adv.* ihin.
 hoarse, *a.* kè.
 hoarse'ness, *n.* ike.
 hoe, *n.* okò, ákegun okò, aketon.
 hoe, *v.* ro, kò.
 hog, *n.* gèdè.
 hold, *v.* òmá, gbà, mú.
 hold'fast, *n.* alimú.
 hole, *n.* alafò, iho, kòto.
 ho'liness, *n.* mimò, iwà mimò.
 hol'low, *a.* wò.
 hol'low, *n.* èfo, iwò.

ho'ly, *a.* mó.
 hom'age, *n.* ihari.
 hom'age, *v.* hari, wari.
 home, *n.* ilé.
 home'bred, *n.* ibilé.
 ho'miny, *n.* egbò.
 ho'nesty, *n.* iwà tito.
 ho'ney, *n.* oro, oyin.
 ho'ney-comb, *n.* afara oyin.
 ho'nor, *n.* ibuyin, olá, òwò.
 ho'nor, *v.* bolá, bòwò, bùyin, šolá.
 ho'norable, *a.* niyin, ologò, olola.
 hoof, *n.* bata, kpatakò.
 hook, *n.* amu: *a tailor's hook*, amuran, arugogan.
 hoot, *v.* hó.
 hop, *v.* lákaláka.
 hope, *n.* aba, igbèkele, ireti.
 hope, *v.* reti, taniaba.
 horn, *n.* iwo, owò.
 horse, *n.* ešin; various kinds are called, abigá, aligárimí, ira.
 horse'man, *n.* ešin.
 horse'whip, *n.* lagba.
 hot, *a.* gbona: *very hot*, bòbò, džandžan.
 hot'ness, *n.* arifi.
 hour, *n.* wakati.
 house, *n.* ilé.
 house'hold, *n.* sata.
 ho'ver, *v.* rà, radòbò.
 how, *adv.* bawò, bibawò, tí, bití: *how many? kelo? melo?*
 howe'ver, *adv.* lákišé.
 howl, *n.* ikòkará, mahuru.
 howl, *v.* kòkará.
 hug, *v.* gba... mọra.
 huge'ness, *n.* igàngan.
 hum, *v.* kòy, kùn.
 hu'manly, *adv.* bièmia.
 hum'ble, *a.* onirelè.
 hum'ble, *v.* kparamò, rẹ... lè.
 hum'bled, *n.* rẹ.
 humi'liate, *v.* rẹ... silè.
 hump, *n.* ike.
 hunch'back, *n.* abuke, atèlè-lin, awòlin.
 hun'dred, *num.* ogorún, orún.
 hun'ger, *n.* ebi.
 hun'ger, *v.* lebi, ebi kpa.
 hun'gry, *a.* alaiyò.
 hunt, *v.* de, degbe.
 hun'ter, *n.* ode.
 hur'ry, *v.* šè iwara, šira.
 hur'ry, *n.* itara.
 hurt, *v.* fàrakpá, kpa... lara.

hurt, *n.* ibi, ikpalara.
 hus'band, *n.* okò.
 hush, *v.* dake, simi.
 husk, *n.* egbò, iwo.
 hut, *n.* agò.
 hy'e'na, *n.* koriko, ikoriko.
 hy'pocrite, *n.* afinòšalžere, afinòšchin, afinòšode, agaba-gebe.

I.

I, *pron.* emi, mi, mo, mò, n.
 iden'tity, *n.* aiyato.
 id'leness, *n.* imelè.
 i'dol, *n.* oriša.
 idol'ater, *n.* abogibokpe, aboriša, oloriša, iworo.
 if, *conj.* bí, bí... tilè, ibá, kò-šekpe: *as if*, bienikpé; *if possible*, bolèšebi, bolèšekpé.
 ig'norance, *n.* aimoje, aimò, okpe.
 ig'norant, *a.* aimoje, alaimò.
 igua'na, *n.* iwogwon.
 illi'terate, *a.* alaimowe.
 ill-na'tured, *a.* okururo, ošonò.
 ill'ness, *n.* okunron.
 i'mage, *n.* erè.
 i'mitate, *v.* sindžè.
 immatu'riety, *n.* igbò.
 imme'diately, *adv.* biatiwiyi, kan, kiyán, lešekanpá, lodžukanpá, odžukanpá, logan.
 immerse', *v.* fi... bomi, ki... bomi, tẹ... bọ.
 immo'dest, *a.* aítidn.
 immor'tal, *a.* alaiku.
 immortal'ity, *n.* aiku.
 impart', *v.* fi... fá.
 impartial'ity, *n.* aišegbe, aišo-džúšáđžú.
 impa'tience, *n.* iwara.
 impede', *v.* dina.
 imped'iment, *n.* adena.
 impend', *v.* wá.
 importu'riety, *n.* abejiyanu, awiyanu.
 imposi'tion, *n.* ayandžè.
 impossibil'ity, *n.* alaise.
 impos'sible, *a.* aiše.
 impos'ture, *n.* iyandžè.
 im'precate, *v.* taše.
 impreca'tion, *n.* ašè, egún, ère.
 impri'son, *v.* ha... mó, semò.
 impro'per, *n.* aítò, aídara.
 impro'vident, *n.* aimete.

im'pudent, *v.* bẹ, dadzú, gbodžu.
impure', *a.* aínú.
impute', *v.* da...mó, fi...mó, ka...si.
in, *prep.* fi, li, ni, ninọ, miti, lara, sama, ti.
inabi'lity, *n.* idéti.
inac'tion, *n.* aísé.
ina'dequate, *a.* aító.
inatten'tion, *n.* aikiyesi.
inatten'tive, *a.* modžukuro.
in'cense, *v.* turai.
inces'sant, *a.* aísimi; *incessant* *talking*, awiidake.
incline', *v.* fi.
incomplete', *a.* aikpé, aísetañ.
incomprehen'sible, *a.* aiyé.
inconsi'derateness, *n.* aírò.
incorruption, *n.* aídíbadže, aibadže.
increase', *v.* bisí, kposí, gbalé, gbilé, rẹ, sọ...kpíkpo, wú.
in'crease, *n.* abisi, ibisi, asonkọj.
incre'dulous, *a.* koše igbagbó.
in'cubate, *v.* sába.
indeed', *adv.* gása, sẹ, tabi.
independ'ence, *n.* aísinj.
in'dicate, *v.* fi...hian.
indif'ference, *n.* aikiyesi.
indif'ferent, *n.* alaikiyesi.
indif'ferently, *adv.* tai, taitai.
indig'nant, *a.* runó.
indigna'tion, *n.* irunó, ibinó.
in'digo, *n.* ẹlu.
indirectly, *adv.* koikoi.
indiscriminate, *a.* idaru-dakpó.
indis'putableness, *n.* aídžinyu.
indivi'dual, *n.* oluware.
in'dolence, *n.* inuẹ.
in'dolent, *a.* ẹmẹẹ.
indue', *v.* fi...wó.
indulge', *v.* kẹ, yé.
indulg'ence, *n.* ẹkẹ, ikẹ.
indus'trious, *a.* oniše, aísẹmẹ.
in'dustry, *n.* aísẹmẹ, aísimẹ.
inexcu'sable, *a.* airiwi, alairiwi.
inexpres'sible, *a.* ailéwi.
inextin'guishable, *a.* aikpa, ailéka.
in'fant, *n.* omọ-omó.
infect', *v.* raju.

infect'ion, *n.* eraju.
infect'itious, *a.* arajuwú, lašeraju.
infer'ior, *n.* aísẹgbe.
in'finite, *a.* aíníkpekun.
infirm', *a.* alalera, kólera, kẹrẹ, ẹlẹkẹrẹ.
infirm'ity, *n.* ailera.
inflame', *v.* gbiniķón.
in'fluence, *n.* aiya.
influen'tial, *a.* olóluju.
informed', *v.* akótáj.
ingraft', *v.* lẹ, ló.
ingraft'ed, *v.* alómó.
ingra'titude, *n.* aimore.
ingre'dient, *n.* èlo.
inha'bit, *v.* tẹdó.
inha'bitant, *n.* agbe, aráílẹ, aráilu.
inhe'rit, *n.* gbágun, dzogun, kogun, role.
inhe'ritance, *n.* ogún.
inhe'ritor, *n.* odžogun.
inhu'man, *a.* aísénia.
inhumi'lity, *n.* airele.
ini'quity, *n.* ẹše.
ini'tiated, *a.* egberi.
injure, *v.* ba...dže.
injurer, *n.* abanidže.
injury, *n.* ibadže.
injus'tice, *n.* aísédodo, aísótó.
ink, *n.* tarlá; *red ink*, ambua.
in'mate, *n.* abániḡbele.
inn, *n.* ilé ero.
in'nocence, *n.* aídžẹbi, aísẹ.
in'nocent, *a.* aísẹ, aísẹ, abalẹšẹ.
innu'merable, *a.* ainiye.
inquire', *v.* bère, bi...lebi, fi...lọ, sẹ.
inqui'ry, *n.* ibère.
inqui'sitiveness, *n.* āyay.
insane', *a.* šiwere.
insan'ity, *n.* ewi, gbéregbère.
in'sect, *n.* kókoró.
insert', *v.* bọ.
in'side, *n.* inó, ninó.
ins'i'pid, *a.* obu, tẹ.
insipid'ity, *n.* ate, okú.
insist', *v.* kirimó, rọ.
in'solence, *n.* afodžúdi.
in'solently, *adv.* tai, taitai.
insolv'ent, *v.* fodzúdi, šafodžúdi.
inspect', *v.* bẹ...wó, woye.
inspect'or, *n.* awoye.
inspira'tion, *n.* amisi, imisi.
inspire', *v.* mi sí.
instalment, *n.* adawin.

in'stant, *n.* ogáj.
in'stantly, *adv.* logan.
instead', *prep.* níkpo.
in'stigator, *n.* ẹlegbe.
in'stinct, *n.* ẹdá.
instruct', *v.* kọ.
in'strument, *n.* élé, ohun ọna.
instrumental'ity, *n.* amuba, imuba.
insuffi'ciency, *n.* aító.
insurre'ction, *n.* irukerudo.
integ'rity, *n.* iwátińo.
in'tellect, *n.* inoye, oyé.
intel'ligent, *a.* dá, amoye, moye, niyanó.
intel'ligible, *a.* iyeni.
intend', *v.* gbèro, kpete, rọ.
intense'ly, *adv.* buraku; *intensely hot*, džandžay.
inten'tion, *n.* ete.
in'terest, *n.* élé, èrè, ẹdá.
inte'rior, *n.* inó.
intermed'dle, *v.* da...si, fẹ-nusi.
intermin'gle, *v.* da...kpó.
inter'pret, *v.* gbédegbeyó.
interpreta'tion, *n.* inó, itumó.
inter'preter, *n.* gbédegbeyó; *interpreter of dreams*, amála.
inter'rogate, *v.* bi...lere, da...lebi, sẹ.
interroga'tion, *n.* ébi, ère.
intes'tines, *n.* ifon, owere.
inti'midate, *v.* da...lódžo, kpa...lódžo.
in'to, *prep.* ninó, sinó.
introduce', *v.* da...silẹ, dà...šá, mu...wó.
intrust', *v.* šú.
in'valid, *n.* arọñ, abirọñ, olokuroñ, alabukun.
invent', *v.* ba...sọ, da...silẹ.
inven'tion, *n.* abuso, idamọray, isi.
invent'or, *n.* adisi, oniši.
invert', *v.* dodžnde.
invert'ed, *v.* alọ.
inves'tigate, *v.* bẹ...wó, fi...lọ, ló wadžo.
investiga'tion, *n.* ibewó, iyewó.
investigator, *n.* afọranlọ, fẹ-idi.
invisibil'ity, *n.* airi.
invita'tion, *n.* ikpedže.
irascibil'ity, *n.* ẹlọ fofó.
i'ron, *n.* irin.

iron'ically, *adv.* to speak ironically, ran ikpon si, ran ikpo.

i'rony, *n.* ikpon.

irre'gularly, *adv.* wanranwanran.

irrita'tion, *n.* sonasi.

is'land, *n.* adadò, idado, erokuśu.

is'sue, *n.* amiwah.

it, *pron.* á, â, ê, ě, í, î, ó, ô, oy, ough, rĕ.

itch, *n.* toc-itch, eyóŋ, keyóŋ.

itch, *v.* yóŋ.

i'vory, *n.* ike.

J.

jack'al, *n.* adža-oko.

jack'et, *n.* alukasafa.

jail, *n.* tubu.

jail'er, *n.* onitubu.

jas'per, *n.* esù.

ja'velin, *n.* òkò.

jaw'bone, *n.* ereke, kpari.

jeal'ous, *a.* dzowu, odzowu.

jeal'ousy, *n.* owú, idzowu.

jerk, *v.* dža.

jerk'ed, *n.* (meat), adingbe.

jerk'ing, *n.* adžagadžigi.

jest, *v.* šawada, šĕĕ.

jest, *n.* awada, ěĕ, ěwa.

jest'ing, *n.* asawada.

job, *v.* džagbá.

job, *n.* aboše.

job'work, *n.* aboše.

jog, *v.* še...nighowó.

join, *v.* bádákpò, da...kpòmò.

joint, *n.* ike, orike: *joint of grass*, ilay.

joist, *n.* ěkĕ.

joke, *n.* awada, ěwa.

jour'ney, *v.* radžo, rebí.

jour'ney, *n.* idžo, ebí.

joy, *n.* ayò.

joy'ful, *a.* layò, ahayò.

judge, *v.* ba...widžo, dadžo.

judge, *n.* adadžò, onidadžò.

judg'ing, *n.* ibawi.

judg'ment, *n.* idadžò.

jug, *n.* orò.

jug'gle, *v.* kpilán.

jump, *v.* bĕ, fò.

just, *a.* oloto, olotito.

jus'tice, *n.* ododó.

justifica'tion, *n.* adalare.

jus'tified, *a.* olundare, džare.

jus'tifier, *n.* onidalare.

jus'tify, *v.* da...lære, džare.

K.

kaw, *v.* hōŋ.

keen, *a.* mú.

keen'ly, *adv.* šinj.

keen'ness, *n.* imu.

keep, *v.* kpanò.

keep'er, *n.* olitòdžu.

ker'nel, *n.* omò.

key, *n.* kòkoro, šika.

key'hole, *n.* odžu šika.

kick, *n.* ikpa.

kick, *v.* ta, takpa, tasc, yin, yaj...nitete.

kid'napper, *n.* alábamòĕ, lá-bamòĕ.

kid'ney, *n.* iwe.

kill, *v.* kpa, kpakú.

kiln, *n.* ebu.

kind, *a.* šeun.

kind, *n.* alárabára, iru, oimuru.

kin'dle, *v.* dana, kun, tibò, ti-nabò.

kind'ness, *n.* išem, òre.

kin'dred, *n.* itan.

king, *n.* oba.

king'dom, *n.* ilĕ oba.

kins'folk, *n.* ará, ibatan.

kins'man, *n.* olutan.

kiss, *v.* feunko.

kitch'en, *n.* ile-àse.

knave, *n.* arĕkerĕke.

knav'ishness, *n.* arĕkerĕke.

knead, *v.* kpo, šù.

knee, *n.* ekun, ekurun.

knee'pan, *n.* džangboro.

kneel, *v.* kunĕ.

knife, *n.* obĕ: *sharp-pointed knife*, ašoro.

knit, *v.* wòŋ.

knock, *v.* dží, džin, kán, kan-kun, lù.

knot, *v.* sokpa, takoko.

knot, *n.* isokpa, koko, okikirin.

know, *v.* mò.

know'ledge, *n.* imò, imòdžu.

knuck'le, *n.* koko-owó.

koran', *n.* kurani, alkurani.

L.

la'bor, *n.* išĕ.

la'bor, *v.* šišĕ.

la'borer, *n.* ašišĕ, onišĕ.

labo'rious, *a.* onišĕ.

lack, *v.* di, kùŋ.

lad'der, *n.* akasò.

lade, *v.* kpòŋ.

la'dle, *n.* igbakò.

lake, *n.* adagun.

lamb, *n.* ođò agutan.

lam'bent, *a.* geregere.

lame, *a.* amokun.

lame, *v.* mòkun.

lame'ness, *n.* imòkun.

lament', *v.* kponrere.

lamp, *n.* fatila, fitila.

lamp'filler, *n.* ero, kòlolo.

lance, *n.* òkò.

lan'cet, *n.* abĕ.

land, *v.* gun, gunĕ.

land'ing, *n.* èbute.

land'lord, *n.* balé.

lan'guage, *n.* ède.

large, *a.* tobi, boni, gonggon, nilá, nilá: *very large*, boniboni, biri.

large'ly, *adv.* kibiti.

large'ness, *n.* igangan.

lasci'viousness, *n.* wòbia.

last, *v.* kpé, kpe.

last, *a.* ěhin, igěhin, ikehin, kehin, šěhin: *the last born*, abikěhin; *the last state*, asiwa.

last'ly, *adv.* nikelěhin.

latch, *n.* ěha.

latch, *v.* há, ti.

late, *adv.* gěhin, nigěhin.

late'ly, *adv.* lolò, nilolò.

late'ness, *n.* igěhin.

lath, *v.* rà, rale, reĕ.

lath'er, *v.* hò, kputu.

lath'ing, *n.* irale.

lat'ter, *a.* ikehin, abikěhin.

lat'terly, *adv.* ni lolò yi.

lat'ter-rains, *n.* aròkuro.

laugh, *n.* ěrin.

laugh, *v.* rin, řerin.

laugh'ter, *n.* ěrin.

law, *n.* idasilĕ, ofin.

law'giver, *n.* olofin.

law'less, *n.* kòlofin, allofin.

law'yer, *n.* amofin.

lay, *v.* lé, fi...le, tĕ, gbe...ru:

to lay down, fi...leĕ; *lay hands on*, dawòĕ; *lay eggs*, ye, yin.

la'ziness, *n.* oĕ.

la'zy, *a.* le.

lead, *n.* odžĕ.

lead, *v.* dari, fá, sin, še amòna, tó.

lead'er, *n.* atokun, ěĕgbe.

lead'ing, *n.* itò.

leaf, *n.* ewe.

leaf, *v.* ruwe.

leaf'less, *a.* nilewe.

leaf'y, *a.* abewe, ěwe, bò.

leak, *n.* dzò.
 lean, *a.* bente, rù.
 lean, *v.* fèhinjì, fi...tì, rù, rọmọ, ti.
 leap, *v.* so.
 learn, *v.* kọ, kẹkọ.
 learn'ed, *a.* akọdžù: *learned man*, álufa, imòdžá.
 learn'er, *n.* akowe, emi tí nkọ.
 learn'ing, *n.* ikọ, ẹkọ.
 leather, *n.* àwọ, bata, madofun.
 leave, *v.* fi...le, fi...silẹ: *to leave off*, dase, yakuro.
 leave'ven, *n.* iwukara.
 leech, *n.* esnsn.
 left, *a.* ósinj.
 leg, *n.* itẹ̀le, tete.
 lei'sure, *n.* dilẹ.
 lei'surely, *adv.* fà, tẹdọ, kasẹ.
 lend, *v.* sìn, wìn.
 length, *n.* igun.
 leopard, *n.* ẹkun, dzakumọ, ogidan.
 le'per, *n.* adẹte.
 lep'rosy, *n.* ẹte.
 lep'rous, *a.* lẹte, elẹte.
 les'sen, *v.* bù...kùnj.
 lest, *conj.* kò...máh.
 let, *v.* dze, dzowọ.
 le'vel, *v.* tẹ...bẹre.
 lewd'ness, *n.* adó.
 li'ar, *n.* eke, adeke, adakadeke, eleke, okobó.
 li'berate, *v.* da...silẹ.
 lick, *v.* fa...là, là.
 lid, *n.* omọri, ideri: *lids of a book*, kpali.
 lie, *n.* awòlẹhù, eke, irọ.
 lie, *v.* deke, seke, kpurọ.
 lie, *v.* (down), dubulẹ.
 life, *n.* ẹmi, iyè, àye.
 life'less, *a.* aiyè.
 lift, *v.* gbe.
 lift'er, *n.* olugbe.
 light, *v.* tana.
 light, *n.* imọle.
 light, *a.* fere, fuye, tату: *light as day*, mọ.
 light'en, *v.* kọ manamaná.
 light'ness, *n.* afeře.
 light'ning, *n.* manamaná.
 lights, *n.* fòlòfòlo.
 like, *a.* ba, dabi.
 like, *v.* fẹ.
 li'ken, *v.* fi...we.
 like'ness, *n.* alugboj, awòran, ẹwà.
 like'wise, *adv.* kpẹlu.

li'ly, *n.* different kinds are called, bólogí, osunere.
 lime, *n.* eru, efin, tere; (*fruit*), orombo.
 li'mit, *v.* sorokpinj.
 li'mit, *n.* arokpín.
 lin'en, *n.* alá.
 lin'ger, *v.* lora, rare.
 linguist, *n.* agbede, ogbunfo.
 li'on, *n.* kénifú.
 lip, *n.* etc.
 lis'ten, *v.* deti, deti silẹ, feti.
 lis'tener, *n.* adetisilẹ.
 lit'tle, *adv.* diẹ, kinjin, kiún, yẹ.
 lit'tle, *a.* kere.
 lit'tleness, *n.* kekẹke, kekere.
 live, *v.* gbaiyè, gbe, wà, wàlayè yè.
 live'liness, *n.* araya, idaraya.
 live'ly, *a.* daraya, ya.
 li'ver, *n.* eđọ.
 liv'ing, *a.* layè.
 li'zard, *n.* the various kinds are, adarikpón, agilfiti, abanlaj, alamọ, alandri, amure, okelendzẹ.
 lo! *interj.* sawo!
 load, *n.* eru.
 load, *v.* deru, diru, ki, ni.
 loaf, *n.* akašu.
 loafer, *n.* asáèniá, dzeguduragudu.
 lo'cate, *v.* sọ...lodzọ.
 lock, *n.* agadágodo, aluse.
 lock, *v.* há, tí: *to lock up*, há...mọ, tí...sino.
 lo'cust, *n.* esú: *locust tree*, igba.
 lodge, *v.* wò.
 lodg'ing, *n.* ọdžọ.
 loft, *n.* adža.
 loft'ily, *adv.* gigagiga.
 log, *n.* itì.
 loin, *n.* egbe.
 loi'ter, *v.* dzafara.
 long, *a.* gigan, gún, gbòro.
 long-suffering, *n.* olukpáramo, olukpamora, atemora.
 look, *v.* bódžuto, bódžuwò, fodzusi, kiyesi, wò, woran, sawó, fidžuwò: *to look up*, gbodžawolke.
 look'ing-glass, *n.* awodžidži.
 loom, *n.* ofl.
 loose, *a.* de, šaj, šunọ.
 loosed, *a.* etu.
 loose'ly, *adv.* deředere.
 loos'en, *v.* fa...tu, tí.
 loos'ened, *a.* ó.

loqua'ciousness, *n.* ayidayida.
 lord, *n.* oluwà.
 Lord, *n.* (Obangidži).
 lose, *v.* dzunò, kpadanò, sọ...nọ.
 loss, *n.* egbé, adanò, iya, ófo.
 lost, *a.* fo, dzunò, nò, šegbe.
 lots, *n.* adila, gege, ibo.
 loud, *a.* kiku.
 loud'ly, *adv.* gbà, gbaì, kará, kikujkiku, kujku, sajawá, ramran, ramramu, rará.
 louse, *n.* ima.
 lous'y, *a.* linu, olina.
 love, *n.* afe, ifẹ.
 love, *v.* fẹ, kudonj.
 lov'er, *n.* olufẹ.
 lov'ing-kind'ness, *n.* isenj ifẹ.
 low, *a.* bere.
 low'er, *v.* ná...silẹ.
 low'ly, *adv.* titẹ.
 low'ness, *n.* dzidžin.
 luck, *n.* alabákpade, asiki, awore, ifá, orobo.
 luck'y, *a.* akóšebá.
 lu'cre, *n.* erekere.
 lug'gage, *n.* eru.
 luke'warm, *a.* lọ, wọwọ.
 luke'warmly, *adv.* lọwọwọ, wọwọwọ.
 luke'warmness, *n.* ilọlọ, lọwọwọ.
 lull, *v.* dákeřoro, mu...dákeřoro.
 lump, *n.* akodžọ, isu.
 lu'nacy, *n.* asijwin.
 lu'natic, *a.* onisijwin.
 lung, *n.* fòlòfòlo.
 lust, *n.* ifẹkufe.
 lust, *v.* fẹ...niřekufe.
 lus'tre, *n.* idanj.
 lus'trous, *a.* dzidža.
 lux'ury, *n.* domdomaiye.
 lye, *n.* aro.

M.

mad, *a.* binọ.
 ma'dam, *n.* nana.
 mad'den, *v.* nu...binọ.
 made, *a.* dida.
 mad'man, *n.* hana.
 mag'got, *n.* idij.
 ma'gistrate, *n.* asolu.
 mag'nify, *v.* gbe...ga, kokiki.
 mag'nitude, *n.* itobi.

maid, *n.* ọmọdán.
 maid'en, *n.* ọmídlán, ọlọmu eko.
 maimed, *a.* alabukún-àrọj.
 maintain'er, *n.* olubọ.
 maize, *n.* agbadó, yanggan.
 majesty, *n.* ọlá.
 majority, *n.* ikpòdžú.
 make, *v.* dá, fi, dže, sà, še.
 ma'ker, *n.* eleda, onída.
 male, *n.* (of beasts) ako.
 malefactor, *n.* oniše luburu, orufin.
 ma'lice, *n.* odi.
 mali'cious, *a.* olodi.
 mali'ciously, *adv.* fi odi.
 mal'let, *n.* ogbogbo.
 maltreat', *v.* še...nidžamba.
 mam'mon, *n.* adže.
 man, *n.* ọkọri, èniá.
 mane, *n.* (horse's) gogo, rọrọ.
 mange, *n.* ekúru.
 man'ger, *n.* ibudže.
 man'grove, *n.* egba.
 man'hood, *n.* àgba.
 ma'nifest, *v.* làri.
 mankind', *n.* araiye, èniá.
 man'ly, *adv.* biọkọyri.
 man'ner, *n.* íše, aša.
 man'ners, *n.* íše, iwá.
 man'slaughter, *n.* ikpani.
 man'tle, *n.* abóra.
 manure', *n.* ilédú, ilédudu.
 ma'nuscript, *n.* rubutu.
 ma'ny, *a.* kpò, ọkpò, kpikpò.
 mar, *v.* ba...dže.
 mare, *n.* àbo ẹsin.
 mark, *v.* kọ, sami.
 mar'ket, *n.* adabòdža, ọdža.
 mar'ket-day, *n.* ọdžọ ọdža.
 mar'riage, *n.* isoyigi, yigi.
 mar'ried, *a.* ọkọlaya, ọkọlobiri.
 mar'row, *n.* mọdumọdu, ora-eggun.
 mar'ry, *v.* fẹ, gbeyawo, soyigi.
 marsh, *n.* àbata.
 mash, *v.* wẹ.
 mast, *n.* okpo oko.
 mas'ter, *n.* babá, oluwá.
 mas'tery, *n.* ikáwó.
 mat, *n.* abà, àyin, ẹni, kẹre, kpakati.
 match, *n.* eró, ísana.
 mate, *n.* egbe, ẹkelđzi.
 mat'ter, *n.* ọran.
 mat'tock, *n.* iganrin, kólobá.
 mature', *v.* gbó.
 matu'riety, *n.* agbo, igbo, ogbo.
 may, *aux.* lè, ma.

me, *pron.* mi.
 mead, *n.* fura.
 mea'dow, *n.* kpakpa.
 meal, *n.* asè.
 meal'y, *a.* megbe.
 mean, *n.* (person) adžadže.
 mean, *v.* dže, kperi.
 mean'ing, *n.* itumọ.
 means, *n.* amubá, imubá.
 mea'sure, *n.* asuwọj, iwọj, osuwọj.
 mea'sure, *v.* wọj.
 meat, *n.* eran, óseše.
 mecha'nic, *n.* onišona, ọlona.
 med'dle, *v.* da...si, fi ẹnu si.
 med'dler, *n.* afenusi, aladaš.
 me'diate, *v.* džiše.
 media'tion, *n.* adžiše.
 me'diator, *n.* asenu.
 me'dicine, *n.* ọgun.
 me'ditate, *v.* še aró, še asáro, dodžúkòdo, humọ, mèro, rò, ronọ.
 medita'tion, *n.* aró, asáro.
 me'ditator, *n.* asáro.
 meek, *a.* oninọ titẹ, teńọ.
 meek'ness, *n.* iwá tutu.
 meet, *v.* bá, dari...džo, kò, kò...lona, koseba, kpa...de.
 meet'ing, *n.* atiba, iba.
 mel'low, *a.* dẹ.
 melt, *v.* yọ.
 mem'ber, *n.* ará, akpa.
 me'mory, *n.* iyé.
 mend, *v.* toń...še, šọ.
 mend'er, *n.* alatọše.
 men'ses, *n.* aše, awaše.
 men'tion, *v.* da, da...rukọ, da...sò.
 mer'chandise, *n.* ọdža.
 mer'chant, *n.* asówo.
 mer'ciful, *a.* alánú.
 mer'ciless, *a.* ailanu.
 mer'cy, *n.* ánu.
 mer'it, *n.* itoye.
 merito'rious, *a.* toye.
 mer'rily, *adv.* dukeluke.
 mer'riment, *n.* araya.
 mer'ry, *v.* daraya.
 mes'sage, *n.* íše, ọro.
 mes'senger, *n.* alasa, iko, onše.
 me'taphor, *n.* akawe.
 mew, *v.* yaun.
 mid'day, *n.* osangangan.
 mid'dle, *n.* agbedemedži, ariń.
 mid'night, *n.* orugandžọ, ogan-džọ.
 midst, *n.* ariń, awódžú.

mid'way, *n.* ariń.
 mid'wife, *n.* iyagbá.
 might, *n.* agbara, ikpa.
 might, *aux.* lè.
 might'y, *a.* alagbara.
 mi'grate, *v.* šatikpo.
 mil'dew, *n.* ẹbu.
 milk, *n.* wára.
 milk, *v.* fọj wára.
 mill'stone, *n.* ọlo.
 mi'mic, *v.* siy...dže.
 mince, *v.* bú...ladžan.
 mind, *n.* ewá, inọ, iyé.
 mind, *v.* kiyesi, tọdžú.
 mine, *pron.* temi.
 min'gle, *v.* da...lú, lú, kpa...kpò, rokpo, ru.
 ming'ling, *n.* idakpò, ikpakpò.
 minute', *a.* keń, kiun.
 mi'racle, *n.* íše aše.
 mire, *n.* ẹre, kpetekpete, kpotọ-kpotọ, šata: pig's mire, afọ.
 mir'ror, *n.* digi, awódžidži: a tula mirror, dandan.
 mis'anthrope, *n.* alaifeńi.
 misan'thropy, *n.* aifeńi.
 miscar'riage, *n.* íšeno.
 miscar'ry, *v.* šeno.
 mis'chief, *n.* ibaiyedže, iwá-ibi, iwá-ika.
 miscount', *v.* ši kà.
 mi'ser, *n.* awọj, ọkanđžua.
 mi'serable, *a.* osiše.
 mi'sery, *n.* oši.
 mis'ertune, *n.* alusin, tulásin.
 mishap', *n.* eši.
 misinter'pret, *v.* ši wi.
 misname', *v.* ši kpò.
 misplace', *v.* ši fisi.
 miss, *v.* (in shooting) batl, lè, sọti, šaki, ši, tase: to miss something lost, fe...kun.
 mist, *n.* ńri, kúruku.
 mistake', *v.* ši, šiše.
 mistake', *n.* adámó, eši.
 mis'tletoe, *n.* afomọ.
 mis'tress, *n.* iyá, iyale.
 mi'tigate, *v.* dẹ, rò.
 mix, *v.* bíllá, da...kpò, darudakpò, darukpò, rokpo.
 mix'ture, *n.* adalu, ẹtu, ida-kpò, ikpakpò: indiscriminate mixture, adarudakpò.
 mock, *v.* šefe, siy...dže.
 mock'ery, *n.* ẹfe.
 mock'ing-bird, *n.* awoko.
 mo'del, *n.* akpedžure, akpere.
 mo'derate, *v.* kpa...mọ.

mo'derately, *adv.* niwoṅ.
moderation, *n.* ikpamó, ikpa ramó.
mo'dest, *a.* onisadzu.
mo'desty, *n.* itidzá, odznti.
mohammedan. See mussulman.
moist'ure, *n.* iriṅ, iriṅmi, iriṅle.
molas'ses, *n.* oyij ireke.
molest', *v.* yo ... lenu.
mo'ment, *n.* ogán: *in a moment*, ni šedzú kán, li ogán.
mo'ney, *n.* owó.
mo'neyless, *a.* allowó.
mon'key, *n.* different kinds are called, alegeba, awere, áyá, edoṅ, oloyo.
mon'ster, *n.* emò.
mon'strous, alèmbò.
month, *n.* ošú.
month'ly, *a.* lošú.
moon, *n.* ošukpa, ošú.
Moor, *n.* bature.
moor'ing, *n.* isokò.
morass', *n.* íra, šakata.
more, *a.* deliṅ, dzú.
more, *adv.* sibe, siwadzu.
moreo'ver, *adv.* kpelukpeli.
morn'ing, *n.* átrò, òro, òwùrò, odzámò.
morose', *a.* asó, kan, kanra, šó.
mor'row, *n.* oša.
mor'sel, *n.* eté, ókele.
mor'tal, *a.* oniku.
mor'tar, *n.* odó.
mor'tify, *v.* ya ... niha, rà.
mosque, *n.* mašalaše.
Most High, *n.* Oga Ogo.
moth, *n.* oša.
mo'ther, *n.* abíamò, iyá, yeye, iyè.
mo'ther-in-law, *n.* ayakò.
mo'therless, *a.* alainiyá.
mould'er, *v.* bú, hù, rà.
moult, *v.* re.
mound, *n.* okete, óke.
mount, *v.* gešín, gòke, gòri, guṅ.
moun'tain, *n.* óke.
moun'tainous, *a.* olòke, óke.
mourn, *v.* kó ánú, kánú, dà àro, še àro, gbawe, šofò.
mourn'er, *n.* aláwè, ełekun.
mourn'ing, *n.* àro, awè, òfò, ekekun.
mouse, *n.* ełuru.
mouth, *n.* emu.

move, *v.* lù, sò, sòy, sún, yi, yin.
mow, *v.* re ... mòle.
much, *a.* kpò, okpò, kpikpò.
much, *n.* okpò, kpikpò.
much, *adv.* gídígídí, kòkò, kperèkperè, rèkòdza.
mu'cus, *n.* ikòṅ.
mud, *n.* kpetèkpete, kpotòkpotò, šata.
mug, *n.* dzaka.
mule, *n.* ihaka.
mul'tiply, *v.* bisí, kpoší, rè.
mul'titude, *n.* okpò.
mur'der, *v.* kpani, kpania.
mur'der, *n.* ikpani.
mur'derer, *n.* akpani, olukpa, olukpani, kpanikpani.
mur'mur, *v.* kòṅ, kún, raluṅ, košínò.
mur'murer, *n.* akòšínò.
mus'cle, *n.* (*shell-fish*), ikaka.
mush, *n.* ašaro, dèṅgè, wagaṅ.
mush'room, *n.* aikperi.
mu'sic, *n.* òriṅ.
mus'lin, *n.* alá.
musqui'to, *n.* abòwoṅáṅ, yam-yam.
mus'sulman, *n.* músulimṅ, imale.
must, *aux.* ní, kò lè máhí.
mute, *a.* odí, aifohun.
mut'ter, *v.* kòy, košínò.
my, *pron.* mí.
myself, *pron.* emi ná, emi tika-rani.
myste'rious, *a.* dzínle.
myste'riousness, *n.* idzínlè.
mys'tery, *n.* awò, egberí, igede, òro idzínle.

N.

nail, *n.* íšo, íšo iriṅ: *finger-nail*, ekan, ekana.
nail, *v.* kán, kán ... mó.
na'ked, *a.* niòhò, niòríhò.
na'kedness, *n.* ihò, ihòhò, ihò-ríhò.
name, *n.* òkò, orukò.
name, *v.* so ... li orukò.
named, *a.* dze.
name'less, *a.* ailorukò.
nap, *v.* sunyè, wo.
nap'kin, *n.* tobi.
narrate', *v.* rohiṅ.
narra'tion, *n.* ihij, irohiṅ.
nar'rative, *n.* ihij.

narra'tor, *n.* arohiṅ.
nar'row, *a.* gbóro, lá, hù, šó-koto, tère, toro.
nar'rowness, *n.* ihila.
nas'ty, *a.* kò mó.
na'tion, *n.* ède, oriè, oriè-ède.
na'tional, *a.* tí oriè-ède.
na'tive, *n.* abíli, ibíli.
nati'vity, *n.* ibí.
na'tural, *n.* adanídá, danídá, edá, idá.
na'ture, *n.* dádá, edá, iwà.
naught, *n.* asàṅ, šaki.
nau'sea, *n.* esne, irindo.
nau'seate, *v.* kpa ... lí esne, riṅ ... leḡo: *nauseated*, rindo.
na'vel, *n.* dodo, idodo, iwò.
na'vigable, *a.* gbòkò.
na'vigate, *n.* tukò.
near, *a.* dèdè, fefe, gbè, nitosí, mọra, niha, sòdzí, tẹ, tí.
near'ly, *adv.* řeše, řetòṅ.
near'ness, *n.* asoṅmò, etile, igberí, itosí, ikusa.
neat, *a.* bokini, řiṅdzu.
neat'ly, *adv.* kinikini.
neat'ness, *n.* ařiṅdzu.
neck, *n.* ořoṅ, ořoṅ.
neck'kerchief, *n.* idiroṅ.
neck'lace, *n.* idiroṅ.
need, *n.* aini, inira, odá.
need, *v.* še alaini.
need'le, *n.* abere.
need'y, *a.* alaini.
neglect', *v.* da ... kòdza, fò ... kòdza.
neglect'ful, *a.* alaikiyesi.
neg'ligence, *n.* aikiyesi.
neg'ligent, *a.* dè, dera, wòy.
ne'gro, *n.* ènia dudu, adú.
neigh, *v.* yán.
neigh'bor, *n.* aladugbo.
neigh'borhood, *n.* agbegbe, igberiko, sakani.
nei'ther, *conj.* beḡe ní ... kò.
nest, *n.* ilò.
net, *n.* àwoṅ.
net'tle-rash, *n.* egbešín.
ne'ver, *adv.* ododí, odorodí.
new, *a.* titòṅ.
news, *n.* ihij.
news'monger, *n.* alahéso.
next, *a.* atèle, kedzi.
next year, *n.* amòduṅ.
nice, *a.* súa, suag.
nice'ly, *adv.* tonitoni.
nick'name, *n.* aladze.
nigh, *prep.* nitosí.

nigh'ness, *n.* itosi.
night, *n.* òru: *the dead of night*, adžin, adžindžin; *by night*, loru.
night'ly, *adv.* loruloru.
nim'ble, *a.* wára, yara.
nim'bleness, *n.* iyara, iwara.
nim'bly, *adv.* gbese, werewere, yaya.
nine, *num.* ešan.
nine'teen, *num.* ókanđilógun.
nine'ty, *num.* ódorun.
ninth, *num.* kešan.
nip, *v.* kán.
nip'pers, *n.* emu.
nit, *n.* ero.
no, *adv.* kinidžebe, kurumu, nadwo, un.
no'ble, *n.* olóye.
nod, *n.* téri.
noise, *n.* áriwo, ató, atoto: *to make a noise*, kpariwo, kpató hió.
noise'less, *a.* aikpató.
nois'ily, *adv.* gbal.
nois'y, *a.* kpató.
no'minate, *v.* kpé.
non'sense, *n.* isòkúso.
noon, *n.* odžokarij.
noose, *n.* isébo: *to make a noose*, še...bo.
north, *n.* áriwá.
nose, *n.* imo.
nos'tril, *n.* iho imo.
not, *adv.* hò, i, kí, kò, kò, máh, ndan, njko, ò, ò.
no'table, *a.* akíyesi, lù.
no'tableness, *n.* afíyesi.
no'thing, *n.* kosinjkan.
no'thingness, *n.* asàj.
no'tice, *v.* bikita, kíyesi.
notwithstanding, *conj.* adí, amòkpé.
nour'ish, *v.* ke, te, bo.
now, *adv.* arowa, biatijwiyi, eyitawiyi, iwoyi, niwoyi, na, sá, wé, nigbaji, isisiyi, nisisi, nisisiyi, wayi.
null, *a.* asàj.
numb, *a.* ketiri.
num'ber, *n.* iye, oye.
num'berless, *n.* alainiye, al-niye.
numb'ness, *n.* etiri.
nurse, *n.* obó, oluto.
nurse, *v.* bo, tó.

O.

oar, *n.* adže, itòko, walami.
oath, *n.* ara, ekpe, ibura.
obe'dience, *n.* ifetisi, igbó.
obe'dient, *a.* eleti, leti.
obey, *v.* gbà...gbò, gbà...še.
object, *v.* kò.
objec'tion, *n.* ikò.
oblige, *v.* lé, tẹ...še, tẹ...li.
obli'vion, *n.* igbagbe.
obscure, *a.* šokunjun.
obscu'rity, *n.* egberi.
observe, *v.* wòye.
observ'er, *n.* alafiyesi, alami.
ob'stacle, *n.* idina, odogbulu.
ob'stinacy, *n.* amòše, ikà.
ob'stinate, *a.* agfidi, waronki.
obstruct, *v.* dèna.
obstruc'tion, *n.* idena.
obtain, *v.* dže, ri...gbà.
obtuse, *a.* kú, aimu.
occa'sional, *a.* idayedaye, igba-kugba.
occa'sionally, *adv.* idayedaye, nidayedaye.
occupa'tion, *n.* isé.
occur, *v.* hù.
o'cean, *n.* òkun.
of, *prep.* niti, nititi, ti.
off, *adv.* hò, lóh.
offence, *n.* isoran.
offend, *v.* sè, dže.
offend'ed, *a.* šokehindà.
offend'er, *n.* isoran.
off'er, *v.* tọre.
off'ering, *n.* òre.
office, *n.* òye.
officer, *n.* idžòye, odžòye, olóye.
offi'cial, *n.* olóla.
offi'ciousness, *n.* idasi.
off'spring, *n.* irumo, omo.
of'ten, *adv.* nigbakugba.
oh! *interj.* aa! yé!
oil, *n.* adí, oróro.
oint'ment, *n.* ikunra.
ok'ra, *n.* ilá.
old, *a.* arugbó, dagbó, èhu, ša-gbo.
old age, *n.* ito, ogbologbo.
old'en-time, *n.* atidžo.
old'er, *a.* aré, šare.
old'ness, *n.* agbó, láf, luláf.
o'men, *n.* àmi.
omit, *v.* kodža.
omni'potence, *n.* agbara gbo-gbo.

omni'scient, *a.* amòhungbo-gbo.
on, *prep.* ká, lara, lé, leri, lori, sara, sori.
once, *num.* ekán, lekán, larij-kan.
one, *num.* á, eni, eni, ni, kán, kọ-kan, okan.
on'ion, *n.* alubosa.
on'ly, *adv.* ógede, ogede, kiki, maso, nikan, nikanšošo, kpere, šaša, šošo.
o'pen, *v.* sí, yà: *to open the door*, šikun.
o'pening, *n.* emu, ikpedži, odžú.
o'penly, *adv.* nigbangba.
o'penness, *n.* ato.
opportune, *a.* šakokó.
opportu'nity, *n.* aye, igba, owólé.
oppose, *v.* de...lona, dzakoro, kodžudžasi.
oppos'ed, *a.* kan.
op'posite, *a.* okokan, tirisi, kodžusi.
opposi'tion, *n.* odisi.
oppress, *v.* kponlodžú.
oppress'ion, *n.* inilara.
oppres'sor, *n.* anuilara.
or, *conj.* mibi, tabi.
o'racle, *n.* alabalaše.
o'range, *n.* orombo.
ordain, *v.* la...lona.
or'der, *v.* kpalaše, tó.
or'der, *n.* ese.
or'derly, *adv.* çeşeşe, leşeşe, leşe-leşe.
or'dinance, *n.* idasilé, ilana.
o'origin, *n.* edi, ihulé, iwá.
ori'ginal, *a.* atorunwah.
ori'ginate, *v.* humò.
or'na'ment, *n.* ošo.
ornament'al, *a.* lošo, olóšo.
or'phan, *n.* omo okú.
os'prey, *n.* ošin.
ostenta'tion, *n.* aluwasi.
os'trich, *n.* ogongo.
o'ther, *pron.* mire, miran, omi-
 ran, elomiran.
o'therwise, *adv.* ayamóbi, kàka.
ought, *aux.* ba, ibá, ní.
our, *pron.* wa.
ours, *pron.* tiwa.
ourselves, *pron.* ará wa, awa tikara wa.
out, *adv.* dzade, sode.
out'ery, *n.* ike.

outdo', *v.* tẹ.
 out'er, *a.* ode, ẹhin.
 out'going, *n.* idžáde.
 outgrow', *v.* dagba džá.
 out'house, *n.* ilẹ ode.
 outlast', *v.* lọ džá.
 outrun', *v.* sare džá.
 out'side, *n.* ẹhin, lẹhin, sẹhin,
 ode, lode.
 outwit', *v.* kpa ... lẹtan.
 o'ver, *prep.* loke, lẹhin.
 overcome', *v.* sẹ, bọri.
 overflow'ing, *n.* akọjwọsilẹ,
 ikọjwọsilẹ, gbẹdugbẹdu.
 overhead', *adv.* ganjan, katari.
 overlook', *v.* modžukuro.
 overlook'ing, *a.* amodžukuro.
 overrun', *v.* gbilẹ.
 oversee', *v.* fodžúto.
 overse'er, *n.* akiyesi, alafiyesi,
 alafodžúto.
 oversha'dow, *v.* šidži, šidžibò.
 o'versight, *n.* itodžú.
 overspread', *v.* gbolẹ.
 overtake', *v.* bá.
 overthrow', *n.* afobadže, itu.
 overturn', *v.* yi ... danò.
 overwhelm', *v.* bò, bò ... mó-
 lẹ, bílù.
 overwhelm'ed, *a.* bibòmólẹ.
 overwise', *a.* àmòdžú, amòtán.
 owe, *v.* dže, dže ... gbese.
 owl, *n.* ogbigbi, owiwi, oyo.
 own, *v.* ni.
 own'er, *n.* ninj, olodžá, olú,
 olúwa.
 ox, *n.* malù.
 oys'ter, *n.* kpašá, kpašanj.

P.

pacifica'tion, *n.* étutu.
 pa'cify, *v.* tuninò.
 pack, *v.* dẹru, ki.
 pack'age, *n.* okelẹ, ogo, waga.
 pack'rope, *n.* àkpa, ọbara.
 pad, *n.* akpere.
 pad'dle, *n.* adže, walami.
 pad'dle, *v.* wà.
 pad'dler, *n.* atukọ.
 pad'lock, *n.* agadagodo.
 pail, *n.* kuruba.
 pain, *n.* edòj, irora, ita.
 pain, *v.* dòn, ro.
 pained', *a.* onirora.
 pain'ful, *a.* kanj.
 paint, *n.* ase, ose, èse, aše.

paint, *v.* kùj, kpalose, sà.
 pair, *n.* takotabò, medži.
 palace, *n.* adij, aganjdžú, akpe-
 sanj.
 pala'ver, *n.* ọfò.
 pale, *a.* fura, rondòj, ši.
 pale'ness, *n.* iši.
 palm, *n.* atčlewó.
 palm'nut, *n.* ẹkuro.
 palm'oil, *n.* ekpo.
 palm'tree, *n.* okpe.
 palm'wine, *n.* ẹmọ, ogurù.
 pal'pitate, *v.* fò.
 pal'sied person, *n.* ẹlẹgba.
 pal'sy, *n.* ẹgba.
 pant, *v.* mí hele.
 pantaloons', *n.* akoto, šokoto,
 kafo, kanji.
 pant'ingly, *adv.* hele.
 pa'per, *n.* tákardá.
 parade', *n.* aluwasi, fari.
 pa'rasite, *n.* afomò.
 parasol', *n.* ikporunj.
 par'boil, *v.* gbàra.
 parch, *v.* di, dij, yan.
 par'don, *v.* dari ... dži, fi ... dži.
 par'don, *n.* idaridži, ifidži.
 pare, *v.* hẹ.
 pa'rent, *n.* abimọ, obi.
 pa'ring, *n.* (yam) ebe.
 park, *n.* ibó, abata.
 par'lor, *n.* bāsa, gbanga.
 pa'roquet, *n.* aganranj.
 par'rot, *n.* odẹ, ofe, ondẹre,
 tẹde.
 part, *n.* ẹleja, idá, iba, ikpa,
 ikpakanj.
 part, *v.* yà, dá, kpa, là.
 partake', *v.* še adžókpín.
 partak'er, *n.* adžókpín, ala-
 džoni, alabakpín, alakpín.
 par'tial, *a.* onišadžú: *to be par-
 tial*, šodžusadžú.
 partial'ity, *n.* odžusadžú.
 parti'cipate, *v.* kpín, wari.
 par'ticle, *n.* kimikini, šonšo,
 toutoro.
 parti'tion, *n.* ike, ikele.
 part'ner, *n.* egbe, ekedži: *in
 fishing or hunting*, alabakpa.
 par'tridge, *n.* akpàro, šúkurá.
 party, *n.* ikpa, odo.
 pass, *v.* da ... kodža, fò ... ko-
 dža, kodža, là, rèkodža, yikpo.
 pas'sion, *n.* edžanò, idinò.
 pas'sionate, *a.* odinò, šó.
 pass'over, *n.* irekodža.
 past, *a.* kodža, ẹhin.

paste, *v.* fi ... mó.
 pas'ture, *n.* kpakpa.
 patch, *v.* lẹ, lu ... le, ranj ... lu.
 patch, *n.* abulẹ, ida-asa.
 patch'work, *n.* iranlu.
 path, *n.* ikpa, ikpase.
 pa'tience, *n.* lakiri, sũru.
 pa'tient, *v.* fiyedenò, mu sũru,
 tẹdo.
 pa'triarch, *n.* babalá, babanlá.
 patrol', *v.* šode.
 patrol', *n.* išode.
 pat'ter, *v.* kpa bāta bāta.
 pat'tern, *n.* akpedžure, akpẹre,
 awoše, idžure.
 paunch, *n.* šaki, ikọj.
 pause, *v.* šimi.
 pawn, *n.* ọfa.
 pawn'servant, *n.* iwọfa.
 pawn, *v.* sigbà, sofa.
 pa'paw, *n.* bekpẹ, ibekpẹ, abo,
 šimbo.
 pay, *v.* dá, dawò, sanj: *to pay
 by instalments*, dawin.
 pay'ment, *n.* ẹšanj.
 pea, *n.* erẹ.
 peace, *n.* aláfi.
 peace'maker, *n.* aladžá, onilá-
 dža, ọladžá.
 pearl, *n.* iyòj.
 peck, *v.* šánj.
 peel, *v.* bó, hó, hó, kpa.
 peep, *v.* wò.
 pee'vish, *a.* kanra, radọ,
 šonò.
 pee'vishness, *n.* išo.
 peg, *n.* ẹkanj.
 peg, *v.* kàj ... lẹkanj.
 pelt, *v.* sọ ... lù.
 pen, *n.* kalamo.
 pe'netrate, *n.* gúnj, wò.
 pen'knife, *n.* abẹ.
 peo'ple, *n.* ẹnia.
 pep'per, *n.* ata, atáfi, atárere,
 gbóngbota, iyere.
 perceive', *v.* moye, wóye.
 perch, *n.* (fish), ikoro, ọwẹre.
 perch, *v.* bà, là le.
 perch'ing, *a.* iyẹ.
 percus'sion-cap, *n.* erò.
 perdi'tion, *n.* egbẹ.
 per'fect, *a.* kpé, kpikpé, tánj.
 perfect'ed, *a.* ašekpe, finj.
 perfe'ction, *n.* kpikpé.
 per'fectly, *adv.* tánj.
 per'forate, *v.* da ... lu.
 perform', *v.* gbe, dže.
 perfu'mery, *n.* turari.

perhaps', *adv.* abi, afalmò, bọya, seší.
 pe'ril, *n.* ewu.
 pe'rish, *v.* gbé, kugbé, ra, rún, ségbe.
 per'jure, *v.* bekpedže, bura eke.
 per'jury, *n.* ibekpedže.
 permit', *v.* dže, džowo.
 perpendi'cular, *a.* gan, gan-gan.
 perpet'ually, *adv.* titi.
 perplex', *v.* damu, gó, sú.
 perplexed', *a.* kò lelé, ròdžu.
 perplex'ity, *n.* idamu, igó, odžukpọn.
 per'secutor, *n.* oninobini.
 perseve'rance, *n.* aisimi, ito-dzú iyanđzú.
 persevere', *v.* foriti, še itọdžú, rọdžu.
 per'son, *n.* ẹnia, ẹni, uí, olu-ware.
 perspira'tion, *n.* ọgún.
 perspire', *v.* lágun.
 persuade', *v.* kpa...niyeda.
 persua'sive, *a.* ọfọn.
 pertain', *v.* ẹti, tori.
 perverse'ness, *n.* odi sí.
 pervert', *v.* yi, yi...kpada.
 pervert'er, *n.* afinọsadžere, afinọsčhin, afinọsode.
 pes'tilence, *n.* adžaka, adža-kále.
 pes'tle, *n.* ọmọ-odó.
 pet, *v.* kẹ, kpọy, sìn, yẹ.
 peti'tion, *n.* ẹbe.
 pew'ter, *n.* símíká, tasa.
 philan'thropy, *n.* ifeni.
 physi'cian, *n.* ologun, onišo-gun.
 phys'ic-nut, *n.* lóbotadžé, ši-gun.
 piazz'a, *n.* odẹde.
 pick, *n.* tu : to pick up, he, sà ; pick off, wọn.
 picked, *a.* (up), asá.
 pick'axe, *n.* igayre.
 pic'ture, *n.* awóran.
 piece, *n.* ẹsí, idžanđža.
 piece, *v.* bulé, raj...mó.
 pierce, *v.* bọ, gan, gún, kan...lara.
 pierced, *a.* gigan.
 pierc'ingly, *adv.* šin.
 pierc'ingness, *n.* ikanilara.
 pi'geon, *n.* ẹiyẹle, erukuku : white pigeon, adaba 'šusu ; wild pigeon, ataba orenkère.

pi'l'fer, *v.* džále, šafowóra.
 pi'l'ing, *n.* akodžo.
 pi'l'lage, *v.* kpiye.
 pi'l'lar, *n.* ọwọn.
 pi'l'lory, *n.* aba.
 pi'l'low, *n.* irora, tintim.
 pi'lot, *n.* atọkọ.
 pim'ple, *n.* ororẹ, rorẹ.
 pin, *n.* abere.
 pin'cers, *n.* ẹnu.
 pinch, *v.* dža...lekana.
 pine'apple, *n.* ọkpaimbó.
 pin'nacle, *n.* agúngan, ọsọsọ.
 pipe, *n.* fere : tobacco-pipe, igusó, ogusó, ikoko-taba.
 pipe, *v.* fọy, fọy fere.
 pip'er, *n.* afey fere.
 pis'tol, *n.* asíšori, ilekọ.
 pit, *n.* ilọ, koto, ọfin, ọgọdọ, libodži, isá : clay-pit, ikudu.
 pitch'er, *n.* orú.
 pi'ty, *n.* ńń.
 pi'ty, *v.* rado, šanu.
 place, *n.* ibi, ikpo, ihin, ikpana, isọ.
 place, *v.* ká, ka...sí, sọ...lọdžo.
 plague, *v.* yó...lenu.
 plain, *n.* kpetelé.
 plain, *a.* ọboro.
 plain'ness, *n.* gbangba.
 plaintiff, *n.* oluńsọn.
 plait, *v.* bá, wọn : to plait the hair, dirọn.
 plan, *n.* idamọran.
 plan, *v.* lamọran.
 plank, *n.* akpáko.
 plant, *v.* gbín, ri.
 plan'tain, *n.* agbagba.
 plas'ter, *v.* kpale, kuple, kùn.
 plate, *n.* awo, awokpọkọ, tan-gara.
 plat'ing, *n.* asùbò.
 plat'form, *n.* atibaba.
 plat'ter, *n.* awo-kpọkọ.
 play, *n.* ire.
 play, *v.* šire.
 play'ful, *a.* wẹ.
 play'fulness, *n.* asáwada, asaya.
 plead, *v.* bẹ, bẹbẹ.
 plead'er, *n.* abẹbẹ ẹlẹbẹ.
 plead'ing, *n.* ibẹbẹ : special pleading, asáwí.
 plea'sant, *a.* dọy.
 plea'santness, *n.* idọy.
 please, *v.* dọy-mó, wu.
 pleased, *a.* ye.
 pleas'ing, *adv.* ẹwu.

plea'sure, *n.* afẹ, inódidọy, ẹwu.
 pledge, *v.* sọfa.
 pledge, *n.* igbọwo, ọfa.
 plen'tiful, *a.* kpọ, kpkpọ.
 plen'ty, *n.* ọkpọ, ọkpọlọkpọ, kpkpọ.
 pli'able, *a.* lẹ.
 plot, *v.* dirikisi, ríkisi, šawo.
 plow, *v.* tulẹ.
 pluck, *v.* fa, ká, kán, šidi, tu, yà.
 plump, *v.* yanwe, šánu.
 plump'ness, *n.* owe.
 plun'der, *v.* kpiye, tu.
 plun'der, *n.* ámọna, ikogun.
 plun'derer, *n.* akpiye.
 plunge, *v.* foribọ.
 pock'et, *n.* ákpo.
 point, *n.* (sharp) agogorí, gogo, ọsọsọ.
 point, *v.* dzure, sá, sọy, sún, wọn.
 point'ed, *a.* šoró.
 poi'son, *n.* ọgun, oró.
 po'ter, *n.* iwana.
 pole, *n.* ogún, ọkra.
 police', *n.* isọde.
 police'man, *n.* ọlọkra, ọlọkpa.
 po'lish, *v.* dan.
 pollute', *v.* sọ...daimó.
 pollu'tion, *n.* aimó, ẹri.
 pond, *v.* dagun, gun.
 pond, *n.* adagun, ọdo.
 pon'der, *v.* dodžukodo, tò.
 pool, *n.* àbata.
 poor, *n.* asíšẹ, ošíšẹ, otoší, talaká, olukpọndžu.
 popula'tion, *n.* ọtekọlu, agbalu.
 porch, *n.* ilò, ilòro.
 por'cupine, *n.* lilí, ore.
 por'ridge, *n.* asáro.
 port'er, *n.* aláru.
 por'tion, *n.* ẹlela.
 posi'tion, *n.* ikpo.
 possess', *v.* dzogun, ní.
 possess'ing, *n.* atini.
 posses'sion, *n.* anidókpin, ani-tan, iní, ilẹ nini, nini, ohun iui.
 posses'sor, *n.* onini.
 pos'sible, *a.* šíše.
 pos'sibly, *adv.* afalmò.
 post, *n.* okpó.
 postpone', *v.* fítí, yẹ.
 pot, *n.* amọ, ikoko, kólóbo, oru-ba : oil-pot, ẹra.
 pot'ash, *n.* áro.
 pota'to, *n.* kukunduku.
 pot'sherd, *n.* akpádi.

pot'ter, *n.* ọmọkoko.
 pot'ter's clay, *n.* àmọ.
 pouch, *n.* àkpo, birigami.
 pounce, *v.* kọnsa.
 pound, *v.* gúy.
 pour, *v.* (out) dà, da... nù, ta, tú.
 po'verty, *n.* ihale, iya, tẹ̀nítẹ̀nì.
 pow'der, *n.* iwašé, lúru, olo.
 pow'er, *n.* ašé, ikpá, agbara.
 pow'erful, *a.* alagbara.
 powerless, *a.* ailagbara.
 prai'rie, *n.* kpakpa, ikpakpa, òḍaj.
 praise, *v.* bùyin, yé, yin.
 praise, *n.* iyin.
 praised, *a.* niyin.
 prate, *v.* sọrọ botiboti.
 pra'tingly, *adv.* botiboti.
 prawn, *n.* ede.
 pray, *v.* gbadua, gbadura, kirọj.
 pray'er, *n.* (to God) adura, (to idols) ikpe, (by rote) iron.
 preach, *v.* wási, wásu.
 preach'er, *n.* oniwási, oniwásu.
 precede', *v.* šadžu.
 pre'cious, *a.* kán, wón, šọwọj.
 pre'ciousness, *n.* iyebiye.
 pre'cipice, *n.* ogbọj.
 preci'pitate, *adv.* kpń, šin, šọj, tukpń.
 predes'tinate, *v.* yàw... tẹ̀lẹ̀, lána... tẹ̀lẹ̀.
 predict', *v.* sọ... tẹ̀lẹ̀, sọ asọ-tẹ̀lẹ̀.
 predic'tion, *n.* asọtẹ̀lẹ̀, afošé.
 pre-exist'ent, *a.* adžibowabá.
 prefer', *v.* fa, fi... šadžu.
 pre'ference, *n.* iwù.
 preg'nancy, *n.* oyún, aboyún.
 preg'nant, *a.* yún, boyún, lo-yún.
 preme'ditate, *v.* ro... tẹ̀lẹ̀.
 prepara'tion, *n.* ése, imura.
 prepare', *v.* dá, mura, kpálemọ, kpata, kpése.
 prescribe', *v.* dá.
 prepay', *v.* saş tẹ̀lẹ̀.
 pre'sence, *n.* iwadžu, odo.
 pre'sent, *n.* isisiyi, iwoyi.
 pre'sent, *n.* ebùn, ibùn, ifibun, òrẹ, itòrẹ.
 present', *v.* fi... torẹ, ta... lorẹ.
 pre'sently, *adv.* loşaj.
 preserve', *v.* kpanọ: to preserve life, sẹ̀mi.
 preserv'er, *n.* olúkpanọ.

press, *n.* ihagaga.
 press, *v.* fọj, kí, ki... mọ̀lẹ̀, kirimọ.
 press'ed, *a.* akimọ̀lẹ̀, rin, wù, šumọ.
 presume', *v.* dašá, gbodo, kugbu.
 presump'tion, *n.* ikugbu.
 presump'tuous, *a.* kugbu.
 presump'tuously, *adv.* kà, kàka.
 pretend', *v.* fi... kpè.
 pret'tiness, *a.* daradara.
 pret'ty, *a.* dara.
 preva'il', *v.* bóri, šegun.
 preva'riate, *v.* yihuy.
 prevent', *v.* da... lekun.
 pre'vious, *a.* iwadžu, šadžu.
 pre'viously, *adv.* larinkaj, tẹ̀lẹ̀, ri.
 pre'viousness, *n.* ariş.
 prey, *n.* ohuş-odo.
 price, *v.* dáyelé, diyelé.
 price, *n.* iye, iyebiye.
 prick'le, *n.* egún.
 pride, *n.* irera.
 priest, *n.* aláwò, álufa, oluwò.
 priest'hood, *n.* orišé-alufa, išé-oluwò.
 pri'mitive, *a.* ateteko.
 prince, *n.* omoş alade.
 prin'cipal, *n.* kpatakí, olorí.
 pri'son, *n.* tubu.
 pri'soner, *n.* aratubu, ešewọj, ondè.
 pri'vacy, *n.* abelè, ikoko.
 pri'vately, *adv.* nikoko.
 pri'vy, *n.* salanga.
 prized, *a.* ayọ.
 proba'tion, *n.* idanwò.
 proceed', *v.* nşó.
 proclaim', *v.* kedé.
 proclaim'er, *n.* akede.
 proclama'tion, *n.* ikede.
 pro'digal, *n.* àkpa.
 produce', *v.* roşun, ta.
 pro'fit, *v.* da... lero.
 pro'fit, *n.* egbe, ère, iwadže, anşani.
 pro'fitable, *a.* şajşani.
 prohi'bit, *v.* dewò, sọşin, şo... loşin.
 prohibi'tion, *n.* èwọ, eşun, isofin, ofin.
 promenade', *v.* kàwú.
 pro'minent, *a.* goşoş, leke, yori.
 pro'mise, *n.* ileri.

pro'mise, *v.* leri, še ileri, šeleri.
 pro'mising, *a.* dá.
 promote', *v.* raş... loşo.
 promul'gate, *v.* taş... kalè, wi... kalè.
 pronounce', *v.* sọ.
 proof, *n.* iladi.
 prop, *n.* afehişti, alafehişti.
 prop, *v.* fehişti, ú, ti... lehiş.
 pro'pagate, *v.* bisí.
 pro'per, *a.* kpegede.
 pro'perly, *adv.* dode.
 pro'perty, *n.* nini, okuş ini.
 pro'phesy, *n.* asọtẹ̀lẹ̀.
 pro'phesy, *v.* sọ asọtẹ̀lẹ̀, sọtẹ̀lẹ̀.
 proph'et, *n.* anabí, woli.
 propi'tiate, *v.* te, tu... ninọ, tunọ.
 propitia'tion, *n.* itunọ.
 propi'tiator, *n.* atunọ.
 propo'sal, *n.* adamòran.
 propose', *v.* damòran, lána.
 propo'ser, *n.* onidamòran.
 prosper'ity, *n.* alafia.
 pro'sperate, *v.* doşalè.
 prostra'tion, *n.* obalè.
 protect', *v.* dabòbò.
 protract', *v.* fa... gun.
 protrude', *v.* yo... džade.
 protu'berance, *n.* koko.
 proud, *a.* gberaga, agberaga, ašefeš, onifeš, rera, onirera.
 proud'ly, *adv.* kaşa, yan.
 prove, *v.* làdi, lári, sọfi.
 pro'vender, *n.* sákasáka.
 pro'verb, *n.* owe.
 provide', *v.* kpese... silè.
 pro'vidence, *n.* ése, iwoye.
 pro'vince, *n.* igberiko.
 provi'sion, *n.* feđžefedže.
 provoca'tion, *n.* imunibinọ, oro.
 provoke', *v.* mu... binọ.
 proxim'ity, *n.* asoşnọ, cti, eba, ikusa.
 pru'dence, *n.* ilóye.
 pru'dent, *a.* olóye.
 prune, *v.* wọj.
 prun'ing-knife, *n.* ada.
 pry, *v.* (into) tođžubo.
 pshaw! *interj.* šío!
 pub'lic, *n.* igbangba.
 public cri'er, *n.* akede.
 pub'lic square, *n.* abáta.
 publi'city, *n.* gbangba.
 publicly, *adv.* nigbangba.
 publish, *v.* ro... kalè, wi... kiri.

puff, *v.* f̄.
 puffed up, *a.* aṣefefe.
 pull, *v.* f̄, ká, yó.
 pump'kin, *n.* elegéde.
 punctually, *adv.* lákoko.
 pun'gency, *n.* ita.
 pu'nish, *v.* d̄z̄e...niya, ṣe...niṣe.
 pu'nishment, *n.* atíṣeniṣe.
 pu'pil, *n.* om̄o-od̄n.
 pur'blindness, *n.* aṣota.
 pur'chase, *v.* rà.
 pur'chase, *n.* or̄à.
 pur'chaser, *n.* or̄à, or̄à.
 pure, *a.* eki, m̄ó.
 pure'hearted, *a.* oninifufu.
 purge, *v.* ṣu...min̄ó.
 purification, *n.* awen̄ó.
 pu'rify, *v.* dà, w̄e...in̄ó, w̄e...n̄ó.
 pu'rity, *n.* aileri, fufu, min̄ó.
 pur'ple, *a.* àluko.
 pur'pose, *v.* gb̄ero, lam̄ṣran, kp̄inu.
 purr, *v.* kuṣkuṣ.
 purse, *n.* alafuta, asunw̄on, orek̄eṣe.
 pursue', *v.* lé, le...kpa, le...reṣe, tel̄e.
 pus, *n.* aikperi.
 push, *v.* bi, w̄ó, ṣi, t̄e, ti: *to push down*, bi ṣubu, ti ṣubu, tari.
 pus'tule, *n.* aror̄e, ror̄e.
 put, *v.* fi: *to put away*, fi...sil̄e, k̄o...sil̄e; *put down*, fi...bal̄e, fi...l̄e, fi...sil̄e; *put upon*, fi...l̄e, bu...kà; *put into*, fi...bo, fi...sin̄ó, fi...w̄ó.
 pu'trefy, *v.* rà.
 puz'zle, *n.* okpe.
 puz'zle, *v.* ḡó, kpa...lokpe, s̄u.
 puz'zling, *a.* ḡiḡo.

Q

quad'ruped, *n.* eṣem̄erin.
 quad'ruple, *a.* em̄erin, em̄em̄erin.
 quake, *v.* s̄e.
 quan'tity, *n.* iye.
 quar'rel, *v.* d̄z̄à, s̄ò, ba...s̄ò.
 quar'relsome, *a.* aláṣò.
 quar'ter, *v.* da...merin.
 quar'ter, *n.* idamerin.
 queen, *n.* ayaba, iyafin.
 queer, *a.* em̄ó, l̄em̄o.
 quench, *v.* kpa.

ques'tion, *n.* èbi, ère, ibi.
 ques'tion, *v.* bi...l̄ere, fi...l̄e.
 quick, *a.* yara, w̄ere, ṣira.
 quick'en, *v.* da...loye, d̄zi.
 quick'ener, *n.* asónidàye.
 quick'ly, *adv.* f̄u, kaṣ, wiri-wiri.
 quick'sand, *n.* iyanrin̄ did̄e.
 qui'et, *v.* bàl̄e, r̄e.
 qui'et, *a.* dak̄ed̄z̄e, dak̄eroro, kek̄ek̄pa.
 qui'etly, *adv.* furu, d̄z̄e, d̄z̄ed̄z̄e, kaun̄kaun̄, t̄en̄ó.
 qui'etness, *n.* ibal̄e, didak̄e, idak̄e, idak̄ed̄z̄e, idak̄eroro.
 quill, *n.* iȳe.
 quit, *v.* d̄ékun̄, ȳe, ye.
 quite, *a.* nini.
 qui'ver, *n.* akpo, adegun̄ṣakpo, ar̄ò, eḅiri.
 qui'ver, *v.* m̄i, wariri.

R

rab'bit, *n.* agoro, choro.
 race, *n.* iran̄, idile, oril̄e; id̄z̄e.
 rack'et, *n.* ariwo.
 ra'diant, *a.* f̄of̄o.
 raf'ter, *n.* eḅk̄e.
 rag, *n.* agisa, akisa.
 rag'man, *n.* alagisa.
 rage, *v.* d̄z̄à.
 rag'ged, *a.* kp̄er̄ek̄per̄e, alagisa.
 rai'ment, *n.* aṣo.
 rain, *n.* èd̄zi, òd̄zo.
 rain, *v.* r̄ò, r̄òd̄zo.
 rain'bow, *n.* osum̄are.
 raise, *v.* gbe, gbe...d̄ide: *to raise from the dead*, d̄zi...d̄ide, d̄z̄inde.
 rais'ing, *n.* agbende.
 rake, *v.* ha.
 rake, *n.* oha.
 ram, *n.* àgbo.
 ram, *v.* ki.
 ram'ble, *v.* rin̄...kiri.
 ran'cid, *a.* gboku, meṣeri.
 rancid'ity, *n.* eṣeri.
 rank, *n.* ito.
 ran'som, *v.* ra...kpadà, da...nide.
 ran'somer, *n.* oludande.
 rap, *v.* k̄an̄.
 ra'pidly, *adv.* f̄u.
 ra'rity, *n.* akan̄ṣe.
 ras'cal, *n.* d̄zaḡid̄zaḡan̄.
 rasp, *v.* àyun̄.
 rat, *n.* ekute; different kinds are called, aṣe, agò, agorò, aṣe, asin̄rin̄, egbara, imod̄zo, mal̄ad̄z̄a, okete.
 ratan', *n.* akparon̄.
 rate, *v.* d̄ayel̄e, diyel̄e.
 rath'er, *adv.* kuku.
 ra'vel, *n.* t̄u.
 ra'ven, *n.* d̄òḅe.
 ra'venous, *a.* akpad̄z̄e, akpani-d̄z̄e.
 ravine', *n.* koto d̄z̄iḡon̄ron̄, id̄z̄iḡon̄ron̄.
 raw, *a.* tutu.
 raze, *n.* w̄ó...kpal̄e.
 ra'zor, *n.* abe.
 reach, *v.* d̄z̄asi, t̄ó.
 read, *v.* kà, kàwe, kewu.
 read'er, *n.* akàwe.
 rea'diness, *n.* imura.
 read'ing, *n.* akàwe.
 rea'dy, *a.* mura.
 re'al, *a.* ot̄ó.
 re'alize, *v.* m̄ò ot̄ó.
 re'ally, *adv.* ṣe.
 reap, *v.* kà, kore.
 reap'er, *n.* olukore.
 reap'ing hook, *n.* ṣilo.
 reappear', *v.* t̄on̄ hàn̄.
 rear, *v.* t̄e, t̄ò...dagba.
 reascend', *v.* t̄on̄ gòke.
 rea'son, *n.* iyeno; (cause), idi, itori.
 rea'son, *v.* soroye, ṣaroye, sod̄i.
 rea'sonable, *a.* d̄zana, niyen̄ó.
 rea'soning, *n.* asoye.
 reassem'ble, *v.* t̄on̄ kp̄ed̄zo.
 re'bel, *n.* asòṣe, olusòṣe, oṣòṣe.
 rebel', *v.* rok̄on̄, ṣeiȳe, s̄òṣe.
 rebel'ion, *n.* isòṣe, oṣe, eiȳe.
 rebuild', *v.* t̄on̄ k̄o.
 rebuke', *v.* bá...wi, fi...kil̄o.
 rebuke', *n.* ibawi.
 recall', *v.* kp̄e...kpadà, t̄on̄ kp̄e.
 receive', *v.* gbà, gba...sod̄o, ri...gbà, t̄ew̄ogbà.
 receiv'ing, *n.* atigbà.
 re'cently, *adv.* nilol̄o, ṣeṣe, ṣeṣon̄.
 recep'tion, *n.* atigbà, igba.
 reck'less, *a.* alána.
 reck'on, *v.* ṣiro, ká.
 recline', *v.* ḡun̄ron̄, roḡbok̄u.
 recollect', *v.* miran̄, ranti.
 re'compense, *n.* owoṣ, eṣan̄.
 re'compense, *v.* radi, san̄.
 re'concile, *v.* l̄ad̄z̄a, t̄u.

re'conciler, *n.* aladzá.
 reconcilia'tion, *n.* étutu.
 recount', *v.* kpitay, ro.
 re'create, *v.* gba...idarawa.
 re'creating, *a.* atopdá.
 red, *a.* be, beledže, kpón, kpa-kpa, rẹ.
 redeem', *v.* da...nide.
 redeem'er, *n.* oludande.
 redemp'tion, *n.* idande.
 red'ness, *n.* ẹkpón, kpukpa.
 reed, *n.* ifefe, idžé, iye.
 reel, *v.* dakún, dáwú, káwú.
 reflect', *v.* mete.
 reform', *v.* kpiwadá.
 reform'er, *n.* alatojše.
 refrain', *v.* kparamó.
 refresh', *v.* tu...lara, tura.
 refreshment, *n.* itura.
 re'fuge, *n.* abó, asalá.
 refund', *v.* san kpadá.
 refuse', *v.* dù, kò.
 re'fuse, *n.* atánú, okúšá.
 refus'er, *n.* okóšẹ.
 regard', *v.* bikita, feti, fodžúsi, ká, wòdžú, sídžuwó.
 rege'nerate, *v.* tojbi.
 re'gion, *n.* agbegbe, ekuj, ẹkún, iba.
 re'gularly, *adv.* lẹsẹsẹ, lẹsẹsẹ.
 rehearse', *v.* ro.
 reign, *v.* džoba.
 reign, *n.* idžoba.
 rein, *n.* okún idžanu.
 reins, *n.* ọkan.
 reject', *v.* kò, tikuro.
 reject'ed, *a.* asati.
 rejoice', *v.* yò, yòayò, yayò, ẹcayò.
 rejoice'ing, *n.* (together) adžoyò.
 relate', *v.* gbà...rò, kpa, ro, rohin.
 rela'tion, *n.* ikpele.
 re'lative, *n.* ána, ikpele, olutan, olotan.
 release', *v.* da...kuro, dža...nide, džowolowò.
 relent', *v.* dẹkun.
 relief', *n.* itil.
 relieve', *v.* de...lara.
 reli'gion, *n.* sinsi.
 relin'quish, *v.* fi...silẹ.
 reluct'ance, *n.* afiyandžúše.
 reluct'ant, *a.* alaigbođo.
 reluct'antly, *adv.* kòti.
 remain', *v.* kún, síkún.
 remain'der, *n.* abukún, ibukún, iyokun.

remains', *n.* akpeta.
 remem'ber, *v.* niray, ranti.
 remem'brance, *n.* iniray, iray.
 remind', *v.* ray...niray, ray...leti, sí...niye.
 remis'sion, *n.* ifidži.
 remit', *v.* fi...dži.
 rem'nant, *n.* akókún, ibukún, idasi; (after eating) adžekún.
 remorse', *n.* arókan.
 remote', *a.* džina.
 remove', *v.* dá, sí, sídi, sí nidi, síkpo, sí níkpo.
 rend, *v.* fa...ya.
 renounce', *v.* kọ...lẹ, kọ...silẹ.
 renova'tion, *n.* akpada.
 rent, *v.* gbà...wò.
 rent, *n.* akpágbèyin, ẹlẹ.
 renuncia'tion, *n.* okéhinlá.
 repair'er, *n.* alatojše.
 repair'ing, *n.* atojše.
 repeal', *v.* fi...dži.
 repeal', *n.* afidži.
 repeat, *v.* tój wí.
 repent', *v.* kpiwadá, ronókpiwadá, tuba.
 repent'ance, *n.* ironókpiwadá.
 repeti'tion, *n.* (of behavior) atojhù, (of words) atojwi.
 replen'ish, *v.* lẹ, kój.
 reply', *v.* dahùn, fesi, fenusi, džẹ.
 reply', *n.* esi, idahun, idžẹ.
 report', *n.* džilun, džiše.
 reproach', *v.* bi...lòhun, bo-džumó, síregun.
 reproach', *n.* ẹgag, ẹtẹ.
 reproof, *n.* abáwí.
 reprove', *v.* bá...wi.
 reputa'tion, *n.* ihin.
 reput'ed, *a.* ẹebi, ašebi.
 request', *v.* hère, bẹ.
 require', *v.* dji, bère.
 requite', *v.* sán.
 res'cue, *v.* gbà...là.
 resem'blance, *n.* alugboj, aworan, džidžo, iray.
 resem'ble, *v.* dabí.
 reserve', *v.* da...sí, da...silẹ.
 reserved', *a.* adasi.
 reside', *v.* gbe.
 re'sidence, *n.* ilé.
 re'sident, *a.* agbe, atikpo.
 re'sidue, *n.* iyokun.
 re'sin, *n.* ida, odžia.
 resist', *v.* gbonu, kodžudža, kò-džudžasi.
 re'solute, *a.* gbodžulé.

resolu'tion, *n.* ẹlẹ.
 resolve', *v.* kpinu.
 resort', *v.* tọ.
 respect', *v.* fodžukpe, džuba, ká, ka...si.
 respect', *n.* ikasi, ọwọ.
 respect'er, *n.* oluwodžú.
 respect'fully, *adv.* tówotówo.
 respond', *v.* dahún.
 respond'er, *n.* elegbe.
 response', *n.* idžẹ.
 responsibility, *n.* adabówọ.
 rest, *v.* fẹri, nuyi, simi.
 rest, *n.* isimi.
 rest'less, *a.* aisimi.
 rest'lessly, *adv.* laisimi.
 rest'lessness, *n.* ákpon, áro.
 restora'tion, *n.* amukpada.
 restore', *v.* bọ...sikpo, mu...kpadá.
 restrain', *v.* mărădaro, kpa-ranó.
 restraint', *n.* akóso.
 result, *n.* amuwál.
 resurrec'tion, *n.* adžinde, agbende.
 retail', *v.* sú.
 retail'er, *n.* onisu.
 retali'ate, *v.* radí, san ẹsán, wò.
 retali'a'tion, *n.* ẹsán, isan, owon.
 retreat', *v.* hó.
 retrat', *n.* osá.
 return', *v.* kpadá.
 return', *n.* akpada.
 reveal', *v.* fi...hàn, síkpayá.
 reveal'ing, *n.* ašikpaya.
 revela'tion, *n.* ašikpaya, ifihán.
 re'velry, *n.* irede.
 revenge', *v.* gbesan, san...ẹsán.
 re'verence, *v.* bọlá, hari.
 re'verent, *a.* hari, ahari.
 re'verently, *adv.* tówotówo.
 revile', *v.* gán.
 revil'er, *n.* ẹlegan.
 reviv'al, *n.* atojhù, odži.
 revive', *v.* tøjhù, sí...lodžú.
 reviv'er, *n.* oludži.
 reviv'ing, *n.* odži.
 revolt', *v.* ẹciye, ọtẹ.
 revolt'er, *n.* ašote.
 revolve', *v.* yi.
 reward', *v.* san.
 rheu'matism, *n.* akuiegbé, lakuiegbé.
 rib, *n.* egun ila.
 rice, *n.* mú, sinkafá.

rich, *a.* atilá, là, olowá, loro, olòro, oloṭo.
 rich'es, *n.* oḷà.
 rid'dle, *n.* aḷo.
 ride, *v.* gešin, gùn.
 ri'dicule, *n.* eleya, eṣi, eṣin.
 ri'dicule, *v.* fi... ṣeṣe, fi... eleya, fi... ṣeṣin, ṣahó, ṣeṣin, ṣeṣe.
 right, *v.* ṣare.
 right, *n.* aláre : right side, oṭon.
 right, *a.* dogba, dzare, ṣare, tó.
 right'eous, *a.* aláre, olódodo.
 right'ousness, *n.* dódó, dodó, ododó.
 right'ly, *adv.* dēdē.
 rim, *n.* eti.
 rind, *n.* ekpo.
 ring, *n.* eka, óka, ornka.
 ring, *v.* lagogo.
 ring'leader, *n.* alaṣerān.
 rinse, *v.* ṣí, sí... nò.
 ripe, *a.* asógbó, dē, èdē, kpōj.
 rip'en, *v.* gbó, kpōjso.
 ripe'ness, *n.* èdē, èkpōj.
 rise, *v.* dido, ru, wú, (*as a hillock*) búke.
 rise, *n.* ihulē.
 ris'ing, *n.* (up) adzinde, iru.
 risk, *v.* da... ṣe.
 risk, *n.* idaṣe.
 ri'val, *v.* didze.
 ri'val, *n.* oludidze.
 ri'valry, *n.* alidze, idze.
 ri'ver, *n.* ódo, ikpa-ódo.
 ri'vulet, *n.* omòdò, soló.
 road, *n.* ikpa-ona, òna.
 roam, *v.* kiri.
 roar, *v.* hó.
 roast, *v.* sun, sɔn.
 rob, *v.* bolé, ko... lèru.
 rob'ber, *n.* labamolē, alabamolē, edžikan, igara, oḷosa.
 rob'bery, *n.* igara, oṣà.
 rock, *n.* akpáta, okuta, agbasa.
 rod, *n.* ogo.
 rogue, *n.* òle.
 roll, *n.* (of cloth), akpokpo.
 roll, *v.* ká.
 roof, *n.* iteḷo, òlé, orulé.
 room, *n.* afo, aye, ikele.
 room'y, *a.* alaye, laye.
 roost, *v.* wò.
 roost'er, *n.* ákukò.
 root, *n.* eḷgo, gbongbo.
 root, *v.* tangbo.
 rope, *n.* okùn, òróg.
 rope'maker, *n.* olòkun.

rot, *v.* bù, lù, rà.
 rote, *n.* ikà.
 rot'ten, *a.* okunra.
 rough, *a.* dzágan, kpálakpála.
 rough'ly, *adv.* kabakaba, yan-yàn, ṣakpaṣakpa.
 rough'ness, *n.* hānahāna.
 round, *a.* ṣu.
 round, *adv.* or *prep.* yika.
 rouse, *v.* dži, tadži.
 row, *n.* eṣe.
 row, *v.* tuko.
 row'er, *n.* atuko.
 rub, *v.* gbo, kijnri, kpa, rá.
 rud'der, *n.* itoko.
 rug'ged, *a.* ṣakísaki.
 rug'gedly, *adv.* ṣakísaki.
 ru'in, *v.* rún, kparun, ba... dzé.
 ru'ins, *n.* áhorò, alakpa, aladžokpa.
 rule, *v.* ṣe akoso, dzoye, dzóba, kawó, sólori.
 rul'er, *n.* odžoye, akoso.
 ru'mor, *n.* okiki.
 rump, *n.* bebe id', id'.
 run, *v.* sá, salóh, sare, sáre.
 run'away, *n.* asásin, isaysa.
 run'ner, *n.* asare.
 run'ning, *n.* asá.
 rush, *v.* róg.
 rush, *n.* ogiri.
 rust, *v.* da... kpara, dikpara, dogun.
 rust, *n.* ikpara.

S.

Sab'bath, *n.* isini, oṣe : the Mohammedan Sabbath, adžimó, idžimó.
 sab'bath-breaker, *n.* aboṣe-džé.
 sack, *n.* oké, akalambi.
 sa'cred, *a.* máto.
 sa'crifice, *v.* fi... rubo, ṣeḷo.
 sa'crifice, *n.* aruda, arukon, eḷo, igbo.
 sa'crlige (commit), *v.* dzá Olorun li òle.
 sad, *a.* fadžuro, furò.
 sad'dle, *n.* asá, gári.
 sad'dle, *v.* di... ni gári.
 sad'dle-cloth, *n.* bese, itehin.
 sad'ness, *n.* ifadžuro.
 safe, *a.* ailewu, lá.
 safe'ly, *adv.* li ailewu.
 safe'ty, *n.* ailewu, aláfia, oḷà.

sail, *n.* igbòkun.
 sail, *v.* riḡ.
 sail'ing, *n.* ita, irin.
 sailor, *n.* oloko.
 saint, *n.* ènia mimó.
 sake, *n.* itori.
 salaman'der, *n.* omòle.
 sali'va, *n.* ito.
 salt, *n.* iyò, oṣere.
 salt, *v.* fi iyò sí.
 saluta'tion, *n.* aikú, akú, ókú, iki, ikini, kiki.
 salute', *v.* kí.
 salva'tion, *n.* igbalá, ilà.
 same, *a.* bakaná, eyiná, kaná, ná, okaj.
 sanctifica'tion, *n.* isòdi mimó, adimimó.
 sanc'tify, *v.* so... di mimó.
 sand, *n.* iyarij, busú.
 san'dal, *n.* bata, salubata.
 sand'fly, *n.* emirin.
 sap, *n.* odze.
 sash, *n.* ikòḷe, mayafi.
 Sa'tan, *n.* èṣi, bara, ebilisi.
 satch'el, *n.* birigami, làba.
 sa'tiate, *v.* tori odžú.
 sati'ety, *n.* ayó, adžeyó, itori odžú.
 satisfac'tion, *n.* itēloron.
 sa'tisfied, *n.* leḷe, yó.
 sa'tisfy, *v.* tē... loron, tori odžú, kón... lodžú.
 sauce, *n.* oḷe.
 sauce'pan, *n.* isasun.
 sau'cy, *a.* safoḷuzi yadžu.
 sa'vage, *a.* asò.
 save, *v.* gbà... là, ṣe igbalá, mu... là.
 saved, *n.* atilá.
 sav'ior, *n.* olá, olúgbalá, onlā.
 sa'vor, *n.* adòj.
 sa'vory, *a.* lorùh, olorùh, adidòj.
 saw, *v.* fi àyun rē.
 saw, *n.* àyun, oyún.
 saw'yer, *n.* aláḡi, gbēnagbēna.
 say, *v.* li, ni, kpé, kperi, wí.
 scab'bard, *n.* ako.
 scafold, *n.* atilaba.
 scale, *n.* (fish) ikpē, ikpekpē.
 sca'ly, *a.* yiḡi.
 scar, *n.* odžú, ṣaḡa.
 scarce, *adv.* kede, ṣowon, wón.
 scar'city, *n.* iwon, owón.
 scare'crow, *n.* adidži.
 scar'let, *n.* alári, ododó.
 scat'ter, *v.* fē... ka, fōj, fōjka, tanḡ, tuka.

scat'tered, *n.* ọwara.
 scat'teringly, *adv.* katakata,
 lilili, šaša, tere.
 scent, *n.* orún.
 scent, *v.* gbóru.
 scentless, *a.* ailóru.
 scep'tre, *n.* okpa, okpa oba.
 scho'lar, *n.* akódzù, omọ kewu.
 scis'sors, *n.* alumágadzi, ọmu.
 scoff, *v.* fi...še ẹleya, yọ sùti
 sí.
 scoffer, *n.* ẹleya, ẹlegán.
 scold, *v.* sò, bá...sò, báwí.
 scold'ing, *n.* abáwí.
 scorch, *v.* dzoa.
 scorn, *n.* ẹya, ikposi.
 scorn'er, *n.* ẹleya.
 scor'pion, *n.* akékè, akérekèrè,
 odžogan.
 scoun'drel, *n.* alarékèrèkè.
 scour, *v.* kpa, fì.
 scourge, *v.* ná.
 scowl, *v.* fèdžu.
 scram'ble, *v.* šegádugudu, dži-
 džadu.
 scram'bling, *n.* gúdugudu,
 idžadu.
 scrap, *n.* akisa, ida asa, irekpe.
 scrape, *v.* fa, ha, han.
 scratch, *v.* ká, kò, dža lekana.
 scraw'ny, *a.* hiantá.
 scream, *v.* han.
 scribe, *n.* akòwe.
 scrip, *n.* akpo-agbadagodo. See
satchel.
 scro'fula, *n.* ẹte, odogí.
 scrut'inize, *v.* wadi.
 sculp'ture, *n.* ike.
 scut'tle, *n.* alafo.
 scut'tle, *v.* lu.
 sea, *n.* agbani, okun.
 sea'-breeze, *n.* atégun.
 sea'-coast, *n.* eti okun.
 seal, *n.* sami sí, di.
 search, *v.* wà.
 search, *n.* afèri, awari.
 searched, *a.* awatán.
 sea'-shell, *n.* kpèkpekun.
 sea'son, *n.* ewò, wakati.
 sea'sonable, *a.* šakoko.
 seat, *n.* ibudžoko, ikpo.
 se'cond, *a.* ekedži, kedži, atele.
 se'condly, *adv.* lekedži.
 se'cresy, *a.* abelè.
 se'cret, *n.* afowòbò, alamò, asiri,
 esi, esin.
 se'cret, *a.* ikòko.
 se'cretly, *adv.* nikòko.

se'cret-teller, *n.* asoròdžedže,
 asoròkèle.
 sect, *n.* iyakpa.
 secta'rian, *n.* oniyakpa.
 secure', *a.* là, laillewu.
 secu'rity, *n.* ilà, onigbòwọ.
 sedge, *n.* šege.
 sedi'tion, *n.* isòtẹ: to cause se-
 dition, rulu.
 sedi'tious, *a.* olotẹ.
 seduce', *v.* fà...lẹtan.
 see, *v.* ri, riran, wò.
 seed, *n.* iru, irugbin, irumo.
 seed time, *n.* igba irugbin.
 see'ing, *n.* atiri, iran.
 seek, *v.* šaferi, wá, wakiri.
 seek'er, *n.* afèri.
 seem, *v.* wò, dabi.
 seen, *a.* ari.
 seer, *n.* oluwò.
 seethe, *v.* bọ.
 seize, *v.* gbà...mu.
 seiz'ure, *n.* amuya, ọmu, igbamu.
 sel'dom, *adv.* idžokanlogbón.
 select', *v.* šà, yàn, šà...yàn.
 select'ed, *n.* asàyan, ayo.
 self, *pron.* kpakpa, tikalá, ti-
 kará, dá.
 self-conceit', *n.* amòtán.
 self-defence', *n.* igbera.
 self-deni'al, *n.* ikparamọ.
 self'ish, *a.* fera, onifera.
 self'ishness, *n.* ifera.
 self-willed', *n.* alášedšú.
 self-willed'ness, *n.* ašetinò.
 sell, *v.* tà.
 sel'ler, *n.* otà.
 sel'ledge, *n.* eti ašọ.
 se'micircle, *n.* ošumàrè, biò-
 šumàrè.
 send, *v.* ran, ran...nišẹ, ranšẹ.
 send'er, *n.* oluranšẹ.
 send'ing, *n.* riran.
 se'nior, *n.* are.
 sense, *n.* itunò, iyenò.
 sen'tence, *n.* inò, ikpinu.
 sen'try, *n.* isò.
 se'parate, *v.* da...nikpa, loto,
 kpala, ya...soto, yà, yakpa.
 se'parately, *adv.* loto, soto.
 se'parateness, *n.* oto.
 separa'tion, *n.* ẹya, iyakpa.
 se'pulchre, *n.* ibodži.
 serenade', *v.* dadža.
 ser'pent, *n.* èdžo.
 serv'ant, *n.* omọ, omọdọ,
 iranšẹ.

serve, *v.* sin, še ti.
 ser'vice, *n.* isẹ-ishẹ, shshẹ.
 ser'vile, *a.* bi eru.
 servi'lity, *n.* iwà eru.
 ser'vitude, *n.* oko eru.
 set v. ba, wò: to set upon, bu
 ...kà, gbe...kà, fi...kà; to
 set down, fi...balẹ, gbe...kalẹ,
 kalẹ; to set a snare, kẹ, regẹ.
 set'tle, *v.* tẹdò; (as water),
 toro.
 set'tlement, *n.* odžọ, itedọ.
 se'ven, *num.* èdže, medže.
 se'venfold, *a.* leřinmedže.
 se'venteen, *num.* etadilogun.
 se'venth, *num.* ekodže, kedže.
 se'venty, *num.* adřin.
 se'ver, *See* separate.
 severe', *a.* onroro.
 severe'ly, *adv.* gogo.
 sever'ity, *n.* imu.
 sew, *v.* gáy, ran, ranšọ.
 sew'er, *n.* aranšọ.
 shack'le, *n.* šekẹšẹkẹ: neck-
 shackle, adžaga.
 shack'le, *v.* dè, di, di...mi šẹ-
 kẹšẹkẹ.
 shade, *v.* šidži, sidžibò.
 shade, *n.* ibodžin, odžidži, odži-
 džin.
 sha'dow, *n.* adžidžin, odžidži,
 odšidžin.
 sha'dy, *a.* onibodži.
 shake, *v.* gbọ, ni, yin: to shake
 hands, bọ, bọ...lowọ, bọwọ.
 shak'en, *a.* amikpò, ẹgbon.
 shak'y, *adv.* abati.
 shak'ing, *a.* imi.
 shall, *aux.* ó, à, ba.
 shal'low, *a.* kò džin.
 shame, *v.* dodžuti, fi...kiọ.
 shame, *n.* esi, esin, itidžu,
 odžuti.
 shame'less, *a.* odadžu, aitudžu.
 shan'ty, *n.* agò.
 shape, *n.* awọ.
 share, *n.* itori.
 share, *v.* kpın, še-adžokpin,
 hari, wi.
 shar'er, *n.* adžokpin, alabakpin,
 aladžoni, odžuwá, olukpin.
 sharp, *a.* mu, gongo.
 sharp'en, *v.* gbe, kpon, kpon-
 mu.
 sharp'ly, *adv.* gogo.
 sharp'ness, *n.* imu, minu.
 shave, *v.* fa, figbon: to shave
 the head, fari.

- she**, *pron.* í, ó, óy, ó.
sheaf, *n.* idi, íti.
shear, *v.* rẹ, rẹrọy.
shear'er, *n.* olurẹrọy.
shears, *n.* alumágadzi.
sheath, *n.* akọ.
shed, *v.* rẹ, wọ : *to shed blood*, ta, tadže, ta... sílẹ.
sheep, *n.* águtay.
sheep'fold, *n.* agbo or ilẹ águtay.
sheet, *n.* gogown.
shelf, *n.* kpekpé.
shell, *n.* kpekpé, ikpekpé, ká-kara.
shelter, *v.* dabóbó, radóbó.
shelter, *n.* abó.
shelterless, *n.* aibó.
shepherd, *n.* oluśó-águtay.
she'riff, *n.* tẹtu.
shield, *n.* akpata, ganiki, gariki.
shin, *n.* igoy, odžugoy.
shine, *v.* mó, molẹ, rany, ta, tany, tanymolẹ, tanyşay, ti.
ship, *n.* okọ.
ship'master, *n.* olokọ.
ship'wreck, *n.* efoko, ifoko.
shirt, *n.* eha, ewu, agbaladza.
shoal, *n.* bebe.
shock, *n.* asati, awó.
shoe, *n.* bata, kobita.
shoe'less, *a.* lainilata.
shoe'maker, *n.* aranybata, oni-bata.
shoot, *v.* ta, ylybọy, yiy... ni-bọy : *to shoot a bow*, ta, tafa ; *to shoot forth*, ta, takpe.
shore, *n.* ebádó.
short, *a.* kuru.
short'en, *v.* mu... kuru, še... kukuru.
short'ness, *n.* kukuru.
shot, *n.* ota.
shot'pouch, *n.* mayami.
should, *aux.* ba, iba.
shoul'der, *n.* edžika.
shoul'der-blade, *n.* okọ.
shout, *v.* hó, hokuy, kọ.
shout'ing, *n.* íbó : *shouting loudly*, kùhu.
shove, *v.* sọy, sáy.
show, *v.* í... hàn, fi... mọ, džure.
show, *n.* okọ.
show'ing, *n.* ílilàn.
show'er, *n.* owara, wara.
shrewd, *a.* li ogbọy, loqbọy.
shrewd'ness, *a.* ogbọy.
- shriek**, *n.* ke goro.
shrill'y, *adv.* goro.
shrink, *v.* sọyki.
shri'vel, *v.* sọyki.
shri'velled, *a.* dọdọ, kpákpala.
shroud, *n.* ago.
shroud, *v.* fi agọ we.
shuck, *n.* eřoy, fulufulu.
shun, *v.* fá... seřin, ri sá, sọyki, yakpasile.
shut, *v.* kpale, se, semó, há.
shut (in), *a.* adimó.
shut'ter, *n.* ekuy, ilekuy.
shut'tle, *n.* okọ.
sick, *v.* şalsay, rọy : *a sick person*, abirọy.
sick'en, *v.* rọy.
sickle, *n.* şilo.
sick'ness, *n.* nışay, arọy, ekuy.
side, *n.* akpa, egbe, íha.
sieve, *n.* ase.
siege, *n.* idó, isagati.
sift, *v.* kú, se.
sift'er, *n.* koşkosọ, ase.
sigh, *n.* imi edón.
sigh, *v.* mi edón.
sight, *n.* imay, iray, iri, irina.
sign, *n.* àmi, işe ; *to make a sign*, sakpere, şakpere, şakpedžure.
sil'ence, *v.* kpa... lenumó.
sil'ence, *n.* adžin, adžindžin, akıldže, arere, idake, kéké.
sil'ent, *a.* dake, didake ; *to be silent*, kpenumó.
sil'ently, *adv.* furu.
silk, *n.* sanyay, şeda.
silk'worm, *n.* tumbu.
sil'lily, *adv.* botiboti.
sil'liness, *n.* awere, iwere.
sil'ly, *a.* were, şiwere, şinwin, şaray.
sil'ver, *n.* fadaka.
sil'ver, *v.* fi fadaka subọ.
sil'versmith, *n.* alagbede fadaka.
si'milar, *a.* furamó.
simi'litude, *n.* awóray.
sim'mer, *v.* gbara.
sim'ple, *a.* şokpe.
sim'pleton, *n.* alaimoye, alaimoye, kẹre, okpe.
sin, *n.* řeşe.
sin, *v.* deşe, gbeşe, şe.
since, *adv.* nigbati.
sincer'ity, *n.* aişetan.
si'new, *n.* işay.
sing, *v.* koş, koşrin.
singe, *v.* wi.
- sing'er**, *n.* akọrin, olórin.
sin'gle, *a.* okay, nikan.
sin'gly, *adv.* nikan, nikan şoşo, şoşo.
sink, *v.* mù, ri : *to sink into the ground*, wilye.
sin'less, *n.* ailéşe, alailéşe, lai-leşe.
sin'ner, *n.* eleşe.
sip, *v.* fere.
sis'ter, *n.* arabiri.
sit, *v.* džoko : *to sit down*, fidi-balẹ.
sit'ting, *n.* igẹ.
situa'tion, *n.* ibi, ikpo.
six, *num.* efa, mefa.
six'fold, *n.* mefefa.
six'teen, *num.* edimogun.
sixth, *num.* ekefa.
six'ty, *num.* ogota, ota.
skein, *n.* ikọ.
ske'leton, *n.* egugun.
skill, *n.* eřoy.
skil'ful, *a.* miřoy, eleşoy.
skil'fulness, *n.* imiřoy.
skim, *v.* rẹ.
skin, *n.* ará.
skin, *v.* řoy.
skip, *v.* řoy.
skip'per, *n.* idiy.
skull, *n.* agbari.
sky, *n.* orun.
sky'light, *n.* ikoro, odžukpo.
slack, *a.* de, deşe.
slack'en'd, *v.* şe.
slack'en, *v.* řoy : *to slacken one's pace*, deşe, kpeşemọ.
slack'ness, *n.* deşe, işó.
slam, *v.* şe gbagada.
slam, *n.* gbagada.
slan'der, *n.* dulumo.
slan'der, *v.* ba... lorukodže, baruko... dže, gbá... dulumọ.
slan'derer, *n.* abanidže.
slap, *n.* abara.
slap, *v.* gba, gba... labara.
slate, *n.* walá.
slave, *n.* eřu.
slave'dealer, *n.* ateru, teřuteru.
slave'holder, *n.* eleşu.
sla'very, *n.* oko eřu.
slay, *v.* kpa.
slay'er, *n.* onikpa.
sleek, *a.* day.
sleek'ness, *n.* aday.
sleep, *n.* idžika, odžú orun, orun.
sleep, *v.* sún, togbe.
sleep'less, *a.* alsun.

sleep'y, *a.* orùṅ kọṣṣmí (*I am sleepy*).
sleight, *n.* àlukpayida, idan.
slen'der, *a.* fọy, gigo, gò, gbòrò, tẹre, tirin.
slen'derness, *n.* ešé.
sley, *n.* àsa.
slide, *v.* bọ.
slight, *v.* da...kodža, fi...džafara.
slight'ly, *adv.* šo.
sling, *v.* fi, gbọṅ.
sling, *n.* kánakána.
slip, *v.* bọ, ší, yó.
slip'pery, *a.* dan, yó.
slit, *v.* lá.
slope, *n.* gèrègèrè.
slop'ing, *a.* bèrè.
sloth, *n.* àfara, oḷe.
sloth'ful, *a.* dera, onifora.
slo'ven, *a.* oḃoṅ.
slo'venly, *adv.* boṅ.
slow, *a.* džafara, lora.
slow'ly, *adv.* kpèḷe, kèkè.
slow'ness, *n.* àfara.
slug'gish, *a.* le.
slug'gishly, *adv.* goigoi, tikò.
slug'gishness, *n.* aigbo, aiye.
slum'ber, *n.* togbé.
sly'ness, *n.* ayòše.
small, *a.* kere, wèrè, wèwè, kiki, šokoto: *a small person*, akere.
small, *adv.* kíbítí.
small'ness, *n.* kekere, kiki.
small'pox, *n.* šakpaná.
smart, *v.* ta.
smat'ter, *v.* he...so.
smat'terer, *n.* alahéso.
smear, *v.* kùṅ.
smell, *v.* gbòruṅ.
smell, *n.* orùṅ.
smelling-bottle, *n.* akošo.
smelt, *v.* kpò, kporin.
smelt'er, *n.* akporin, olukporin.
smile, *v.* reṅin wéší.
smite, *v.* kọlu, lù, šá.
smith, *n.* alagbède.
smith'ery, *n.* agbède, aró.
smoke, *n.* eší, fiṅ, ešín.
smoke, *v.* fiṅ, rěfiṅ, ru.
smok'y, *a.* eḷešín.
smooth, *a.* dan, feḷe, feḷeḷe, kua, tẹdžu.
smooth, *v.* dan, tẹ feḷe.
smooth'ly, *adv.* feḷeḷeḷe.
smooth'ness, *n.* idan, feḷe-feḷe.

smother, *v.* fiṅ.
smug'gle, *v.* yabode.
smut, *n.* adú, džakawò.
snag, *n.* egún.
snail, *n.* igbin, ikpere, okoto.
snake, *n.* èdžo, manamana, owoṅ, šebe.
snap, *v.* šá, šáki: *to snap the fingers*, taka.
snapping, *n.* iti.
snare, *n.* ohun didè, ege, eku, gboro, ikekun, ikpeti, mate.
snatch, *v.* dža, takpa.
snatch, *n.* idžakpati.
sneer, *v.* da...kpara.
sneeze, *v.* sijn.
sniff, *v.* sòṅmó.
snore, *v.* hoṅruṅ, džeka.
snout, *n.* igi imò.
snuff, *n.* ašara.
snuff, *v.* sòṅmó.
snuffers, *n.* irena.
so, *adv.* ba, bai, bayi, bouṅ, beḃe, gege.
soak, *v.* fi...bọ, fi...bomi, re.
soap, *n.* ošé.
soar, *v.* rá, fò.
so'ber, *a.* odžú rẹ walé (*he is sober*).
so'berness, *n.* airekòdža.
soci'ety, *n.* egeḃe.
sock'et, *n.* iho-itèbo.
so'da, *n.* kanu.
so'fa, *n.* ibirògbòku.
soft, *a.* dè, ède, fulé, kpèrè, rọy ogerò.
soft'en, *v.* mu...dè or rò.
soft'ly, *adv.* fuléfulé, rọra.
soft'ness, *n.* ède, rọrọ.
soil, *n.* ilè.
so'jour, *v.* še átikpo, šátikpo.
so'journer, *n.* átikpo.
sol'dier, *n.* adžagun, danzare, džakare, džama, oṃo ogun.
sole, *n.* atelešé.
sole, *a.* okan, nikan.
sole'ly, *adv.* nikan.
so'lemn, *a.* ronó.
solem'nity, *n.* ironó.
solid, *a.* lé, kiki.
some, *pron.* awonkan, dič, melokan.
some'thing, *n.* kini.
some'times, *adv.* nigbakúgba.
some'where, *adv.* nibikan.
son, *n.* oṃo, oṃòkọṅri.
song, *n.* òrin.
soon, *adv.* laikpe, nisisiyi.

soot, *n.* džakawò.
soothe, *v.* tẹ...laiya or lara, tù.
sop, *v.* ron.
sor'cerer, *n.* ošo.
sorc, *n.* ègbo, odžu.
sorc, *a.* gbekaj.
sor'row, *n.* àro, idaro, ànù.
sor'rowful, *a.* onirora, alánù.
sor'ry, *a.* kàna.
sort, *n.* oloriòrì, oniruru.
sort, *v.* yan, ya...loto.
sor'tilege, *n.* ibo.
soul, *n.* okan.
sound, *n.* òhunj.
sound, *a.* aifo, dida.
sound, *v.* dá, gbà, ro, ta: *to sound in water, take soundings*, wondò.
sound'ly, *adv.* (*asleep*), fọṅ-fọṅ.
soup, *n.* oḃè.
soul, *n.* kan.
source, *n.* idi.
sour'ness, *n.* ekan.
south, *n.* gùsu.
south'ward, *adv.* niha or siha gùsu.
sow, *v.* fọṅ, fọṅ...gbin, fọṅru-gbin, gbin, sú.
sow'er, *n.* aḃonrugbin.
space, *n.* afo, aye, ofurufú.
spa'cious, *a.* alaye, laye.
spade, *n.* okògun.
span, *v.* gbaw.
span, *n.* igbani.
Span'iard, *n.* Aguda.
spare, *v.* da...sí, da...silè, kun...silè.
spared, *n.* adasi, idasi.
spark, *n.* iforífo.
spark'lingly, *adv.* džeredžere.
spar'row, *n.* awá, itu, olo-gonšé.
speak, *v.* fò, fòhunj, sò, wi.
spear, *n.* ešín, èkò.
spear'man, *n.* oḷokò.
special'ity, *n.* akanšé.
spe'cies, *n.* im.
speck'les, *n.* ètu.
speck'le, *v.* ètu.
speck'led, *a.* ètu.
speck'tacle, *n.* irina.
speck'tacles, *n.* awò odžú.
speech, *n.* òhunj, ede.
spell, *v.* kà.
spend, *v.* ná, nawó.
spend'thrift, *n.* àkpa, awandò, homkọṃu, nawonawo.

spi'der, *n.* alantakun, alajnsasa, eḷeṇo.
spike, *n.* iso, ekan.
spill, *v.* ta, ta...silē, yidāndō.
spin, *v.* ran, ranwu.
spin'ner, *n.* arañwu, irañwu.
spi'rit, *n.* afeḷe, ḷmi.
spit, *v.* tu, tuto.
spite, *n.* iwōsi.
spite'ful, *a.* koro, soro.
spite'fulness, *n.* arañkan.
spit'tle, *n.* ito.
splin'ter, *n.* eruj.
split, *v.* be sajsan, là, sán, tō.
spoil, *v.* badže, dibadže.
spoil'ed, *v.* badže, dibadže.
spoil'ing, *n.* ibadže.
spokes'man, *n.* alagbasō.
sponge, *n.* kanrikan.
spoon, *n.* eḷpon, ikpon, gombō, šibi.
sport, *v.* wē.
spot, *n.* abawon.
spot, *v.* še...labawon.
spot'less, *a.* alabawon.
sprain, *v.* fi...rō, rō.
spread, *v.* mukale, ta, tan kale, tē.
spright'ly, *a.* ya.
spring, *v.* hukō, ré, ru.
spring, *n.* orison, ison.
sprin'kle, *v.* wōṇ, bōmiwōṇ, bũ...wōṇ, rdžo.
sprin'kling, *n.* abáwōṇ, ibó-miwōṇ, ibuwōṇ.
sprout, *n.* akpadahū, ehū, ekan.
sprout, *v.* ru, hū džade.
sprout'ing, *n.* atophū.
spur, *n.* oḡan.
spy, *n.* alámi, amí, at'ona, awoye, ayoluwō, ayoniwō, keḷeḷeḷe.
spy, *v.* rōna.
spy'glass, *n.* awō.
squab'ble, *n.* oḷō, oḷpalai.
square, *n.* (of a house), asa-kanilē, sàre.
squash, *n.* agbēdže.
squat, *v.* dákaka, lošo.
squat'ting, *n.* ákaka.
squeeze, *v.* fon.
squint, *v.* foḷžukag wō.
squirrel, *n.* ikon, keḷe, óforo, oḷeḷe.
stab, *v.* gán.
sta'ble, *n.* ilō iso or esiṇ.
stack, *n.* abá, agbo, nsati.
staff, *n.* oḷka.
staff'-bearer, *n.* oḷoḷka, oḷoḷpaga.

stag'ger, *v.* tagbongbōṇ.
stag'geringly, *adv.* katakata.
stagnant, *a.* gboku.
stag'nate, *v.* gboku.
stain, *v.* kpa...lose.
stain, *n.* abáwōṇ, ibuwōṇ.
stain'less, *a.* ailabawon.
stair, *n.* akasō.
stale, *a.* eḷu, gboku, kasi, ikasi, obu.
stalk, *n.* kpokporō, igi.
stall, *n.* budže, busō, oriso.
stammer, *v.* kolōlo.
stammerer, *n.* akolōlo.
stamp, *v.* tē, tē...mole.
stand, *n.* ibuduro.
stand, *v.* duro, ro: *to stand up*, diḷe, naro.
stand'ing, *a.* diduro, digbaro, idigbaro, ogurodo.
sta'ple, *n.* aba.
star, *n.* irawo.
starch, *n.* oḡi.
stare, *v.* wō.
start, *v.* šilōh.
starve, *v.* debikpa, febiḷka.
starv'er, *n.* adebikpani, afebi-
kpa.
state, *n.* iwā.
sta'tion, *n.* isō, ikpo.
sta'ture, *n.* iga.
stay, *v.* duro, kpe.
stay'ing, *a.* akpe.
stead, *n.* ikpo.
stead'fast, *a.* še aiyeše.
stead'fastly, *adv.* šin, šinšin.
stead'fastness, *n.* aiyeše.
steal, *v.* džále, džá...lōle, dží, džindi.
stealth, *n.* ayōše.
steam, *n.* oru.
steam'er, *n.* eḷeḷin.
steep, *a.* goḡon.
steer, *v.* toko.
stem, *n.* kukute.
stench, *n.* ayau.
step, *v.* gbese.
ste'rite, *a.* okusaḷe. See *bar-rn*.
stern, *a.* šoro, asoro.
steward, *n.* iridžú.
stew'pan, *n.* kpakuta.
stick, *n.* igi.
stick, *v.* kanmole, ré.
stiff, *a.* káka, kako.
stiff'ly, *adv.* kakakaka.
stiff'necked, *a.* waronki.
still, *a.* dže, džedže.

still, *v.* kpa...roḷo.
still, *adv.* sibē.
still'ness, *n.* idakeroro.
stills, *n.* gagalo.
sting, *n.* ita, eḷa.
sting, *v.* ta.
stin'giness, *n.* awon.
stin'gy, *v.* šé awon, wōṇ.
stink, *v.* bú, rún, šayan.
stir, *v.* daru, rò, ru, wú.
stir'ring, *n.* irō.
stir'rup, *n.* alukembu, oḷō-asa.
stockade', *n.* aghàra.
stock'ing, *n.* ibose.
stocks, *n.* aba.
sto'mach, *n.* aya.
stone, *n.* okuta, okó.
stone, *v.* so...lokuta.
stone'-cutter, *n.* agbékuta.
stool, *n.* aga, akpoti.
stoop, *v.* bēre, go, tiri.
stoop'ing, *adv.* ibēre.
stop, *v.* dese, duro, di: *to stop the road*, dēna.
stop'per, *n.* edidi.
store, *n.* abá.
stork, *n.* ako.
storm, *n.* idži.
sto'ry, *n.* iro.
stout, *a.* lara.
straight, *a.* doḡba, ganraṇ, t̄ara, tō.
straight'en, *v.* mu...tō.
straight'ness, *n.* ito, oṣanhan, titō.
straight'way, *adv.* eyitawiṇi, loḡan.
strain, *v.* bā, gbā, sē.
strain'er, *n.* ase, ladiro, oki-ti aro.
strait, *n.* diwō, inira.
strange, *a.* èmō, adžedži.
stran'ger, *n.* adžedži, aledžo, olōdžo.
stran'gle, *n.* lo...loron.
straw, *n.* kórikó.
stream, *n.* isān.
street, *n.* igboro, ita.
strength, *n.* agbara, okun.
strengthen'en, *v.* mu...lé, ti...lehin.
stretch, *v.* nà, naga.
stretch'ing, *n.* ena, iyá.
strew, *v.* fe...ka, fon.
strict'ly, *adv.* lešolešo.
strife, *n.* idžá, aḡon.
strike, *v.* dá, lù, hule, ro, tí: *to strike against*, dákàn, gún,

da...mó; *strike with a sword*, da...lida; *strike with a stick*, da...nigi; *strike with the fist*, džíleşe, džíleşe, ki...nibeude.
string, *v.* sún.
string, *n.* okún, fína.
string'y, *adv.* olókun.
strip, *v.* bó, hó, tu...laşo, tu...nibòrílo.
stripe, *n.* inà.
striped, *v.* abilà, ètu.
stripped, *a.* etú.
strive, *v.* dzá, lákaka.
stroll, *v.* kiri.
stroll'er, *n.* alarín kiri.
strong, *a.* káka, lé, lera, lè inokun: *strong man*, akóni, alagbára.
strongly, *adv.* kakaraka.
struggle, *n.* awaya, idzakádi, iwaya-idzá, owere.
struggle, *v.* şe awaya, dzowere, rá.
strut, *v.* yan.
stub'ble, *n.* akekun.
stub'born, *n.* agidi.
stub'bornness, *n.* aigbo.
sturdy, *v.* kẹkọ.
stumble, *v.* kọşe.
stumbling, *n.* ikọşe.
stumbling-block, *n.* adugboló, dugbolú.
stupid, *a.* ákun, ókun, akun-
 rete gígò, gò, ohẹ.
stupid'ity, *n.* gígò.
stutter, *v.* kólolo.
stutterer, *n.* akólolo.
subdue, *v.* şe, şe ikáwò.
submit, *v.* forifun, foribàle, tuba.
substitute, *v.* fi...likpo, gbi-
 kpo.
substitute, *n.* agbikpo.
sub'terfuge, *n.* awawi.
sub'tlety, *n.* erọ, ogbonkọ-
 gbọy.
succeed, *v.* bi, telẹ.
success, *n.* áşiki.
success'ion, *n.* itẹle.
success'or, *n.* ateje.
suc'cor, *v.* gbà, gbà...lọwọ.
such, *pron.* iru.
suck, *v.* mo, mu.
suck'le, *v.* fi omu fu.
sud'den, *a.* şe ódzidzi, ódzid-
 dzi.
sud'denly, *adv.* lodzidzi, kpa,
 kperẹ.

sud'denness, *n.* ódzidzi.
sue, *v.* fi...sòy, sòy, sún.
suf'fer, *v.* džíya.
suf'ferer, *n.* ódžíya.
suf'fering, *n.* iya.
suffi'cient, *a.* tó.
suf'focate, *v.* flọ.
su'gar, *n.* iyọ-oibó.
su'gar-cane, *n.* ireke.
suggest, *v.* kpúno.
su'icide, *n.* ikpara.
suit, *v.* bade, ba...şe, rẹ.
suit'able, *a.* wọ, ye.
suit'ableness, *n.* abade, iwọ.
sul'try, *a.* moru.
sun'merset, *n.* òkiti: *to turn a sunmerse*, takete.
sum'mit, *v.* ori.
sump'tuous, *a.* adidòy.
sump'tuously, *adv.* didòy-
 didòy.
sun, *n.* óruy.
sun'rise, *n.* ilà óruy.
sun'set, *n.* iwò óruy.
sun'shine, *n.* iray óruy.
superadd'ed, *n.* awisi.
superintend, *v.* fodzuto, wò,
 tedzá.
superintend'ence, *n.* abo-
 dzuwò, ibodzuwò.
superintend'ent, *n.* alafiyesi,
 alafodzuto.
sup'e'rior, *n.* are: *to be super-
 rior*, šare.
superior'ity, *n.* išare.
superscrip'tion, *n.* akolẹ.
supersti'tion, *n.* isihjúşin,
 ekokẹkọ.
sup'per, *n.* asè-alẹ.
supplant, *v.* dží...leşe.
sup'plement, *n.* ekón.
sup'pliant, *n.* onibẹbẹ.
sup'plicate, *v.* bẹ, bebẹ.
supplica'tion, *n.* ẹbe, ibẹbẹ.
support, *n.* afẹhínti.
support, *v.* fẹhínti, tí, tí...lẹ-
 híj.
support'er, *n.* alafẹhínti, oni-
 fararọ.
suppose, *v.* daba, fikpẹ, koşe-
 kpe, šebi, támaha.
suppress, *v.* fi...kpanọ, bo
 ...mólẹ.
surc, *a.* da...lodzá.
sure'ty, *n.* onigbowọ.
sur'face, *n.* odzá, ori.
sur'ly, *a.* šonọ.
surmount, *v.* bóri.

sur'name, *n.* akpele.
surpass, *v.* bóri, dzá, rẹ...kọ-
 dza.
sur'plus, *n.* iyokun.
surprise, *n.* sun, ldzi.
surprise, *v.* bábudzá, da...
 nidzi, yà...lenu.
surrender, *v.* tuba.
surround, *v.* bú...ka, fá...
 yika, ka...mó, rọ...gbaká,
 yika.
surround'ing, *n.* abuka, aka-
 mó, ayika.
survey, *v.* wò, be...wò.
suspect, *v.* fi...mó.
suspend, *v.* fi...ba, fi...kọ,
 fi...tí, gbe...ha, rọ, sorọ.
suspi'cious, *n.* afọranmó.
suspi'cious, *a.* afura, fura.
suspi'ciously, *adv.* kojikoi.
sustain, *v.* tí...lẹhij.
swad'dle, *v.* gbà...lodzá.
swal'low, *v.* mi, gbe...mi.
swap, *n.* kpaşikparọ.
swarm, *n.* okpọwọn: *in a
 swarm*, yòy.
swarm, *v.* šà.
sway, *v.* fi.
swear, *v.* bura, fi...bu, šekpe.
swear'er, *n.* elekpe.
sweat, *n.* ógún.
sweat, *v.* lágun.
sweep, *v.* gba: *to sweep the
 house*, gbalẹ; *sweep the ground*,
 gbalẹ.
sweet, *a.* dọy.
sweet'ly, *adv.* kanmukaninu,
 kaunkaun.
sweet'meats, *n.* adidòy.
sweet'ness, *n.* didòy, edòy,
 idòy.
swell, *v.* báke, ru, wú.
swell'ing, *n.* wiwu.
swept, *a.* egbá.
swift, *a.* yara, iyara.
swift'ness, *n.* iyara.
swim, *v.* wẹ, hwẹ.
swin'dle, *v.* rẹ...dze.
swin'dler, *n.* alayandze.
swine, *n.* eledẹ.
swing, *v.* fi, rọ.
swing'er, *n.* ofi.
switch, *n.* orẹ, kpatire.
swollen, *a.* wiwu.
swoon, *v.* daku.
sword, *n.* agbẹ, lida.
sy'rup, *n.* oyin.

T.

- ta'ble**, *n.* aga, itafo.
tack, *n.* iso.
tail, *n.* iru.
tailor, *n.* arañso.
tailoring, *n.* irañso.
take, *v.* fi...mu, gbà: *to take away*, gbe...lôh, ko...lôh; *take up*, ko.
tak'ing, *n.* igbe.
tale'-bearer, *n.* ofófo, olofofo, oloforo.
talk, *v.* sô, sôro: *to talk about*, da...sô.
talk, *n.* osô.
talk'ative, *a.* dánú, sôso.
talk'atively, *adv.* kporokporo.
talk'er, *n.* alaroye, alaso.
tall, *a.* ga.
tall'ness, *n.* agógo, giga.
tal'on, *n.* ekaj.
ta'marind, *n.* adzagboŋ.
tambourine', *n.* šekere.
tame, *v.* sin, tu...lodžú.
tame, *a.* mōdžú, osiy, rōdžú.
tan'gled, *a.* kiredže.
tan'ner, *n.* alawô.
tap, *v.* dži, džij, tú.
tar'dy, *a.* lora.
tar'ry, *v.* kpé.
task'master, *n.* akonišije.
taste, *v.* tó, tó...wô.
tattle, *v.* šofofo.
tat'tler, *v.* adakadeke, ofofo.
tattoo', *v.* kô, kôlá.
tattoo', *n.* ilá.
tattoo'er, *n.* olólá.
tattooed', *a.* onilá.
taught, *a.* akotán.
tax, *n.* owóbode.
teach, *v.* kô, kôni.
teach'er, *n.* akoni, oluko, olukoni.
tear, *n.* omidže, omi odžú.
tear, *v.* yà, fá...ya.
teat, *n.* ômu.
tell, *v.* ro, rolij, wí.
tell'ing, *v.* ero, iro.
tem'perance, *n.* airekōdža, akparamô.
tem'pest, *n.* ldži, efúfu, nlá.
tem'ple, *n.* (*of the face*), cráj; (*place of worship*), ilé mimô.
tempt, *v.* dan...wô.
tempta'tion, *n.* idanjwô.
tempt'er, *n.* onidanwô.
ten, *num.* ewá, mēwá.
- ten'der**, *a.* oronu, rò.
ten'derness, *n.* ironu.
tent, *n.* agô.
tent, *v.* gbeğô.
tenth, *num.* kēwa: *a tenth part*, idamewa.
te'pid. See *lukewarm*.
terms, *n.* arosilê, arotelê.
ter'minate, *v.* kâse, kú, kpe-kuj, nikpekuj, kpíj, kpínjê.
termina'tion, *n.* atubótáj, ikú.
ter'rapin, *n.* awoŋ, idžakpa.
ter'rible, *a.* deru.
ter'ribleness, *n.* řru.
ter'rify, *v.* deruba, daiyafô.
tes'ticle, *n.* čkpôj.
tes'tify, *v.* glá...eridže, gbá...leridže, dželeri.
tes'timony, *n.* čri, idžerí.
tex'ture, *n.* irô.
than, *conj.* džú: *better than I*, dara džú mi.
thank, *v.* dukpe, šokpe.
thank, *n.* čkpé.
thank'ful, *a.* amore.
thank'fulness, *n.* adukpe.
thank'less, *a.* aidukpe.
that, *pron.* ná, ni, eyiná, eyini.
that, *conj.* ki, kpé, nikpé.
thatch, *v.* bôle.
thatch'er, *n.* bôlebôle.
thaw, *v.* yô.
thee, *pron.* iwô, ô, řê.
theft, *n.* ôle.
their, *pron.* tiwoŋ.
them, *pron.* awoŋ, nwoŋ, woŋ.
themselves', *pron.* awoŋ ná.
then, *adv.* niğbaná.
then, *conj.* ndže.
thence, *adv.* tibê.
thencefor'ward, *adv.* lati ilê lôh.
there, *adv.* ibê, mbê, nibê, sibê, řhuj.
there'about, *adv.* niha ilê, nitori řê.
thereaf'ter, *adv.* lehin igba ná.
thereby', *adv.* nikpati řê.
there'fore, *adv.* itori, nitoriná, ndžê.
therein', *adv.* ninô řê.
these, *pron.* iwonyi, nwoŋyi, woŋyi.
they, *pron.* awoŋ, nwoŋ, á.
thick, *a.* ki, nikpoŋ, sùŋ.
thick'et, *n.* ošnú, igbê.
thick'ly, *adv.* kobikobi.
thick'ness, *n.* iki, ikpoŋ.
- thief**, *n.* édzikan, ôle.
thiev'ishly, *adv.* džindi džin-di.
thigh, *n.* itaj.
thin, *a.* bečê, bečêbečê, fečê, fečê-fečê.
thine, *pron.* terê, tirê.
thing, *n.* iwuj, kini, nkán, ohuj.
think, *v.* daba, gbéro, rò.
think'ing, *n.* aba, irô.
third, *num.* kęta: *a third part*, idamewa.
thirst, *n.* ongbe.
thirst, *v.* longbe.
thirs'ty, *a.* ongbe gbe mi (*I am thirsty*).
thir'teen, *num.* ečalá.
thir'ty, *num.* oğbôŋ.
this, *pron.* yi, eyi, eyiji, alayi, ele-yi.
this'tle, *n.* ewoŋ.
thi'ther, *adv.* lóhuj, nibê.
thorn, *n.* egún, oğaj.
thorn'y, *a.* ełeguj.
tho'roughly, *adv.* džalę, džalę-džalę, šaša, šaušauj, toto.
those, *pron.* iwôni, wôni.
thou, *pron.* iwô, o, ô.
though, *conj.* amôkpé, bí, bí...tíle.
thought, *n.* éro, ete, ironô.
thought'ful, *a.* šaro, našaro, olušaro.
thought'less, *a.* alairo, almete.
thought'lessness, *n.* ałró.
thou'sand, *num.* egberuj.
thrash, *n.* iwô.
thread, *n.* owú.
threat, *n.* ilo, ikilo.
threat'en, *v.* kilô, yajhuj.
three, *num.* četa, mečeta.
three'fold, *n.* mečeta.
thresh, *v.* kpáka.
throat, *n.* omirin.
throb, *v.* ro.
throne, *n.* ite.
through, *v.* ha...laye.
through, *prep.* džá.
throughout', *prep.* džá, džá-linjđáhin.
throw, *v.* džú, džunô, so, soŋô, tanô: *to throw in wrestling*, da...niđza.
thrush, *n.* elúlu.
thrust, *v.* kiwočô, gún.
thumb, *n.* atamkpako, igborobo.
thump, *v.* tí.

thun'der, *n.* arā.
 thun'der, *v.* kù, sáj.
 thus, *adv.* baun, bebe.
 thwart, *v.* bábudzá.
 thy, *pron.* rē.
 thyself', *pron.* iwó ná.
 tick, *n.* egbón.
 tick'le, *v.* ké... legake, rin.
 tick'ling', *n.* egake, egani, egi-
 ni.
 tid'ings, *n.* ihin.
 ti'dy, *v.* fińdzu.
 ti'dy, *a.* áfińdzu, eleye.
 tie, *v.* di, rà, sáj, so: *to tie to*,
 somó; *tie loads*, deru; *tie a*
knot, sokpa.
 tight, *a.* lé, di.
 tight'en, *v.* fa...ló.
 tight'ly, *adv.* gbámgbam, kpin-
 kpin.
 till, *conj.* digbati, titi, toni.
 till, *v.* ro, roko.
 till'er, *n.* alaroko.
 tim'ber, *n.* iti, igi.
 time, *n.* akóko, arin, arinjo,
 ewò, ida, igba, wakati: *Time is*
flying, odzó nřó lřh.
 time-server, *n.* odzulafeni.
 ti'mid, *adj.* beruberu, lodzó.
 timid'ity, *n.* odzó.
 ti'midly, *adv.* beruberu.
 tin, *n.* tangara, tasa.
 tin'der, *n.* lewu.
 tin'der-bag, *n.* ákpo-ísana.
 tip, *n.* šonšo.
 tip'pler, *n.* omotí.
 tip'sy, *a.* oti nkpa mi (*I am*
tipsy).
 tip'toe, *adv.* tiro.
 tire, *v.* dása.
 tired, *a.* ure nře, gāsa.
 tire'some, *a.* lāre.
 tithe, *n.* idamewa.
 ti'tle, *n.* onikó.
 to, *prep.* de, fu, fun, sí, sodo, ti.
 toast, *n.* sun, yan.
 tobac'co, *n.* taba: *African to-*
bacco, ákira; *Brazilian tobacco*,
 dzuku.
 tobac'conist, *n.* alašára.
 to-day', loni, oni.
 toe, *n.* omose: *great toe*, ikpori;
little toe, omodin.
 tog'e'ther, *adv.* dzo, dzumó,
 kpò.
 toil, *n.* iše ikpa.
 to'ken, *n.* igbowó.
 to'lerate, *v.* dekun sí.

toll, *n.* owóbode.
 toll'gate, *n.* ibode, ðna ibode.
 toll'gatherer, *n.* agbowóde.
 to'mahawk, *n.* gamugamu.
 toma'to, *n.* igbá.
 tomb, *n.* ilú okú, ilekpa.
 to-mor'row, *v.* oja;—*adv.* lřla.
 tongs, *n.* enu.
 tongue, *n.* ahóń, awóń.
 too, *adv.* kpélu.
 tool, *n.* eà, ohun oma.
 tooth, *n.* akoko, chin, eyin.
 tooth'ache, *n.* chinđon.
 tooth'less, *a.* akayin.
 top, *n.* òke, ori: *on top*, sori.
 top'most, *a.* agangan.
 tor'ment, *n.* iše oró, oró.
 torment', *v.* da...loro, kusi,
 kponlodzu, šise oró.
 torment'or, *n.* asoro.
 tor'toise, *n.* awon.
 tor'ture, *v.* da...loro.
 to'tal, *a.* ototo, toto.
 total'ity, *n.* ototo.
 touch, *v.* fowota, fowoba, kàn,
 tó, tó...lara.
 tough, *a.* gbó, yi.
 tough'en, *v.* mu or še...gbó.
 tough'ness, *n.* agbó, egbó.
 towards', *prep.* ikódzusi, lokpo-
 kan, okokan, siha, sikpa.
 tow'el, *n.* inđdzu, inđse, inđwó,
 tobi, tobinđwó.
 tow'er, *n.* ilé išo, ore.
 town, *n.* ilu.
 track, *n.* eše, ikpa, ikpase.
 track, *v.* ðna, tđse.
 trade, *v.* nadza, šowo.
 trade, *n.* owo, đdza.
 trad'er, *n.* aladzakpa, alarobó,
 asówo, onišowo.
 tradi'tion, *n.* atówodowo, itan,
 owodowo.
 tradi'tioner, *n.* arokin, ologbó.
 traf'fic, *v.* nadza, šowo.
 traf'fic, *n.* adzakpa, arobo, owo.
 trail, *n.* ibale, ikpa.
 trail, *v.* tokpá, tđse.
 train, *v.* tó.
 trai'tor, *n.* aláfilàn, edálé, oni-
 kukpani.
 tram'ple, *v.* tē, tēlē, tēlese, tē
 ...silē, tēmó, tē...mólē.
 tran'quil, *a.* rolē, tóro.
 tran'quillize, *v.* mu...rolē.
 transact', *v.* še.
 transcend', *v.* dza, bori, kodza.
 transfi'gure, *v.* kpara...dà:

he was transfigured, ará rđ
 kpadá.
 transgress', *v.* ðaran, šóran,
 relin, rufin, yinfin.
 transgress'ion, *n.* idaran, ire-
 kpa.
 transgress'or, *n.* alarekódza,
 arufin.
 translate', *v.* rđ.
 transpa'rent, *a.* mó.
 transplant', *v.* le, ló.
 transport', *v.* ko...lřh.
 transporta'tion, *n.* ikolřh.
 trap, *n.* ebińi, ege, ošonšon,
 ikonkošo, irin.
 tra'vail, *v.* rđbi.
 tra'vel, *v.* radzo, rebi.
 tra'veller, *n.* aradzo.
 tra'velling, *n.* (together), adžorin.
 tra'verse, *n.* là...dza.
 tread, *v.* tēlē, tēlese, tē...mólē.
 trea'dle, *n.* itše.
 trea'son, *n.* eše oba.
 trea'sure, *v.* fi...šura, šura.
 trea'sure, *n.* isura.
 trea'ty, *n.* ikpinu.
 tree, *n.* igi.
 trem'ble, *v.* wá, wárirí.
 trem'bling, *n.* owariri.
 trem'blingly, *adv.* riri.
 tre'mulously, *adv.* titi.
 trench, *n.* iyara.
 tres'pass, *v.* ðaran.
 tress, *n.* iwedže.
 tri'al, *n.* idanwó.
 tri'angle, *n.* oligon meťa.
 tribe, *n.* orilē, đya.
 tribula'tion, *n.* wahala, tulasin.
 trick, *n.* šagalamaša.
 trick, *n.* agalamaša, arékeré-
 ke.
 tri'er, *n.* amodže, oludanwó.
 tri'fle, *v.* dzařara.
 tri'fle, *n.* inkankinjan.
 trig'ger, *n.* akérekére, ekó.
 tri'nity, *n.* emetalokan.
 trip, *v.* kose.
 trip, *n.* ara.
 tripe, *n.* ifon, šaki.
 tri'ple, *a.* meřeta.
 tri'umph, *v.* šogo, yo.
 tri'une, *a.* meřalokan.
 troop, *v.* owó.
 trou'ble, *v.* rđ, tó, yo...lenu.
 trou'ble, *n.* wahala, iše, iyomn,
 lala, odžukpon, idžaba, irobi-
 nđžé, idaniłodzu, idanilara,
 adžaba, abadžó.

trou'bled, *a.* dzowere, kolelẹ.
 trou'blesome, *a.* yomu.
 trough, *n.* ẹkpo.
 trow'el, *n.* abẹro.
 trow'sers, *n.* ọkoto; different kinds are called, abẹnu-gbągba, alongo, ẹfą, iyegbẹ.
 true, *a.* titọ, tọ.
 tru ly, *adv.* lótitọ, lótọ, nitọ, mą.
 trum'pet, *n.* ikpẹ.
 trum'peter, *n.* onikpẹ, afoņ-kpẹ.
 trunk, *n.* akpoti.
 trust, *n.* igbẹkẹlẹ, igbọ.
 trust, *v.* da... ląwin, gbẹkẹlẹ, gbokanlẹ.
 trustee', *n.* agbatodžu.
 truth, *n.* otitọ, ọtọ, tótọ, itótọ, nitótọ, dódó, dododó, ododó.
 truth'ful, *a.* lótọ, li ododó, olo-dodó.
 truth'less, *a.* ailótọ, alsótọ.
 try, *v.* daņ... wò, ródžu.
 tu'ber, *n.* ẹta.
 tum'ble, *v.* togedngbe.
 tu'mor, *n.* wiwu, ọwo.
 tu'mult, *n.* gidigini, irúkerúdo, rukerúdo, irulu: *to make a tumult*, rokeke.
 tune, *n.* ọrin.
 tu'nic, *n.* alukasafą, kúkumọ.
 tur'key, *n.* tolótóló.
 turn, *n.* dà, kpadà, kpara... dà, kparidà, yẹ, yẹra, yi, yi... kpadà, yikpo.
 tur'tle, *n.* awoņ.
 tut! *interj.* ọ́!.
 twelfth, *num.* ekedžilà.
 twelve, *num.* edžilà, medžilà.
 twenty, *num.* ogun.
 twice, *adv.* medži, lemedži.
 twig, *n.* kpatire.
 twi'light, *n.* fifi, fifin, wiri-wiri.
 twin, *n.* edžire, ibedži.
 twine, *n.* okun tinrin.
 twine, *v.* ká.
 twin'kle, *v.* ọan.
 twink'ling, *a.* ọan.
 twist, *v.* koko, keredže, ran, we, wo... kpọ.
 twist'ed, *a.* ló.
 two, *num.* edži, medži.
 two'edged, *n.* olodžu medži.
 two'fold, *a.* medžimedži.
 ty'rannize, *v.* ọe sinisini.
 ty'rant, *n.* slusini.

U.

udder, *n.* ọmu.
 ug'liness, *n.* iburu odžu.
 ug'ly, *a.* buru, kò dara.
 ul'cer, *n.* itanjpara.
 ul'cerate, *v.* tanjpara.
 umbrel'la, *n.* ọbọnbọy, ikporun.
 una'ble, *n.* ailẹ, kò lẹ.
 unaccep'ted, *a.* aigbà.
 unaccom'modating, *a.* aišenia, awoņ, ašawoņ.
 unaccom'panied, *a.* aišin.
 unaccom'plished, *a.* aišetan, aikpin.
 unaccount'able, *a.* aimọ.
 unadapt'ed, *n.* aibade.
 unadorned', *a.* aišelọso.
 unadul'terated, *a.* allabula.
 unani'mity, *n.* ọhuy káp.
 una'nimous, *a.* lóhuy káp.
 unapproach'able, *a.* alaišonmọ, alaišonmọ.
 unasked', *a.* ikpẹ.
 unavail'ing, *a.* asąn, lasąn.
 unbar', *v.* tú, ọ́.
 unbelief', *n.* aigbagbọ, aigbọ, aigboraņ.
 unbeliev'er, *n.* alainigbagbọ.
 unbeliev'ing, *a.* kò ọe igbagbọ, alaigbagbọ.
 unbelov'ed, *a.* aiše, alaiše.
 unbid'den, *a.* aikpe.
 unblest', *a.* alaibukoņ.
 unbri'dle, *v.* tu ni idžanọ.
 unbro'ken, *a.* aifọ.
 unbuil't, *a.* aikọ.
 unceas'ing, *a.* aidà, aiyè.
 uncer'tain, *a.* ọaniani.
 uncer'tainty, *n.* aniani.
 unchain', *v.* tu... lẹwoņ.
 unchange'able, *a.* aikpada, aiyikpada, aidiyatọ.
 uncha'ritable, *a.* aišeni, alaišeni.
 uncha'ritableness, *n.* aišeni.
 uncir'cumcised, *a.* aikọlà, alaikọlà.
 uncircumci'sion, *n.* alaikọlà.
 unclean', *n.* aimọ.
 unclean'ness, *n.* aifọ.
 unclothed', *a.* albóra.
 unconcern', *n.* aibere, aikiyesi.
 uncorrupt'ible, *a.* aidibadže, alaidibadže.
 uncorrupt'ness, *n.* aidibadže.
 uncount'ed, *a.* aikà.

unco'ver, *v.* ọ́.
 uncul'tivated, *a.* airo.
 uncut', *n.* aike, aikpa, airé, aišà.
 undaunt'ed, *a.* aiberú.
 undeceit'fulness, *a.* aišetaj.
 undefend'ed, *a.* aibò, alaibò.
 undefiled', *a.* ailabawoņ.
 un'der, *prep.* labe, misalẹ.
 underneath', *prep.* abẹ, labe, isalẹ, misalẹ.
 understand', *v.* mọ, ridi, yc.
 understand'ing, *n.* iyé, iyenọ, oyé, imoye.
 understood', *a.* ayetaj.
 undertake', *v.* dawolẹ.
 undertak'er, *n.* adawolẹ.
 undeserv'ed, *a.* aidžé, aidžébi.
 unde'viating, *a.* aiyakpa.
 undiscern'ing, *a.* ainiyenọ.
 undis'ciplined, *a.* aikọ.
 undo', *v.* tú.
 undone', *a.* aiše, abadže.
 undoubt'edness, *a.* aišiyemedži.
 undress', *v.* bọ ašo lẹ.
 undy'ing, *a.* aikú.
 unea'sy, *a.* dąro.
 uneat'ableness, *n.* aldžé.
 une'ducated, *a.* aikọ.
 unembar'rassed, *a.* aidamu.
 unendu'rableness, *n.* aikpe.
 une'qual, *a.* aišegbe.
 une'venly, *adv.* kabakaba, yąnyąn, ọakisiaki.
 unfair', *n.* aifọ.
 unfaith'ful, *a.* aišetọ.
 unfeigned', *a.* aišetaj.
 unfin'ished, *a.* ašekun, ti.
 unfit', *a.* alaiye.
 unfold', *v.* tú.
 unforeseen', *a.* airtẹlẹ.
 unfound'ed, *a.* aimidi.
 unfre'quent, *a.* kede.
 unfruit'ful, *a.* alailso, sekpoņ.
 unfulfilled', *a.* aiše.
 unga'thered, *a.* aikọ.
 ungrate'ful, *a.* afibikpore, afó, alaimọre, foresigi.
 unguard'ed, *a.* aišo.
 unhap'piness, *n.* adžabà.
 unheal'thy, *a.* ailera.
 unheard', *a.* algbọ.
 unheed'ed, *a.* aikiyesi.
 unhe'sitating, *a.* aišiyemedži.
 unho'liness, *n.* aimimọ.
 unho'ly, *n.* aimọ.

unhonored, *n.* aìlòla, alalòlò, aìniyìn.
 unhook', *v.* tu.
 unhurt', *a.* aikpalára.
 unhum'bled, *a.* aìrèlẹ̀.
 u'nicorn, *n.* agbanrèrè.
 uninfec'tious, *a.* aìran.
 uninstruct'ed, *a.* alaiko.
 unintel'ligible, *a.* aiyé.
 unintelligibil'ity, *n.* aiyé.
 unintend'ed, *a.* aikpete.
 uninvit'ed, *a.* aikpè.
 u'nion, *n.* adakpò, idakpò, idawòkpò, idikpò, aiyakpa.
 u'nison, *n.* olòhunkán.
 u'nit, *n.* òkan.
 unite', *v.* bádákpò, da...kpò-mó, kpa...kpò.
 u'nity, *n.* òkan, isokan.
 univers'ally, *adv.* sùá.
 u'niverse, *n.* agbaiye.
 unjust', *a.* aítò, aísòtò.
 unjustif'able, *a.* ádalare.
 unkill'ed, *a.* aikpa.
 unkind' *a.* aísèniá, aísèun.
 unknown', *a.* aìmò, èmò.
 unla'wful, *a.* aìlofin.
 unlearn'ed, *a.* alaiko.
 unleav'ened, *a.* aìwá.
 unless', *conj.* aì, aìbí, ayan-
 šebi, bikòšè, bikòšèkpé.
 unlike', *a.* aìdžò.
 unli'mited, *a.* aìnikpèkun.
 unlov'ing, *a.* aítẹ̀.
 unmade', *a.* aìdá.
 unmer'ciful, *a.* aìlànú.
 unmer'cifulness, *n.* aìšánú.
 unmin'gled, *a.* aìlú, aìdákpò.
 unna'tural, *a.* aìdanida.
 unnum'bered, *a.* aìniye.
 unobserv'ing, *a.* aìkiyesi.
 unoffend'ed, *a.* aìbinò.
 unprepared', *a.* aìmúra.
 unpro'fitable, *a.* alaìlere.
 unproved', *a.* aìlẹ̀ri.
 unquench'able, *n.* adžòókú.
 unquench'ableness, *n.* aìkú.
 unrea'ped, *a.* aìsá.
 unrea'sonable, *a.* aítò, aì-
 džana.
 unredeem'ed, *a.* aìràkpada.
 unreform'ableness, *n.* aì-
 kpada.
 unrege'nerate, *a.* aìtonbí.
 unreli'able, *a.* aìnòšadžere.
 unrepent'ing, *a.* aìronokpì-
 wala.
 unreply'ing, *a.* aìlžè.

unright'eous, *a.* alaìšòdòdò,
 aìšòdòdò.
 unright'eousness, *n.* aìšò-
 dòdò.
 unripe', *a.* eganran, aìgbò.
 unripe'ness, *n.* aìgbò.
 unrul'iness, *n.* aìgbògbò.
 unrul'y, *a.* alawìgbò.
 unsad'dle, *v.* tó...ní gári.
 unshel'tered, *a.* alaìbò.
 unskil'fulness, *n.* alaìlògbòn,
 alaìmòšè.
 unsought', *a.* aìwakiri.
 unsound', *a.* alaìlè.
 unsta'ble, *a.* alaìdùro.
 unstained', *a.* aìlabawòn.
 unsubdu'ed, *a.* aìšè, aìšègun.
 unsuit'ableness, *n.* aìdžè.
 unsuit'ed, *a.* aiyè, aìbaìle.
 unthank'ful, *a.* alaìmore.
 untie', *v.* tó.
 until', *conj.* tìtì.
 untill'ed, *a.* igbòro.
 un'to, *prep.* sika, sòdò. See
 to.
 untrained', *a.* aikó.
 untrue', *a.* aítò.
 untu'toredness, *n.* ibimbi.
 unwar'ranted, *n.* (saying),
 adaso.
 unwashed', *a.* aítò, aìwè.
 unwell', *a.* alsan.
 unwil'lingly, *adv.* tikò.
 unwil'lingness, *n.* aítẹ̀.
 unwise', *a.* aìgbòn: *an unwise*
person, aìlògbòn, alaìlògbòn,
 alaìgbòn.
 unwit'nessed, *a.* aìlẹ̀ri.
 unwor'thiness, *n.* aiyè.
 unwor'thy, *a.* alaìye.
 unyield'ingness, *n.* aìgbò,
 aiyè.
 up, *prep.* leke, lóke, sòke, lori.
 upbraid', *v.* la...wì.
 uphold', *v.* dimú, gbe...dùro,
 gbe...ro, té.
 uphold'er, *n.* olu'beduro.
 upon, *prep.* lé, leri, lori, sori.
 up'permost, *adv.* leke, lóke.
 up'right, *a.* olodòdò, iduro šìj-
 šìj.
 up'rightly, *adv.* šan, šìj, šìj-
 šìj.
 up'roar, *n.* áriwo, aìhigini, iu,
 iru.
 uproot', *v.* tó.
 upset', *v.* dá.
 up'ward, *adv.* lóke.

urge, *v.* rò, tó.
 u'rrinate, *v.* tó.
 u'rrine, *n.* aítò, itò.
 us, *pron.* awa, wa.
 use, *n.* òlò.
 use, *v.* lò.
 use'less, *a.* aìšèlò.
 u'sual, *a.* okporo.
 uten'sil, *n.* èlò, ohun ilò.
 ut'erance, *n.* ifò.
 ut'erly, *adv.* énu.

V.

va'cancy, *n.* òfò.
 va'cant, *a.* òfò.
 va'cillate, *v.* šiyemedži.
 va'gabond, *n.* ašá èniá, džègú-
 duragádu.
 vain, *n.* gberaga, lásan, šefefe.
 vain'ly, *adv.* lásan.
 vale, *n.* koto, džìgbonròn, ofóni-
 fòdži.
 val'ley, *n.* idžìgbonròn, koto óke.
 va'luable, *a.* oliye.
 va'lue, *n.* itoye, iye.
 va'lue, *v.* fi...san, kpè iye.
 van'guard, *n.* kelekèlè.
 va'nish, *v.* dl òfò.
 va'nity, *n.* asàn.
 van'quish, *v.* šè, šègun.
 va'por, *n.* oru, ikáku.
 va'riance, *n.* iyakpa: *to set at*
*variance, yan...nikpa, yan...
 nikposi.*
 vari'ety, *n.* iruru, oniruru, olo-
 riori.
 vaunt, *v.* šogo, šefefe.
 vaunt'ing, *n.* ogó.
 vegeta'tion, *n.* ewe.
 vehement'ly, *adv.* tl.
 veil, *n.* ibodžu.
 vein, *n.* isán.
 vel'vet, *n.* arán.
 ve'nerate, *v.* bòwò fu.
 vena'tion, *n.* ibuyin.
 ven'geance, *n.* šán.
 ve'nom, *n.* oró.
 ve'nomous, *a.* oloro.
 ven'ture, *n.* idáše.
 vera'city, *n.* otitè.
 ve'rify, *v.* wa...tò.
 ve'rily, *adv.* lóto, lóto.
 ver'min, *n.* ina, yoro.
 ver'tigo, *n.* oyi.
 ve'ry, *adv.* fòlì, aìgan, aìwò,
 džègú, džù, kòrò, má, tóho.

ves'sel, *n.* ohun èlo, ohun ilò.
 vex, *v.* bá... minòdžé, bi...
 niuó, nilara.
 vexa'tion, *n.* ibadže, ibinó,
 irukpekpe.
 vexed, *a.* binòdžé, runó.
 vi'al, *n.* okpálaba.
 vicin'ity, *n.* etile.
 vic'tor, *n.* olušeté.
 vic'tuals, *n.* ondžé.
 view, *v.* wò.
 vile, *a.* abeše.
 vil'ifier, *n.* alébu.
 vil'lage, *n.* égure, iléko, ileto,
 ilukedži.
 vil'lager, *n.* ará ilu, ará iléko.
 vin'dioate, *v.* gbidžà.
 vindica'tion, *n.* egbe, igbera.
 vind'icative, *a.* ašdro.
 vine, *n.* okun (*a term applied
 to all running and climbing
 plants*).
 vi'olence, *n.* agbara, ele,
 džamba, iwà ikpa.
 vi'olent, *a.* kpati.
 vi'olently, *adv.* fukefuke,
 gburu, kpàkpa, kpatikpatí, tán-
 tan, títì.
 violin', *n.* dùru.
 vi'per, *n.* agbàdu, kпамо́лє.
 vir'gin, *n.* wundia.
 virgin'ity, *n.* iwà wundia.
 vis'cid, *a.* mó, emó, fà.
 vis'cous, *a.* fà.
 vi'sible, *a.* hàn.
 vi'sibly, *adv.* ni gbangba.
 vi'sion, *n.* inan, iran, odžuran.
 vi'sit, *v.* be... wò, kesi, wò.
 vi'siting, *n.* abodžunwò.
 visita'tion, *n.* abèwò, ibèwò.
 vi'sitor, *n.* akesi, alakesi, awòni.
 viva'city, *n.* iyari.
 vi'vidly, *adv.* sànj.
 vo'cal, *a.* olòlun.
 voca'tion, *n.* isé.
 voice, *n.* òhun.
 void, *a.* òfo, asànj.
 void, *v.* so... dasànj.
 vo'luntary, *a.* fura, fu ará rẹ.
 vo'mit, *n.* cbi.
 vo'mit, *v.* bi, kpo, ru... laiya.
 vora'cious, *a.* onidžekudžé.
 vow, *n.* ileri.
 vow, *n.* šeleri.
 vul'ture, *n.* àkala, igun, tentę-
 re.

W.

wad, *n.* (*of a gun*), idžé.
 wad, *v.* ki.
 wade, *v.* là.
 wag, *v.* redi.
 wa'ges, *n.* owóšé, oya.
 wa'gon, *n.* kekčru.
 wail, *v.* kpòhun rere.
 wail'ing, *n.* òhun rere.
 wait, *v.* digbaro, duro.
 wake, *v.* dži, tadži.
 walk, *v.* rin.
 walk, *n.* akporó.
 walk'ing, *n.* irin.
 wall, *n.* igana, odí, ogiri.
 wall, *v.* modí.
 walled, *a.* olodi.
 wal'let, *n.* ásunwón, óketò.
 wal'low, *v.* kpafo.
 wan'der, *v.* kiri, rin.
 wan'derer, *n.* akiri, alarij-kiri,
 onikiri.
 wan'dering, *a.* akiri.
 wan'deringly, *adv.* kiri, kiri-
 kiri, kakiri.
 want, *v.* ée alainí.
 wan'tonness, *n.* ašedžù.
 war, *n.* idža, ogun : *which caus-
 es war*, adžagunsilè.
 war, *v.* džagun.
 warm, *a.* gbona, ya.
 warm, *v.* rana, ya, yana, yàra.
 warn, *v.* kiló.
 warp, *n.* iró.
 warp, *v.* tašo.
 war'rior, *n.* adžagun, ologun.
 wart, *n.* òdi.
 wash, *v.* bọ, fí, wẹ, sí... nọ : *to
 wash the face*, bọdžn ; *wash the
 body*, bora, wera.
 washed, *a.* awẹnd.
 wash'erwoman, *n.* alagbafọ,
 onifọ.
 wasp, *n.* agbón.
 waste, *v.* da... nọ, fi... šofọ,
 šofọ, tafala.
 wast'er, *n.* áwanò.
 wast'ed, *a.* adánò, fo.
 waste'fulness, *n.* borukonn.
 watch, *v.* šó, šona, šora.
 watch, *n.* isó.
 watch'er, *n.* olušo.
 watch'fulness, *n.* isóra.
 watch'man, *n.* ešo.
 watch'tower, *n.* ore.
 wa'ter, *n.* omi, òdo.
 wa'ter, *v.* rin.

wa'ter-course, *n.* òdo, ikpa
 òdo.
 wa'ter-melon, *n.* guna, bara.
 wat'tle, *v.* lá.
 wat'tle, *n.* toló.
 wave, *n.* irumi, tere.
 wa'vering, *a.* še wele.
 wav'ingly, *adv.* wele.
 wax, *n.* ida, òda.
 way, *n.* òna, ikpa.
 way'layer, *n.* alabamóle.
 we, *pron.* awa, á.
 weak, *a.* alalera, ešekerodé,
 kẹrẹdẹ.
 weak'ly, *adv.* leutę.
 weak'ness, *n.* ailera.
 wealth, *n.* olà, oró.
 wealth'y, *a.* oloro.
 wean, *v.* dža... lenu, wo, wón.
 wea'pon, *n.* elé.
 wear, *v.* wòšọ : *to wear out*, lò
 ... gbó.
 wea'ried, *a.* lārę.
 wea'riness, *n.* agara.
 wea'ry, *v.* da... lagá, rẹ, sá.
 wea'ry, *a.* lārę.
 wea'ther, *n.* odžo.
 weave, *v.* wón, wónšọ.
 weav'er, *n.* alakele, awonšọ :
 weaver's beam, akabẹ.
 wed'ding, *n.* ibi-iyawo.
 weed, *v.* ro.
 week, *n.* ošé.
 weep, *v.* sokun.
 weep'er, *n.* ešekun.
 weep'ing, *n.* ešun.
 weigh, *v.* wón, šiwón.
 weight, *n.* osunwón.
 weight'ily, *adv.* rinrin.
 well, *n.* kanga.
 well (it is), *adv.* sian, suaj.
 well, *adv.* gege, džodžọ, lehe,
 kputu, rere, šaušau, to, tolo.
 wen, *n.* gęge, koko.
 west, *n.* atiwo-orun, yama.
 west'ward, *adv.* niha yama.
 wet, *a.* tutu.
 wet, *v.* rin, wẹ.
 weth'er, *n.* ogufẹ.
 wet'ness, *n.* itutu.
 whale, *n.* alububutinj.
 wharf, *n.* ebute.
 what, *pron.* biti, c, ewó, ki,
 kila.
 what else? *adv.* ambošin, am-
 bōtori.
 whate'ever, *pron.* kati.
 wheat, *n.* alikána.

wheel, *n.* kẹkẹ.
when, *adv.* nigba, nigbati, nigbawo? ti.
whence, *adv.* bi, nibiti, uibo, niboti.
where, *adv.* da, ibo, libisi, nibiti, nibo, niboti, sa, sia, wa, tí.
whereas, *adv.* nibi.
whereby, *adv.* bibawo.
wherefore, *adv.* nitoriná.
wherever, *adv.* nibikibi.
whet, *v.* gbẹ, kpọ, kpọ . . . nu.
wheth'er, *conj.* bi, yala.
which, *pron.* ẹ, ewó, kelo, tí, yisi.
while, *adv.* nigba, nigbati.
whip, *n.* lagba, kpaşan.
whip, *v.* dá, ná.
whipping, *n.* iná.
whirl, *v.* dzo, lori, kpòri.
whirling, *n.* ilori.
whirlwind, *n.* idzi.
whisper, *v.* sọrọdzedze, sọrọkẹ.
whisperer, *n.* asọrọdzedze, asọrọkẹ.
whistle, *n.* akpala.
whistle, *v.* sufe.
white man, *n.* ambó, oibó, oyibó.
whiteness, *n.* alala, fifu, fufu, ifun, tála.
whither, *adv.* nibo.
whitlow, *n.* atafo.
who? *pron.* ta? tani? *who*, ti.
whoever, *pron.* ẹnikeni ti.
whole, *n.* odidi, ototo, tító.
wholly, *adv.* kpatakpata, kpi, şaka, tẹfetẹfe, tí . . . ti.
whoop, *v.* kigbẹ.
why, *adv.* ẹ še tí, eháşe, ehátise, ẹşe, ẹtise, ewó.
wick, *n.* owú.
wicked, *a.* buru, ọwọ.
wickedly, *adv.* fura.
wickedness, *n.* iburu, iká, ikakika, isekuşe, iwá buburu.
wide, *a.* gbágba, gbòro.
widely, *adv.* gbengbe.
wide-mouthed, *a.* abénu-gbòro.
widen, *v.* mu or še . . . gbòro.
widow, *n.* okpó.
width, *n.* ilu, igboro.
wife, *n.* aya, abilekọ.
wild, *a.* igbẹ, tí igbẹ.

wildcat, *n.* akata, agbó.
wilderness, *a.* agaydzú, aginjdzú, idzú.
wildfowl, *n.* ẹyẹ igbẹ.
will, *aux.* á, ó, ọ, ba, dzẹ.
will, *n.* ifẹ.
wilfulness, *n.* amoşe.
wilfully, *adv.* furafura.
willing, *a.* ifẹ, dzẹ.
willingly, *adv.* tinotinó.
win, *v.* lakọ.
wind, *n.* afẹfe, ẹfufu.
wind, *v.* kà dàwú, káwe, káwu, wemọ: *to wind together*, wekpọ.
window, *n.* fẹrese.
windpipe, *n.* igòngo-ọfọ.
wing, *n.* akpa, akpa-iyẹ.
wink, *v.* fodzúkpẹ, şedzú.
winnow, *v.* fẹ, fẹ . . . nọ: *winnowed away*, afenọ.
wipe, *v.* fa, nọ: *to wipe off*, nọ . . . nọ.
wisdom, *n.* ọgbọ.
wise, *a.* amọdzú, mọran, amọran, olumọran, gbọ, ọlogbọ, olóye.
wisely, *adv.* ọgbọgbọ, fi ọgbọ.
wish, *v.* fẹ.
wisp, *n.* iti.
witch, *n.* adzẹ, alawiká, aróniká, awirin, oşo.
witchcraft, *n.* ise oşo.
with, *prep.* bá, fi, fu, fun, lọdọ, kpelu, ti.
withdraw, *v.* fa . . . kpadà.
withe, *n.* okú.
whither, *v.* kú, rọ, rọdzo, şẹkpe, wòwé.
withhold, *v.* dakun, fa . . . sehij.
within, *prep.* ninó, tinó.
without, *adv.* lode, leliij.
without, *prep.* laini.
withstand, *adv.* de . . . lóna, kodznda.
witness, *n.* ẹleri, ẹni.
wizard, *n.* alawiká, aróniká, awirin, oşo.
woe, *n.* egbẹ: *woe unto thee*, egbẹ ni fu ọ.
woman, *n.* obiri, obinjri.
womb, *n.* inọ.
wonder, *v.* yamu.
wonder, *n.* emọ, iyanu.
wonderful, *n.* gása, kpa.
woo, *v.* fẹ.

wood, *n.* igi.
wooden leg, *n.* angere.
woodpecker, *n.* akoko.
woof, *n.* ita, okuku.
wool, *n.* iron agutan.
word, *n.* gbolóhun, ọrọ.
work, *n.* ise.
work, *v.* şise.
workman, *n.* onişe.
workshop, *n.* iló ise.
world, *n.* aiye, araiye.
worm, *n.* aron, ẹdžonó, ekolo, kòkoró.
wormeaten, *a.* adzu.
worse, *a.* kẹ.
worship, *n.* isij.
worship, *v.* bọ, bọgi, foribalẹ, hari, sij, te, wari.
worshipper, *n.* olusij.
worthiness, *n.* ẹyẹ.
worthless, *a.* ẹnkanjikanj.
worthy, *a.* ye.
would, *aux.* ba, dzẹ.
wound, *v.* farakpa, kpa . . . lara, ráj, şá, şá . . . logbe.
wound, *n.* ọgbẹ.
wrangling, *n.* asọ, asọkpọ.
wrap, *v.* fi . . . we, gbà.
wrath, *n.* ibinj.
wreath, *n.* mariwo.
wrest, *v.* ló.
wrestle, *n.* dzakadi.
wrestling, *n.* idza, idzakadi.
wriggle, *v.* şe owere.
wriggler, *n.* oniwere.
wring, *v.* ló.
wrinkle, *v.* kiwedze.
wrinkle, *n.* ikiwedze, iwedze.
write, *v.* hantú, kọ, kọwe.
writer, *n.* akówe.
writhe, *v.* şe owere.
writing, *n.* rubutu, ikowe.
wrong, *a.* alaitọ.
wrong, *n.* alaisótọ.
wrongfulness, *n.* odi.
wrongness, *n.* aisótọ.

Y.

yam, *n.* isu, abadze, esuru, gudu-gudu, igangan.
yard, *n.* isaboti.
yarn, *n.* owú.
yawn, *v.* yán.
yaws, *n.* gbódogi.
ye, *pron.* ẹyin, ẹ, nri, nyin nyin.

yea, *adv.* aní, kpelukpèlu.

year, *n.* ayidà, ọ́dún.

yearly, *a.* ọ́dọ́dun.

yearly, *adv.* lọ́dọ́dun.

yeast, *n.* iwukara.

yelk. *See* *yolk*.

yellow, *a.* beledé, safakpukpa.

yes, *adv.* bẹ́hẹ̀ ní, e, ẹ̀yí, he, hẹ̀yí, ọ́họ́.

yesterday, *adv.* ana, lana.

yes'ternight, *n.* ọ́ru ana.

yet, *adv.* sibẹ̀.

yet, *conj.* sùgbọ́n.

yield, *v.* dẹ́kun, rọ́.

yield'ing, *a.* lẹ̀lẹ̀.

yoke, *n.* adzaga.

yoke, *v.* di li adzaga.

yolk, *n.* kpukpa ẹ̀yín.

yon'der, *adv.* ọ́hun, lọ́hun, sọ́hun.

yore, *n.* lailai.

you, *pron.* iwọ́; *pl.* nyí, nyín.

young, *a.* titọ́n.

younger, *a.* abùro.

young'est, *n.* abikẹ́hin.

young'ster, *n.* balaga.

your, *pron.* iwọ́, rẹ̀; *pl.* ẹ̀nyín, tẹ̀nyín.

yourself, *pron.* iwọ́ ná.

youth, *n.* balaga, ewe, ikpere, okpekpe.

Z.

zeal, *n.* itara, igbona.

zeal'ot, *n.* onitara.

zeal'ous, *a.* gbona.

zeal'ously, *adv.* gbonagbona, tasatasa.

ze'nith, *n.* katari, akatari.

ze'phyr, *n.* ọ́fẹ̀.

E R R A T A .

GRAMMAR.

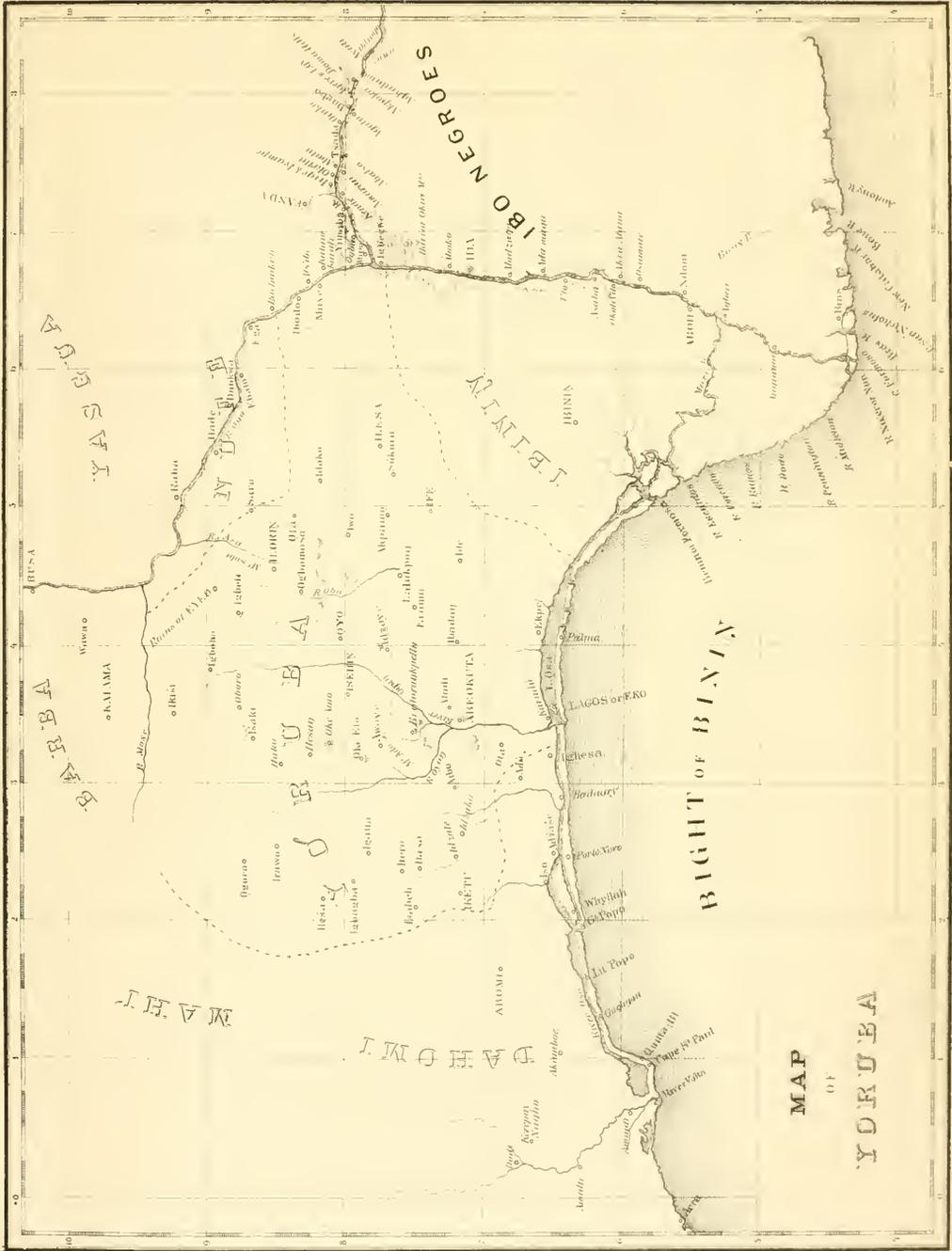
Page	4,	line	15,	for	aimò,		read	aimò.
	"	4,	"	38,	"	asò,	"	asò.
	"	5,	"	38,	"	èsé,	"	èsé.
	"	6,	"	26,	"	èsé,	"	èsé.
	"	34,	"	9,	"	emi kò ri or ò (ri) bi?	"	emi kò (or ò) ri bi?
	"	38,	"	25,	"	isòdè,	"	isòdè.
	"	56,	"	18,	"	òran.	"	òran.

DICTIONARY.

Page	6,	col.	b,	line	9,	for	abénagbòro,	read	abénuḡbòro.	
	"	8,	"	a,	"	23,	"	ádìrè,	"	adìrè.
	"	8,	"	b,	"	27,	"	adzagun,	"	adzagun.
	"	8,	"	b,	"	47,	"	adzedze (bis),	"	adzedzi.
	"	9,	"	a,	"	31,	"	adzorin,	"	adzorin.
	"	9,	"	b,	"	17,	"	afinošehin,	"	afinošehin.
							"	afinòsode,	"	afinòsode.
	"	10,	"	a,	"	5,	"	<i>knows the head,</i>	"	<i>knows not the head.</i>
	"	10,	"	a,	"	27,	"	agbabon (ibon)	"	agbabon (ibon).
	"	10,	"	b,	"	24,	"	agbedzòlo,	"	agbedzòlò.
	"	11,	"	b,	"	36,	"	alku (bis).	"	alkú.
	"	12,	"	a,	"	23,	"	ainiye,	"	ainiye.
	"	13,	"	b,	"	28,	"	akórò,	"	akórò.
	"	15,	"	a,	"	30,	"	alàikola,	"	alàikòla.
	"	15,	"	b,	"	14,	"	alalye,	"	alalyè.
	"	15,	"	b,	"	29,	"	alalpedze,	"	alalpedzè.
	"	16,	"	b,	"	17,	"	dele 'alufa,' the definition of which belongs to the preceding word 'alufa.'		
	"	18,	"	b,	"	12,	"	asánkòḡ,	read	asánkòḡ.
	"	19,	"	a,	"	34,	"	asayan,	"	asàyan.
	"	20,	"	a,	"	20,	"	atizaran,	"	atidzarun.
	"	21,	"	b,	"	1,	"	ayanšebi,	"	ayanšebi.
	"	21,	"	b,	"	27,	"	ayun,	"	àyun.
	"	22,	"	a,	"	46,	"	obangidzi,	"	Obángidzi.
	"	23,	"	b,	"	29,	"	mòlè,	"	mòlè.
	"	25,	"	a,	"	38,	"	dò alya,	"	dá alya.
	"	28,	"	b,	"	33,	"	lerì,	"	lèrì.
	"	30,	"	b,	"	37,	"	<i>inflection,</i>	"	<i>inflection.</i>
	"	31,	"	b,	"	47,	"	edò (bis),	"	edò.
	"	33,	"	b,	"	1-4,	"	eni,	"	enì.
	"	36,	"	a,	"	20,	"	šè-ḡḡ,	"	šèšin.
	"	36,	"	b,	"	26,	"	menses,	"	muncus.
	"	43,	"	a,	"	17,	"	ifihau,	"	ifihàu.
	"	44,	"	b,	"	34,	"	ikogdu,	"	ikogḡu.
	"	46,	"	a,	"	30,	"	mu,	"	mú.
	"	47,	"	b,	"	30,	"	oro,	"	oró.

Page 48, col. a, line 39, for itowò,	read itowò.
“ 49, “ a, “ 20, “ iyangbo,	“ iyangbo.
“ 49, “ b, “ 51, “ <i>adv.</i>	“ a.
“ 53, “ a, “ 3, “ lōkanḁà,	“ lōkanḁà.
“ 53, “ b, “ 2, “ owò,	“ owò.
“ 63, “ b, “ 5, “ orilẹ,	“ orilẹ.
“ 63, “ b, “ 29, “ ami,	“ àmi.
“ 64, “ b, “ 37, “ odzò,	“ ọdžó.
“ 66, “ b, “ 8, “ idžinlẹ,	“ idžinlẹ.
“ 67, “ a, “ 37, “ eḁo,	“ eḁò.
“ 68, “ a, “ 8, “ rẹ . . . lẹ,	“ rẹ . . . lẹ.
“ 69, “ a, “ 32, “ sagadaga,	“ sagadagbà.
“ 70, “ a, “ 20, “ si . . . ndžẹ,	“ siṣ . . . džẹ.
“ 70, “ b, “ 8, “ sọ . . . di,	“ sọ . . . di.
“ 70, “ b, “ 21, “ sọ . . . di,	“ sọ . . . di.
“ 71, “ a, “ 34, “ mu,	“ mù.
“ 71, “ b, “ 2, “ šala,	“ šaba.
“ 71, “ b, “ 12, “ šaisan,	“ šaisán.
“ 72, “ a, “ 17, “ šawotan,	“ šawótán.
“ 72, “ a, “ 26, “ moḁe,	“ moḁẹ.
“ 73, “ b, “ 16, “ šiwo,	“ šiwo.
“ 74, “ b, “ 38, “ laiya,	“ laiya.
“ 75, “ b, “ 13, “ tẹlẹ,	“ tẹ . . . lẹ.
“ 75, “ b, “ 24, “ tẹri, tẹriba,	“ tẹri, tẹriba.
“ 76, “ b, “ 41, “ tọdo,	“ tọḁo.
“ 77, “ a, “ 20, “ <i>bearer's.</i>	“ <i>hearer's.</i>
“ 78, “ a, “ 52, “ woran,	“ wòran.
“ 78, “ b, “ 17, “ wọlẹ,	“ wọlẹ.
“ 79, “ a, “ 5, “ yabode,	“ yabode.
“ 79, “ a, “ 51, “ ya . . . sọto,	“ yà . . . sọto.

NOTE.—It is hoped that the reader will make these corrections before using the book; and that he will find some excuse for the number of them, mostly relating as they do to the accentual and diacritical marks, in the fact that in noting these we have as yet to depend in great measure on the ear.



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