

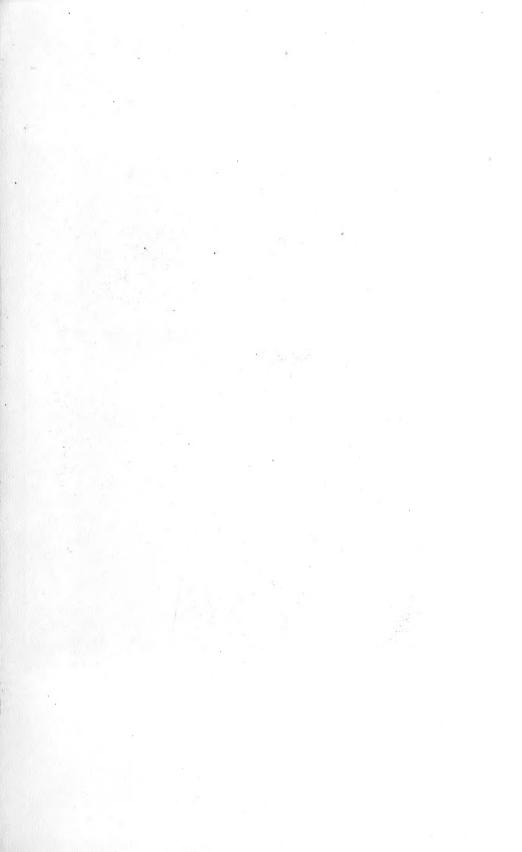
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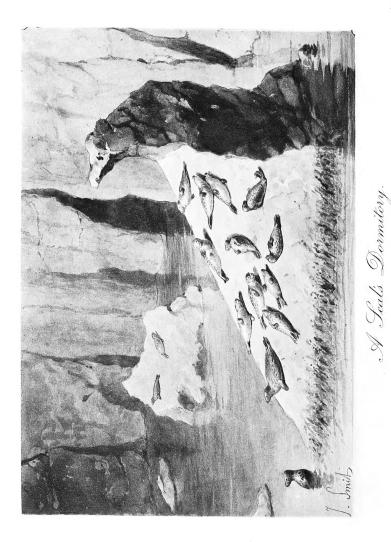
Oct 12, 1922. A. Wetmon



THE BIRD WATCHER IN THE SHETLANDS with some notes on seals-and digressions

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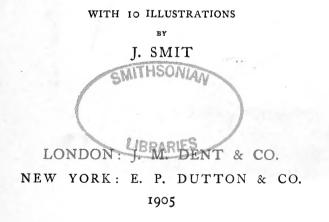
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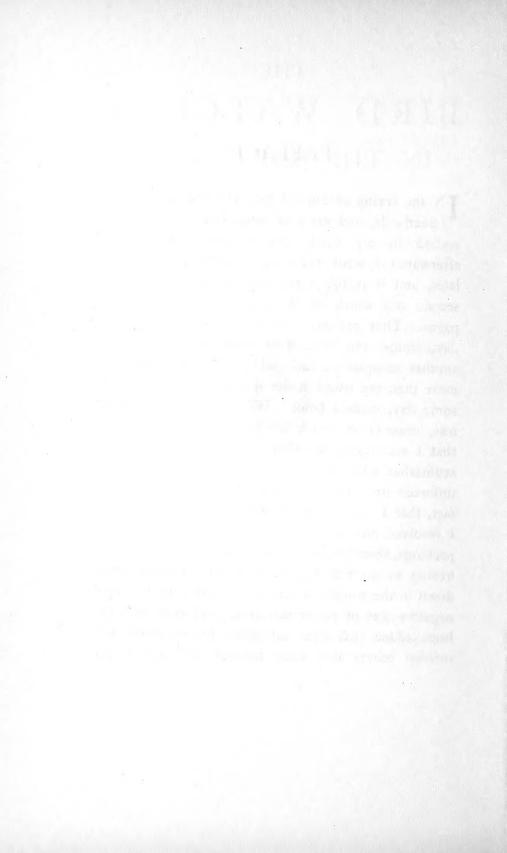
BIRD WATCHER IN THE SHETLANDS

WITH SOME NOTES ON SEALS —AND DIGRESSIONS

BY EDMUND SELOUS







PREFACE

IN the spring of 1900 I paid my first visit to the Shetlands, and most of what I then saw is embodied in my work Bird Watching. Two years afterwards I went there again, arriving somewhat later, and it is the notes made by me during this second stay which fill the greater number of these They are my journal, written from day to pages. day, amidst the birds with whom I lived without another companion, nor did I look upon them as more than the rough material out of which I might, some day, make a book. When it came to making one, however, it struck me more and more forcibly that I was taking elaborate pains to stereotype and artificialise what was, at any rate, as it stood, an unforced utterance and natural growth. I found, in fact, that I could make it worse, but not better, so I resolved not to make it worse. Except for a few peckings, therefore, and minor interpolations-mostly having to do with the working out of ideas jotted down in the rough-I send it to press with this very negative sort of recommendation, and with only the hope added that what interested me so much will interest others also, even through the veil of my

PREFACE

writing. Besides birds, I was lucky enough this time to have seals to watch, and I watched them hour after hour and day after day. I believe I know them better now, than I do anybody, or than anybody does me; but that is not to say much, for, as the true Russian proverb has it, "Another man's soul is darkness." But I have them in my heart for ever, and I would take them out of the Zoological Society's basins, and throw them back into the sea, if I could.

I have no doubt that these pages contain some errors of observation or inference which I am not yet aware of-but those who only glance at them may sometimes be inclined to correct me, where, later, I correct myself. It is best, I think, to let one's mistakes stand recorded against one, for mistakes have their interest, and often emphasize some truth. Honesty, too, would suffer in their suppression-and besides, if one has got in some idea or reflection that pleases one, or a piece of descriptive writing that does not seem amiss, how tiresome to have to scratch it out, merely because it is founded on a wrong apprehension! ----the spire to come tumbling just for the want of a base! For these reasons, therefore-especially the last, when it applies-I have not suppressed my errors, even where I happen to know them. There they stand, if only to encourage others who may be labouring in the same field as myself-which makes one more high-minded motive.

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For my digressions, etc.—for which I have been taken to task—I hope this fresh crop of them will make it apparent that they are a part of my method, or, rather, a part of myself. I have still a temperament I find—and it gives me a good deal of trouble —but as soon as I have become a nonentity, I will follow the advice given me, and write like one. I would say more if I could, but I must not promise what it is not in my power to perform.

EDMUND SELOUS



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THE BIRD WATCHER IN THE SHETLANDS

WITH SOME NOTES ON SEALS —AND DIGRESSIONS

CHAPTER I

MY ISLAND AGAIN!

MY island again !---and all the birds still there, looking just as they did when I left it. More, too, have come. At night, but in a sort of murky daylight, I walk over the breeding-ground of the terns, a long flat strip of pebbly beach-or rather the heather a little way above it, for on the beach itself they do not appear to have laid. Rising, all at once, as is their wont, they make a second smaller canopy, above me, floating midway beneath the allovershadowing one of dreary low-lying cloud. Out of it, ever and anon, some single bird shoots down, with a cry so sharp and shrill that it seems to pierce the ear like a pointed instrument. Occasionally an oyster-catcher darts in amongst them all, on quickly quivering wings, its quavering high-pitched note of "teep, teep !--- teep, teep, teep !" threading, as it were, the general clamour, whilst like a grey, complaining shadow, the curlew circles, beyond and solitary,

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shunning even the outer margin of the crowd. How lonely is this island, and yet how populous! The terns—a "shrieking sisterhood"—make, as I say, a canopy above me, when I pace or skirt their territories; but what is that to the great perpetual canopy of gulls that accompanies and shrieks down at me, almost wherever I go? Were it beneath any roof but that of heaven, how deafening, how ear-splitting would be the noise, how utterly unendurable! But going forth into the immensity of sky and air it sounds almost softly, harsh as it is, and even its highest, most distressful notes, sink peacefully at last into the universal murmur of the sea, making the treble to the bass of its lullaby.

Most of the cries seem to resolve themselves into the one note or syllable "ow," out of which, through varied tone and inflection, a language has been evolved. "Ow-ow, ow-ow, ow-ow!" sadly prolonged and most disconsolately upturned upon the last, saddest syllable -a despair, a dirge in "ow." Then a series of shrieking "ows," disjoined, but each the echo of the last, so that when the last has sounded, the memory hears but one. Then again a wail, intoned a little differently, but as mournful as the other. And now a laughdiscordant, mirthless, but a laugh, and with even a chuckle in it-"ow, ow, ow, ow, ow !" the syllables huddling one another like the "petit glou-glou" of water out of a bottle. All "ow" or variants of "ow," till the great black-backed (the bulk are herring-gulls) swooping upon you, almost like the great skua itself,

breaks the spell with a "gugga, gugga, gugga!" or, right over your head, says "er" with a stress and feeling that amounts almost to solemnity.

How lonely and yet how populous! Does life, other than human life, around one, in any way diminish the sense of solitude? I do not think it does myself, except through human association, and for this, human surroundings are more or less requisite. Thus woodland birds seem homely and companionable in woods near which one has a home, and gulls upon the roofs of houses take the place of pigeons or poultry in the feelings they arouse. So, too, as long as a natural alacrity of the spirits prevails over that dead, void feeling which prolonged solitude brings to the most solitary, the wildest creatures in the wildest and loneliest places may seem to cheer us with their presence. But the feeling is a false one, dependent on that very condition, and treacherously forsaking us-even to the extent of making what seemed a relief, an accentuation-when it fails. How often, as I have wandered over this little, noisy, thickly crowded retreat, has all the fellowship around me served but to remind me of my own exclusion from it-as from that of fairies, ghosts, elementals-but what all this life could not do, the cheerful firelight on the bare stone walls of the solitary shepherd's hut did at once for me, and with bacon in the frying-pan I had all the companionship I wanted. A dog-one's own or that knew one-or even a cat, might do more by its own personality than such inanimate objects by association merely, to

THE BIRD WATCHER

relieve the sense of solitude; but no quite indifferent creature could do as much, I believe, or indeed anything.

But with the gulls here-and still more with the terns-there is more than mere indifference. It is a disagreeable reflection that all these many birdsthese beings everywhere about one-resent one's presence and wish one away, that every one of all the discordant notes uttered as one walks about under this screaming cloud of witnesses has a distinct and very unflattering reference to oneself, upbraids one, almost calls one a name. To be hated by thousandsand rightly hated too! It is strange, man's callousness in this respect-that he should see his presence affect bird and beast as that of the most odious tyrant affects his fellow-men, yet never sleep or eat a meal the less comfortably for it ! So it is indeed-and the principle holds good as between races and classes of men-when one has one's fellow-tyrants to laugh and joke and chat with; but here, with but oneself and one's own thoughts, the hostility of all these gulls begins to trouble one. There is no one to share in the obloquy-it falls upon you alone. You are the most unpopular person in the island.

I get another odd sensation through being here. Gradually, as the days go on, it seems more and more as though gulls made all the world, and this feeling, which, for its singularity, I value, I can encourage by seeking out some spot from which the sight of all but them and inanimate nature is, with extra rigour, shut

out. The centre of the island, which is the gulls' especial sanctuary, presents these conditions. It forms an extended grassy basin, ringed in with low, swelling peat-hills, above which-for the intervening space is invisible-rise the tops of hills far higher, belonging to islands of some size which lie spread about this little one, hiding it from all the world. Through dips in these, and in the rim of one's own brown basin, one gets the sea-dull, cold grey lakes of it, engirt by dimmer islands, far away. No human sight in it all; no sail, for hours, upon the sea-only the gulls which, in their thousands and their all-possession, seem to have subdued the world. Men are gone, and gulls now take their place, become ennobled for want of a superior. Like snowy-toga'd Roman senators, they stand grouped about, or walk over the grassy amphitheatre-their natural senate-house-and it is wonderful with how slight an effort of the imagination-or indeed with none-the dissonant cries and shrieks, the clang and the jangle, become as the dignified utterance, eloquent oratory, to which one has sat and listened, spell-bound, in the gallery of the House of Commons. "Such tricks has strong imagination." "How easy," indeed, as Shakespeare tells us, "is a bush supposed a bear ! "

It is curious how the gulls cling to their breedingplaces long after the breeding-time is over. Summer —or say July—is now fast waning, yet in the way they stand amidst the heather, rise as I approach, and float, shrieking, above me, it is just as it was last time

I was here, which was in early June, when things were hardly more than beginning. Any one not knowing the time of the year-and it is difficult to tell in the Shetlands-might expect from the birds' actions and the general appearance of the whole community, to find eggs and newly-hatched chicks all about; but all are gone, and the nests now hardly to be distinguished from the surrounding heather. A few young birds there are, but they are of large size, though unable as yet-or scarcely able-to fly. It is the habit of these, when approached, to crouch and lie flat along the ground, without making any attempt to escape, even allowing themselves to be stroked and taken up in the hand. When set down again, however, they generally start off running, and often get to a great distance before they stop. Young terns and young peewits do just the same thing, and it is curious that in their manner of thus crouching, before the power of flight has been fully gained, they exactly resemble the stone-curlew, in which bird the habit is permanent, though not, I should say, very frequently indulged in after maturity has been reached. As no adult gull or peewit crouches in this way, we must suppose either that natural selection has infixed a certain habit in the young bird, suited to its flightless condition, or that in thus acting it reverts to a trick of its ancestors, which were presumably, in that case, flightless, through life. The clinging of the stonecurlew to the early habit seems to support the latter supposition, and primâ facie it is perhaps more prob-

able that crouching in a bird should have come before flying than after it, or, at least, that it should have been resorted to by certain species, on account of their flight having become weak. It is conceivable that some birds may have alternately lost and reacquired the power of flight many times in their genealogical history. But where have the majority of the young gulls gone? That they have left the island seems evident, for, were it otherwise, they would either be all about the heather, or fill the air more numerously than do the mature birds, when they cluster above me in my walks. In the air, however, none are to be seen, though, as by far the greater number must now be full-fledged, it is there that they ought to be, with the rest. On the ground there are, as I say, a few that seem to have been later hatched, and are not yet matriculated in flight. Their proportion, however, is not more than one to a hundred of the grown gulls, whereas since every pair of these rears three young, it should be as three to two. Gilbert White speaks of that general law in accordance with which young birds are driven away by their parents, when they are no longer dependent upon the latter's attention, but can feed and look after themselves; but with social birds this law of expulsion is apt to merge in a larger one, that, namely, which is expressed in the old adage that "birds of a feather flock together." We often see this illustrated in the case of the sexes, and after watching kittiwakes at the close of the breeding-season, I can have no

doubt that the same principle governs the motions of young and old birds. Of hostility on the part of the parents I have seen but little, nor is it necessary; for the young, which are now distinguished by a different coloration, both of plumage and bill, making them look like another and quite mature species, delight to associate together, so that both the rocks and the water become the scene of tolerably large gatherings of them, at which hardly an old bird is present. As the parents of these assemblies are now free from the cares of domesticity, it seems as though the reason for such a segregation must be of a psychical nature, since one can hardly suppose that the dissimilarity of plumage has anything to do with it, seeing that young and old are as familiar with one another's appearance as with their own. It is the same thing, no doubt, with the gulls on this island, but as the whole interior, or rather the crown of it, is little else than their nesting-ground, it would be difficult for the younger generation to foregather, without the constraining presence of the elder one. The inconveniences of this may be imagined. Not a remark but would be overheard, not a side-glance but would be supervised and harshly interpreted, not a giggle that would pass unreproved. In these irritating circumstances, apparently-this, at least, is my theory of it-the young people have migrated en masse, a striking proof that, with birds no less than with ourselves,

Crabbed age and youth cannot live together.

CHAPTER II

SPOILER AND SPOILED

TO the one smooth beach that there is here come the terns, each year, to breed, and from these, as well as from the various gulls that nest upon the island, the lesser or Arctic skua--whom some call Richardson's, as though it belonged to that gentleman -is accustomed to take toll. Sweeping the sea with the glasses, one detects, here and there upon its surface, a dusky but elegantly shaped bird, that sometimes rises from the water and descends upon it again, slowly and gracefully, but is never seen to poise and hawk at fish, like the terns themselves, or, more rarely, some of the gulls. These are those skuas who elect to take their chances at sea, and whenever a tern rises after making his plunge, with a fish in his bill, they rise also and pursue him. Then may be witnessed a long and interesting chase, in the course of which the two birds will sometimes mount up to a considerable height, rising alternately, one above the other, as though each were ascending an aerial ladder. There are no gyrations in these ascents. They are, or at least they have the appearance of being, almost perpendicular, so that they differ altogether from those of the heron and hawk, once familiar in falconry, and of which Scott has given us

such a splendid description in "The Betrothed," that delightful work which an obtuse critic and publisher (l'un vaut bien l'autre very often) almost bullied its author into discontinuing. The victory is by no means always to the robber bird; and I believe that if a tern only persevere long enough it has nothing to fear, for, as in the case of the black-headed gull and the peewit, with much threatening, there is never, or, to be on the safe side, very rarely, an actual assault. It almost seems as if this logical sequence of what has gone before had dropped into desuetude, and that the skua, from having long been accustomed to succeed by the show of violence only, had become incapable of proceeding beyond the show. Why, if this were not the case, should he always leave a bird that holds out beyond a certain time? It is not that he is outstripped in the chase, for the skua's activity and powers of flight have always seemed to me to be sufficient to overtake any bird of his own size, however swift, with whom he has piratical relations. Of his own size, or something approaching to it, for I have seen him altogether baffled by the smaller turns and evasions of such a comparatively feeble flyer as the rock-pipit. But this was out of the ordinary way of his profession. The rock-pipit carried nothing, and, even if he had done, it would have been too insignificant for the skua's attention. Either amusement or murder-or the amusement of murder, which is felt by birds as well as men-must have been the object here, nor does this contravene

the theory I have just laid down, since such generalised and legitimate longings are only indirectly related to the bird's special instinct.

I do not myself see how these curious relations of robber and robbed could have arisen, unless there had been, from the beginning, a marked difference in the relative powers of flight possessed by each. The skua, originally, must have caught fish, like the birds on whose angling it is now dependent, and only an easy mastery over the latter could have induced it to abandon the one way of living for the other. This superiority was probably first impressed upon the weaker species through bodily suffering, but it would have been less trouble for the stronger one could it have succeeded without coming to extremities, and this, and its constantly doing so, might in time have made it forget, as it were, the last act of the drama. But say that the skua has forgotten this, then it is likely that a certain number of the persecuted birds have by practice discovered that it has, and so emancipated themselves from the tyranny. Whether this be the reason or not, I have often noticed the persistence with which some terns refuse to yield the fish, though the nearness of the skua, and its sweeping rushes, seem quite sufficient to induce them to. Those, on the other hand, who drop it quickly, often do so whilst the enemy is still at a distance, in which case the fish falls upon the water before the skua can catch it. Upon this, the latter-if not invariably, as the fishermen assert, yet certainly in the greater number

of instances—flies off without any further attempt to secure it, and I have then seen the tern sweep back, and, plunging down, retake possession of its booty. Whether, in such cases, the fish was designedly relinquished, in order to be secured again, I cannot say, but here, at any rate, we see another way in which the parasite might come to be outwitted by the more intelligent of its *vaches à lait*.

These competitions between skua and tern, both of them birds of such swift and graceful flight, are very interesting to watch. The skua, in the midst of the chase, will frequently sweep away, as if it had abandoned all hope, and then return in a wide circling rush, at the end of which there may be a sudden upward shoot, for the tern generally seeks to elude its pursuer by rising higher into the air. Often-and again this is just as with the peewit and gull-a pair of skuas will give chase to the same tern, and then one may see the slender, shining bird quite overshadowed by the two evil figures, as, pressing upon either side, they rise or sink towards it, often almost covering it up with their broad and dusky pinions. Twin evil geniuses they look like, seeking to corrupt a soul, or else dark shadows that this soul itself has summoned up, and that attend it, hardly now to be shaken off:

> Da hab' ich viel blasse Leichen Beschworen mit Wortesmacht. Sie wollen, nun, nicht mehr weichen Zurück in die alte Nacht.

For imagination can easily multiply the two into

many—cares, shadows, sorrows, they are easily multiplied.

A tern that either eludes or is not molested by a skua at sea, flies home with its fish, to feed its young. But here it has often to run the gauntlet of other skuas, who wait and watch for it upon the land, sitting amidst the short stunted heather, with the brown of which their plumage, as a rule, harmonises. There are, therefore, land-robbers and sea-robbers pirates, and highwaymen—amongst these aristocratic birds, and it would be interesting to know whether the two rôles are performed by different individuals, or indifferently by the same one. To ascertain this satisfactorily I have found a difficult matter, but I believe that here as elsewhere—in everything, as soon as one begins to watch it—a process of differentiation is going on.

Where there are terns to be robbed, the skuas—I am speaking always of the smaller and, as I have found it, the more interesting species—seem to prefer them to any other quarry, so that the gulls, generally, benefit by their presence; otherwise all are victimised, except, as I think, the great black-backed gull. The latter will, himself, attack the skua, who flies before him, so that, taking this and his size into consideration, it does not seem very likely that the parts should ever be reversed between them, nor can I recall any clear instance in which they were. Of all the birds attacked, the common gull—which, like common sense, seems to be anything but common—makes, in my experience, the stoutest resistance; for it will turn to bay and show fight, both in the air and on the water, when it has been driven down upon it. Generally it is able to hold its own, and I look upon it as a vigorous young Christian nationality, in course of establishing its independence against the intolerable yoke of Turkish oppression.

These skuas love brigandage so much that, amongst themselves, they play at it; swooping, fleeing, and pursuing, each feigns, in turn, to be spoiler or spoiled. So, at least, I understand it, for nothing ever comes of these mock skirmishings, no real fight or flight, or anything approaching to one. It is fun, frolic, with a sense of humour, maybe, as though two pirates were playfully to hoist the black flag at each other. I love the humour of it. I love the birds. Above all, I love that wild cry of theirs that rings out so beautifully "to the wild sky," to the mists and scudding clouds. By its general grace and beauty, by its sportings and piracies, its speed of flight and the rushing sweeps of its attack, this bird must ever live in the memories of those who have known it : but, most of all, it will live there by the inspiring music of its cry.

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CHAPTER III

FROM DARKNESS TO LIGHT

TO all that I have said concerning the Arctic skua in my last chapter (I do not say it is much) I will now add what the Germans call a *Beitrag*, on the subject of the multitudinous variety of colouring and arrangement of markings which the plumage of this species exhibits.

Hitherto, indeed, I have spoken as if it were always of a uniformly dusky shade, but that was because I wanted that shade (and, indeed, it happened so to be) in the two that were chasing my tern. Otherwise they would not have suited the part I assigned them of twin evil geniuses, or have contrasted sufficiently with the white soul that they were seeking to corrupt. So, till that was all over, there could be no light or half-light skuas, but now that it is, and the effect produced, I permit things to be as they are.

The Arctic skua, then, is supposed by ornithologists —or, at any rate, that is how they are accustomed to speak of it—to be a bird of two different outer appearances, independent of sex, which does not add another one : dimorphic we are told it is, which means, or should mean, that it is two- or doubleformed, taking form here to mean colour. Two ! A hundred would be nearer the mark, I think, but I

have only had the time, or the patience, to note down fifteen, which I did very carefully, through the glasses, as the birds stood amidst the short heather on the ness-side. Here they are; not, perhaps, very precisely or scientifically defined, but none the less truthfully so, for all that, and as accurate, I think, as the fact that no two people see colours quite alike will allow. But they, at any rate, bring out four facts, which, together, have, I think, a distinct meaning, viz. (1) the unmistakable and, for the most part, pronounced difference in these fifteen forms of a twoformed species; (2) the likeness of the extremely plain, permanent form to the plain-coloured great skua; (3) the same resemblance in the first true plumage of the young bird; and (4) the absence in the young bird of the two lance-like feathers which, in the old ones, project beyond the rest of the rectrices, but which are also absent in the great skua. Well, here they are.

(1) The neck, from just below the head, with the throat, breast, and ventral surface, as far as the legs, a beautiful creamy white; the rest dark, as in the ordinary dark form, but I was not careful to note the precise shade; the crown of the head—and this, it seems, is universal—sufficiently dark to appear black. This bird represents, I think, the extreme of the light or ornate form, in which dark and light are almost equally divided.

(2) The light colouring extends, speaking roughly, over the same parts, but is very much less bright and pure. It might be described as a dun-cream or cream-

dun, the two shades seeming to struggle for supremacy. The cream prevails on the neck, the dun on the other parts; but even the neck is of a much duller shade than in the bird just described (No. 1). There are parts of the breast where the original sombre hue, a little softened, encroaches, cloudily, upon the lighter surface. These two birds cannot, certainly, be described as more or less handsome, merely, in the same colouring. The lighter surface, at any rate, is plainly different in shade, also its amount and distribution, though in a less degree.

(3) Another bird is much like this last one (No. 2), but there is, here, a distinct, broad, dunnish space, dividing the throat and breast parts, making, of course, a very palpable difference.

(4) Another bird—one of two standing together is the common uniformly dark form, except that the neck and throat just below the head is, for about an inch, very much lighter, making a considerable approach to cream without quite attaining it. This light part is conspicuous in the one bird—this that I have been describing (No. 4)—but not in the other (No. 5) that it is standing by.

(5) This other one might pass for the ordinary dark form, but on examining it through the glasses a lighter, though less salient, collar is distinctly visible.

(6) In a third bird, not far off these two (Nos. 4 and 5) the whole colouring, from immediately below the crown of the head—which seems always to be black or very dark—is of a uniform brown-drab or brown-dun colour, there being not the slightest approach to a lighter collar, or any lightness elsewhere, except, as in every bird, without exception, on the quill feathers of the wings as seen in flight.

(7) In another bird the breast and ventral surface is of a delicate silvery cream, or creamy silver, something like that on the same parts of the Great Crested Grebe. On the sides of the neck, and just below the chin it is the same, perhaps a little less silvered; but between these two spaces, and so between the chin and breast, a zone of faint brown or dun, somewhat broken and cloudy, pushes itself forward from the wings, thus breaking the continuity of the light surface by the strengthening of a tendency which is, perhaps, just traceable even in the lightest specimens. Besides this, a similar clouded space is continued downwards from the back of the head, first in a diminishing quantity, and then, again, broadening out, till it joins the upper body-colour. So that here only a little of the nape is white, hardly more than what may still be described as the two sides of the neck. This is a very pretty and delicate combination.

(8) Close beside this last bird (No. 7) is a uniformly dark brown one; and

(9) Not far off, on the other side of it, one which exhibits the same sort of general effect, in a dark, smoky dun. This latter bird would generally pass as representing the dark form, and, with fluctuations in either direction, dark or light, it does represent the common form. Nevertheless, it is both light and varied compared with the extreme or uniform dark brown form beside it (No. 8), which appears to me to be the least common one of all, less so than the extreme light one (No. 1) at the other end. When I say uniform, however, I do not mean to include the crown of the head or tips of the wings, which are always darker than the rest of the plumage, nor yet that lighter shade which is on the primary quills of every individual, but only seen in flight. These exceptions must always be understood, and, moreover, the expression uniform is not to be construed with mathematical accuracy, but only as conveying the general effect upon the eye.

(10) A bird that from the dark crown of the head to the dark tips of the wings is, above and below, a uniform dark, browny dun, yet some washes lighter than the uniformly brown one (No. 8) that I have spoken of.

(11) A bird that, from the dark crown to the dark wing-tips, is, above and below, a uniform light fawny dun.

(12) A bird that would be the extreme light form (No. 1) that I have first described, were it not that, both on the throat and breast, the cream is enroached upon by cloudy barrings of a soft greyey-brown (or something between the two) which extend also over the under surface of the wings. Moreover, a toning of the darker colour of the general upper surface encroaches a little upon the cream of the nape.

(13) A bird exhibiting the uniform, dusky-dunnish

colour of the common form (a shade lighter, perhaps, on the under surface), but with a cream patch on each side of the neck, just below the head. These patches are not, perhaps, of the brightest cream, but they are very conspicuous, whether the bird is seen standing or flying—in fact, the salient feature.

(14) A bird that would be the extreme light form (No. 1), but for a distinct collar of soft brown dividing the cream of the neck and throat from that of the breast.

(15) A bird that is yellowish dun on the neck and throat, mottled-brown on the breast, and a fine cream on the ventral surface.

Moreover, all these birds differed to a greater or less extent in those lighter markings of the quill feathers, both on the upper and under surface, some being lighter and some darker; following, in this respect, the general colouring. This feature, however, is only apparent when the birds fly, and I found it too laborious to include.

I can say with certainty, I think—judging by the lance-like projecting feathers of the tail, absent in the young bird, and by every other indication—that all the individuals here described by me, were birds of mature plumage. They were all established in one locality, and I was able to compare most of them with each other. I think, therefore, that though there might, perhaps, be some difference of opinion in regard to some of my colour terms—as where would there not be ?—yet that the variation between the

different forms is properly brought out. Without my seeking it, the list includes the two extreme forms, as I believe them to be, of dark and light; the former represented by a uniformly dark-brown bird, the latter by one having the whole under surface of the body, as well as the sides and nape of the neck, of a beautiful cream colour, by virtue of which, and of the salient contrast exhibited between this and the dusky upper surface, it is extremely handsome, not to say beautiful-one of the handsomest of all our birds in my opinion. Both the extreme forms are uncommon, but only, I think, as compared with all the intermediate shades, not with any one of them. Also the extreme light, or handsome, form seems to me to be commoner than the extreme plain one. Should not a bird like this be described as multimorphic rather than as dimorphic? I believe that there exists as perfect as series between the two extreme forms as between the least eye-like and the most perfect eye-feather in the tail of the peacockto take the well-known illustration given by Darwin to enforce his arguments in favour of sexual selection. The eye, however, insensibly masses the less saliently distinguished individuals together, so that those in whose plumage the light colour is more en évidence than the dark, go down as the light form, and vice versa. Moreover, the more prononce a bird is, in one or another direction, the more it is remarked; so that, perhaps, the intermediate shadings are forgotten, on the same principle as that by which extreme

characters, in any direction, are more appreciated than less extreme ones, by the breeders of fancy birds pigeons, poultry, etc. The uniform brown form, however, as being less striking (though extreme at one end) is not, I believe, so much noticed as those various dunnish shades, which have, in my view, been classed all together, as the dark variety.

In regard to the young birds, I only remember those nestling ones which had feathers under the fluff, as brown, without any admixture of cream. But I had not, at that time, these matters in my mind, and, moreover, I did not see many. When older, however, and able to fly, all that I have seen have had a distinct colouring of their own-for their plumage has borne a considerable resemblance to that of the Great Skua (Stercorarius catarriactes), being mottled on the back with two shades of brown, a darker and a lighter one. I got the effect of this when I watched young birds flying or standing, and one day I caught one whose wing had been injured, and saw that it was This resemblance is increased by such birds so. wanting the two lance-like feathers in the tail. As I say, this mottled brown is the only kind of colouring which I have seen in these immature but comparatively advanced birds, and my impression is that, in the still younger birds, such mottling was either absent or not so noticeable. At any rate, I have no clear recollection of it.

My own explanation of all these facts is that Stercorarius crepidatus — by my faith, 'tis a pretty

name, though not wholly deserved-having been, originally, a plain homely-coloured bird, like his relative, the great skua, is being gradually modified, under the influence of sexual selection, into a most beautiful one, as represented by the extreme light or half-cream form. Natural selection, in the more general sense, seems here excluded, or, at any rate, extremely doubtful; and if it be suggested that the lighter birds have the more vigorous constitutions, that they are fuller of verve and energy, to which they owe their cream colouring, I, for my part, can only say "Prodigious !" (or think it), like Dominie Sampson. But I can assure all those who hold this unmanageable view-for really there is no dealing with it-that the one sort came not a whit nearer to knocking my cap off than did the other. But, leaving shadows, the main facts here suggest choice in a certain direction. There is a gradation of colour and pattern, connecting two forms-one plain, the other lovely. This suggests a passage from one to the other, and if the plain mature form-I mean the uniform brown onemost resembles the young bird in colouring-which to me it seems to do-whilst the young bird resembles, more than any old one, an allied plainer species, this makes it more than likely that the passage has been from the plain to the lovely, and not from the lovely to the plain. Supporting and emphasising this, we have the absence, in the tail of the young bird, of those lance-like feathers which give so marked a character to, and add so infinitely to the grace of, the

old one. Of what use can this thin projection, an inch or so beyond the serviceable fan of the tail, be to the bird? Seeing how well every other bird does without it, can we suppose it to be of any service? Its beauty, however—which one misses dreadfully in the young flying bird—is apparent to any one, and it goes hand in hand with an ascending scale of beauty in colour. All this seems to me to point strongly towards sexual selection as the agency by which these changes have been, and are being, effected;¹ since I am, personally, a believer in the reality of that power, having never heard or read anything against it, so convincing to my mind as what Darwin said for it, nor seen anything that has appeared to me to be inconsistent either with his facts or his arguments.

No doubt if the varied coloration of the Arctic skua is really to be explained in this way, the lightercoloured forms, especially the extreme one, in which the whole under surface is cream, ought to be on the increase, whilst the dark ones should ultimately die out or remain, perhaps, as a separate species, the intermediate tintings having disappeared. It is very difficult to form an idea of the relative number of individuals constituting any one form, because one unconsciously compares such form with a great many others instead of with each separately; but, whereas I remember various repetitions of the extreme light or

¹ It is a strong enforcement, I think, of this view, that in another variable species of skua—*Stercorarius pomatorhinus*—the same two feathers give the bird "the grotesque appearance of having a disk attached to its tail."

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half-cream variety, I have not the same clear recollection in regard to birds exhibiting other shades and proportions of cream. It was the opinion, moreover, of the man engaged to protect the sea-birds during the breeding season on Unst, that the light birds, by which he meant the ones more markedly so, were increasing in numbers. It would appear, therefore, that the process one might expect, were sexual selection the agency here at work, is in operation, and, for the rest, it is no use being in a hurry. A little patience, the "rolling" of "a few more years"—say a million —will settle the matter either one way or the other.

CHAPTER IV

DUCKINGS AND BOBBINGS

THE eider-duck is here, but not its beauty, for at this fag-end of the summer and breeding season the males have all departed, and it is the sober-coloured female, either alone or accompanied by her little brood of ducklings, that one meets now along the shores of the island. True there must be males in their just proportion among the latter, but at this tender age-the age of fluff and innocencethe sex of a bird is in abevance-a world that is not yet begun. A pretty thing it is to see such little family parties coasting quietly along the shore and following all its bends and indentations. There is one such now-mother and three-coming "slowly up this way," like the spring, though not so slowly as the spring, or anything at all spring or summer-like, comes to these islands. They are feeding, apparently, upon the brown seaweed that clothes, as with a mantle, each rock and smooth stone that lies upon the shallow bottom along a gently shelving beach-making a continuous fringe which is but just submerged at In this the heads of the young ones are low tide. continually buried, but the mother eats more sparingly, and seems all-in-all happy to be thus with her family. Now as the eider-duck is certainly very much of an animal feeder-supposed, indeed, to be

wholly so-one would naturally think that here the food sought for is not the seaweed itself, but any-live things that may be clinging to it. This, accordingly, was my provisional hypothesis, but practical investigation hardly supported it, for on examining some of the seaweed, first in one spot and then another, along the track in which the birds had swum, I could find nothing whatever upon it-noticeably bare, indeed, it was. The eyes of an eider-duck are, no doubt, sharper than my own-or anybody's. Still I do not believe that even the most sharp-sighted one could find anything on this seaweed, at least without searching for it, whereas these ducklings are constantly dipping and, apparently, as constantly feeding all the way along. Finding always, they never have the appearance of looking for what they find. To me they seem to be browsing in their little ducking way, just as sheep browse in a field.

The seaweed here is not the long, brown sort, but another and almost equally common kind, which is shorter and covered with little lobes, shaped something like an orange-pip, but of a slightly larger size —small grapes, perhaps, since they grow in bunches, is more what they resemble. They are full of a clear, gelatinous substance that might well be appreciated, and having, to the boot of all the other indications, actually seen something that looked very like one of them in the beak of a duckling, I imagine—and it is a pleasing imagination—that the latter, at any rate, derive some part of their sustenance from these their

subaqueous vineries. But I have seen seaweed in the mother's bill also, and this was not only the brown sort, but a soft green variety which grows sparingly with it. When feeding, without any doubt, upon living prey, eider-ducks are accustomed to dive, going right to the bottom, and often coming up with what they find there-a crab or other kind of shell-fish-to dispose of it on the surface at their leisure. The chick can dive as easily as the grown bird, but one may watch these family excursions for a long time without once seeing either of them do so. Instead, they now merely duck to get the seaweed, which almost reaches the surface. The chicks, however, are often raised by the swell of the sea beyond the height at which they can nibble it comfortably, and it is then funny to see the hinder portion of their little bodies sticking up in the air, with their legs violently kicking, as they hold on with might and main to prevent being floated off on the wave. Sometimes a brisk one bids fair to tilt them right over, but they always ride it in the most buoyant manner. The motion with which they do so-or rather with which it is done for them-is sometimes very curious, for they look as though they were swung out at the end of a piece of elastic, and then drawn smoothly back again, just as they are on the point of turning a somersault; but more often it is a plain bob-bobbing. Thus over wave and ripple they bob lightly along, whilst their mother, floating deeper and heavier, bobs with more equipoise-a

staider bob, that has much of deportment about it. Each kind has its charm—never was there a prettier family bobbing. All bob to each other—that, at least, is what it looks like—and their song, if they had one, would be certainly this :

> If it wasna weel bobbit, weel bobbit, weel bobbit, If it wasna weel bobbit, we'll bob it again.

But, for my part, I have never seen them bob it otherwise than well. They all of them bob to perfection.

Scenes like this belong to the pebbled beach and gently sloping shore. There are others in the deeply indented, rocky bays that bound the greater part of the island. Here, in the frowning shadow of beetling, cavern-worn precipices, one may often see the little eider-ducklings crawl out to feed upon the steeply-sloping sides of rocks or mightier "stacks" -as those great detached spurs of the cliff that the water swirls round are called here-whilst their mother waits and watches on the sea close at hand. She does not bob now. These sullen heaving waves sway her with a larger and more rhythmic motion, calm but portentous, like the breathings of a sleeping lion that may at any moment awake. Or she will follow her ducklings, sliding up on the heave of the wave, and remaining, most smoothly deposited, as though the sea, rough and rude as it cannot help being, yet really loved her, in its way, and were solicitous of her safety. There she will feed beside them till she tires, and with a deep note that brings them running after her down the smooth, wet slope of the rock, goes off on the wave that is waiting, like a ship with so many little pinnaces following in her wake. The most she ever sails with now is three, and very often she has only one to attend her.

CHAPTER V

A VENGEFUL COMMUNITY

T was terns, I think, who, when some killing Scotch naturalist or other had wounded one of their number, came down to it, pitifully, as it lay on the sea, and bore it away upon their backs and wings. I can better realise this incident now, after having walked about a ternery in these northern parts, and again tried the experiment-which in the south produced no special consequences-of interfering with their young. Upon my taking one of them in my hand, the whole community, amounting, perhaps, to several hundreds, gathered in one great, air-filling cloud, a little above my head, and with violent sweeps and piercing cries, seemed to threaten an actual attack. When I let the young thing flutter to the ground, and it moved and struggled upon it, the excitement was redoubled. It seemed as though they were animated with hope at seeing it out of my grasp, and as I took it up and let it go twice again, each time with the same result, I have little doubt that this was really the case. It was not only the two parents-assuming them to have been there -who attacked me. Many did so; many, too, seemed to feel, at some time, an extra degree of fury, whilst not a bird in the whole crowd but was violently and vengefully moved. These terns, as they clustered

and darted about, resembled, or at least made me think of an angry swarm of wasps or hornets; but how different is the anger of insects to that of any other sort of animal! Though so much smaller, they attack without any hesitation or mistrust as to the result whatever. A hornet or an ant threatening merely when its nest was attacked seems an absurdity, whilst in a creature many times their size it is the idea of courage only that is presented to us.

Yet it was not all threatening with these terns, for as the excitement and hubbub increased several of them attacked me, though only with missile weapons. To be explicit, they excreted upon me, as they swept down, in such an irate "Take that !" sort of manner and with such precision of aim, that the intention was quite evident. This habit I had heard of, though not felt, before, for a south coast fisherman told me that he once had a dog which had developed a strong liking for tern's eggs, to gratify which he used to make egghunting and feasting expeditions along a line of beach where they lived, from which he would return in a most unseemly plight, owing to the birds having "dunged" him. I did not doubt this account at the time, and I have now this interesting confirmation of it, but though I myself walked amongst these southern terns and often took the young ones up in my hand, they never vented their displeasure on me in this particular way, nor were such swoops and threatenings as they made of so pronounced and violent a character. They mobbed a hare, however, in a much more deter-

mined way, and certainly pecked at it, though, at the distance, this was all I could say with certainty. It is interesting if a means of defence resorted to against animals only, by some colonies of these birds, is by others employed to repel the intrusion of man also. For the habit itself. I do not remember reading of it, either in the case of terns or any other bird or animal, except one with which Swift has made us familiar-Swift, that great misanthrope, who, by the sheer force of his satire, has anticipated to some extent the reasoned truth of Darwin. As I say, I can hardly doubt that these terns acted as they did with malice prepense, yet, as their conduct is, perhaps, susceptible of another interpretation, I ought to mention that the bombardment was not continuous, but occasional only -a dropping fire, so to speak. As far as I could observe, however, the act was always in combination with the plunging sweep down, which makes me certain that, if not the mere mechanical effect of intense excitement, it was prompted by hostility-to which latter view I strongly incline.

A little way farther on I found two quite tiny terns —the other was of a fair size—lying together in the nest. There was excitement when I took up these also, but not nearly so great as just before, except, perhaps, on the part of the two parents. The first young bird had assumed almost its final appearance, though not quite able to fly. I concluded, therefore, that this had something to do with the different degree of excitement shown by the terns as a whole, but when, after some while, I found and took up another baby, almost as big as the first, there was still less demonstration than in the case of the two fluffy ones —again excepting the parents. Perhaps the boiling point of communal fury that had been aroused by my first unlawful act was not to be again reached; but birds are certainly capricious in their actions, and there is no judging from one to the next.

But, taking them at their best, why are these northern terns so much fiercer and more vengeful than those which breed in the south? Of the disposition of the latter I have had ample time to judge, and, though there was always anger when I walked over the great bank crowded with their nests, yet its manifestations were of a more ordinary kind, nor, as I say, did I notice any very acute development of it when I lifted a young one from the ground. Sometimes I think these Shetlanders look slightly smaller than the English kind, and always they seem to me to be more waspish and irritable in their disposition. Are they, therefore, of a different species-the Arctic, instead of the common tern, or vice versa? The two, indeed, are so much alike that only an ornithologist-as ornithologists tell us-is capable of distinguishing them whilst the birds are alive and at liberty. However, as the sole mark of distinction appears to consist in a hardly appreciable difference in the length of the tarsus, it is easier to understand the difficulty than how the ornithological eye, even, unsupported by a measuringtape, manages to surmount it. But when would any

member of a fraternity admit himself on a level with mankind in general, in regard to his particular cult? The thing is always to ramp on one's pedestal, though it be no higher than the houses over the way. Personally I doubt the validity of a specific distinction so attenuated as this; but be that as it may, terns, in their northern and southern homes, seem to differ somewhat in their natures, even as do the respective beaches on which they lay, with their surrounding scenery of sea and sky. How different are these one from another ! Here, in these desolate and windswept isles, I, at least, though I have sometimes seen very much rougher November. But on that other great bank, in the more genial climate of southern England, not only is it summer, sometimes-and that in spring-for hours together, but one may even be, for a while, in the tropics. How else could there be the mirage ? Yet there it is, or, at any rate, something like it; for as one lies at length and gazes through the golden haze that seems to beat in waves upon the hot, parched shingle, lo! this is gone, and where it lay, all glaring, a blue pellucid lake, that seems to partake equally of the nature of sea and sky, lies now, cool and delightful. Into it terns, ever descending, seem to plunge or softly dip, as though it were the sea itself; and as they do so they either disappear altogether, becoming lost in azure haze, or are seen through it, dimly and vaguely, sitting or performing such actions

as are proper to their shore life, amidst those strange new waters, from which others as constantly ascend. Gulls, too, and sometimes cormorants, may be there, whilst dove-cot pigeons, with familiar, yet now half phantasmal strut and bow, mingle occasionally, like little household Pucks, with the more poetic figures of this fairy dream. A dream, indeed, it is; but, more and more, it passes into one of far-off, sunnier lands—seen once, remembered now. Bluer becomes the sky—the sea; softer the air. Palm-trees wave, the long, bright breakers are bursting on a coral shore, the surf roars in, hissing and sparkling, the gulls are the surf-riders, England is no more.

CHAPTER VI

METEMPSYCHOSIS

OH, if there is really a metempsychosis, has not the soul of Bardolph gone into an oyster-catcher, or at least has not his nose, which was his soul-Shakespeare, at any rate, has made it the most immortal part of him-gone into an oyster-catcher's bill? I believe it has, and it burns there, now, just as brightly, with nothing but the salt sea to drink. It is that bill, that wonderful bill, which makes the oyster-catcher a handsome bird. The ruby eye, the pale pink legs, and the gaily-chequered plumage, all help; but they are but adjuncts, and by themselves would work but small effect. This is well seen when the bird, having before been running actively about on the foreshore, becomes, all at once, oppressed with somnolence, stands still, turns its head over its shoulder, and thrusts its long, fierce, fiery tube amidst the plumage of the back. The transition from something showy to something plain, from brilliancy to mediocrity, is then quite remarkable; and equally so is it the other way when, for some imperative purpose, or in a wakeful moment, the red ray flashes out again. Every now and again come these swift conflagrations, and, between them, the bird stands like a little lighthouse, in the intervals between the flashes of the revolving light.

Oyster-catchers—or sea-pies, to give them their old name, which is a very much better one—seem somewhat sleepy birds, unless it be that in the Shetlands birds sleep more in the daytime and less at night than farther south. Sleep, I think, it may be called, taking the attitude and the complete quiescence into consideration. Yet the red eye is always open, seeming—for you see but one—to wake singly, keeping guard over the rest of the slumbering commonwealth to which it belongs. But there is another eye, and that, no doubt, is open too. A pair of these quaint birds will often rest thus, side by side, upon the rocks, and another, seeing them as he comes flying along the dividing-line of shore and sea, will wheel inwards, and, settling beside them, be a lotus-eater too.

CHAPTER VII

BIRD SYMPATHY

TO-DAY—which is my third here upon the island —I was actually assaulted by the terns. I saw a young one, now well advanced, that flew for a little and then went down on the grass. Walking towards it, a bird-presumably one of the parents-descended upon me twice in succession, and, with that angry and piercing cry that I have spoken or ought to have spoken of-it sounds very like a shrill "bah!"delivered a fierce peck at my head, so that I felt it each time, quite unpleasantly, through the thin cloth of my cap. The difference is to be noted in this form of attack, to that employed by gulls and skuas, the former in battles inter se only, and the latter as against man in defence of their eggs or young. Both of them, when they thus "swoop to their revenge," use the feet only, and the superiority of the tern's method is so great that it makes this small bird almost as redoubtable-if this exaggerated word may be pardoned-as even the largest of the others. The Great Skua, especially, were it to use its powerful beak, would be really formidable, even to a man. In fighting with its fellows, it no doubt does so, and gulls, under these circumstances, make the greatest use of theirs. This, however, is when they struggle together on the ground; but when one fights on the ground

and the other in the air, the latter uses its feet only, with effects that are irritating rather than to be feared. Now why is this, and what causes the difference in this respect as between gull and tern? From my own observation I think I can explain it. So long as two contending gulls fight with any equality, they do so upon the ground, but when one of them can no longer hold his own there, he rises into the air and, sweeping backwards and forwards over the other, who stays where he was, annoys him in this particular way. The bird, therefore, by whom these tactics are resorted to has already got the worst of it, and the last thing he wishes is again to close with a rival who has defeated him. This, however, is exactly what would happen were he to use his hooked beak in the manner proper to it, for it is adapted for seizing and tearing, and to these uses it has hitherto been put. To peck or stab with it would be like making a thrust with a sickle, and though possibly as against a weaker antagonist it might be made effectual in some other than the normal way, yet here there is always the fear of detention, to check any experiment of the sort. Let the hooked tip but pierce the skin to any extent, and the swoop would be checked sufficiently to allow of the flying bird's being seized. The feet, therefore, though without efficient claws and quite unadapted to anything except swimming, are employed by preference, and in the manner in which they are used we see the same principle at work, for instead of making any attempt at grasping or scratching, the flying gull,

as it sweeps by, just gives a flick with the back of them, which the other revenges or parries with a blow of the wing.

The tern, however, having a straight and sharply pointed bill, adapted for pecking, and nothing else, can use it in this manner when flying also, though in other respects it delivers its attack in exactly the same manner as the gull does, allowing for the difference in bulk and aerial grace and mastery, between the two birds. Here, as it appears to me, we see structure affecting habit. As a rule, I think, it is rather the other way, for it is wonderful to how many uses, other than the primary one for the performance of which it has been specially adapted, almost any part of an animal's anatomy may be put. And indeed, if we look at it in another way, this truth is as strikingly illustrated by what we have just been considering as by almost anything, for the webbed foot of a gull or any swimming bird is extremely unadapted for fighting, and yet we here see it thus employed. But it is owing to the structure of the beak, in my opinion, that this has come about. That is the bird's real weapon, which I am convinced it would always use if it could or if it dared. Not even in their rough-and-tumbles, where they close and roll over and over together, have I seen gulls fight with their feet, upon the ground.

I had not gone far, after this episode with the terns, when I was pecked at, twice again, by another one, under similar circumstances. Each time, I believe, the sharp point of the beak went through the slight

stuff of my cap, or I should hardly have felt it so sharply. It is not only the skuas, then, that attack you in defence of their young. These terns, though so much smaller, do so too, and, as appears by the story, they have more than one weapon in their armoury. But a more interesting experience was in store for me, which brought still more forcibly to my mind that incident with the wounded tern to which I have before alluded. Walking on, I noticed a bird which, though a young one, looked almost in its full plumage, and which kept flying for a little, and then going down again at some distance in front of me. Every time it alighted, a cloud of terns hovered excitedly over it, and first one, and then another of them kept swooping down, so as just or almost to touch it, until at last it flew up again, so that I could never approach it more nearly. It certainly seemed to me as though the grown community were trying to get this young one to fly, so as to be out of danger, and this they always succeeded in doing. I do not think they really prevented me from catching the bird, for, no doubt, it would have flown of itself before very long; but what interest and sympathy shown! Moreover, had I been pursuing it with a gun it might have made all the difference.

So, too, it must be considered how lethargic these young terns are before they can fly, and how easily they then let themselves be caught, though able to run quickly. When noticed, or approached closely, they crouch, but though this is probably due to an



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inherited instinct of self-preservation, they do not appear to have much fear of one. Therefore it seems likely that in their early flying days they might still be inclined to act in this way, and if so, any encouragement to fly which they received from their elders would be of assistance to them. It is noteworthy that the younger birds which I caught were not thus encouraged to run. The public attention, in this case, seemed concentrated on myself.

Terns vary much in the degree of resistance, or rather of evasion, which they offer to the attacks of the skuas-always I am speaking of the smaller of the two species. I have often seen them get off scotfree, without losing their fish, and, as before said, this has always seemed to me to be because of their persistency in holding out, and not at all on account of their superior speed. I have advanced a theory as to why the skuas should not actually attack the terns on these occasions, as they do not seem to me to do, and if there is any truth in it, we here see a road along which a certain number of the latter might become free of the tyranny under which they now suffer. It is doubtful, however, whether these more obstinate birds would gain, in this way, a sufficient advantage over the others to allow of natural selection coming into play. They could carry, no doubt, more fish to their young, but here, at least, the skuas seem hardly in sufficient numbers to make the difference a working one. With many birds, however, a similarly acquired change of habit would mean the difference between

life and death. I remember once passing unusually close to a cock pheasant, which remained crouching all the while, though nineteen out of twenty birds would, I feel sure, have gone up. It struck me, then, that as all such pheasants as acted in this way would have a greater chance of not being shot than the others that rose more easily, whilst these latter were constantly being killed off, therefore, in course of time, the habit of crouching close ought to become more and more developed, and pheasants, in consequence, more and more difficult to shoot. Some time afterwards I met with some independent evidence that this was the case, for a gentleman who shot much in Norfolk, remarked, without any previous conversation on the subject, that the pheasants there had taken to refusing to rise, and that this unsportsmanlike conduct on their part was giving great trouble and causing general dissatisfaction. That was his statement. He spoke of it as something that had lately become more noticeable, but only, as far as his knowledge went, in Norfolk, which, I believe, is an extremely murderous county.

Beyond this I have no knowledge on the subject, but I feel sure that a gradual process of change and differentiation is every day going on amongst numbers of our British birds. I believe that I have myself, here and there, seen some traces of it, and my idea is that greater pains ought to be taken to collect evidence in this and similar directions. Along all those lines where fluctuation has been observed, or where modi-

fication might, in course of time, be expected, the present truth should be most carefully made out, and having been accurately recorded and published, observation, after a certain length of time, should again be focussed on the same points, and this being renewed every ten, twenty, fifty, or a hundred years, the results could be compared. For instance, our green woodpecker feeds now largely upon ants in their nests, whilst it both fights and copulates upon the ground. How interesting would it be if we had a continuous record of observations of this bird's habits, dating, say, from William the Conqueror or the days of the Saxon Heptarchy, and if we found that no mention was made of these peculiarities, by the field naturalists of those times, but that they first began to be doubtfully recorded in the reign of Henry the Fifth, or Richard the Third. No doubt a connected chain of evidence of this kind will gradually grow up, owing to the accumulation of works of natural history, but it would, I think, be a great deal more satisfactory if the object were kept steadily in view, and I am quite sure that observations made in this spirit would produce much more interesting matter than that which is to be found in the ordinary bird or beast book. For the great idea would then be to compare the present with the past habits of any creature, in order to see whether, or in what degree, they have changed, and this could only be done by continual re-observation, which would assuredly lead to novelty of some sort, instead of mere repetition, which is what we have now; and not only so, but the thing that is so constantly repeated seems often to be founded either on nothing, or nothing that one can get at. Take, for instance—but no, that would lead to twenty more pages at the least, and I want them for something better.

CHAPTER VIII

ENCHANTED CAVERNS

A LONG the bolder coast-line of this island, where the cliffs, without being very high, are steep and frowning, there are some remarkable caves, which I today visited with Mr. Hoseason, in his boat-he having sailed over from Yell Island. To me, at least, they seemed remarkable, principally by reason of the various and vivid colours which the rock perforated by them begins to display as soon as their entrance is passed. This rock, as elsewhere in the Shetlands, is sedimentary, but broken here and there with veins of quartz, often of considerable thickness, which seem to have been shot up in a molten state and to have afterwards cooled-"seem," I say, for I have no proper knowledge as to their geological formation. This quartz, which when exposed to the light of day is white or whitish, is here of a deep rust-red, and this, distributed in long zigzag lines or meanderings, is sufficiently striking, but nothing compared to the much brighter reds, the lakes, and brilliant greens with which the interior of the cavern is, as it were, painted; so that the whole effect, lit up by the candles which we used as torches, resembled, in a surprising and quite unexpected way, those highly coloured and very artificial-looking representations of natural scenery which one sees on the stage-in pantomimes

more particularly or on some very florid dropscene. These colours are due to some low form of vegetation which is spread like a wash over the face of the stratified rock, but it seems surprising, since one is accustomed to associate colour with light, that in the absence of all sun they should not only exist, but be so very brilliant. I have never seen anything like such vivid hues on the surface of rock or cliff exposed to the light of day, nor, indeed, in any landscape, if flowers and the autumn tints of leaves are excluded. Gaudily painted stage scenery, some enchanted or robber's cavern in a pantomime-Ali Baba's, for instance-is really the best comparison I can think of, nor shall I ever again think these exaggerated. Nature is really harder to outdo or burlesque than one may fancy-even on the stage, where the effort is so constantly, and, one would swear, successfully made.

In shape these caverns are long and narrow throatal, one might call them—and the sea, with the many weird and uncouth noises that it makes as it licks, tongue-like, in and out of them, helps to suggest this resemblance. Though their height is really but moderate, yet, owing to the narrowness of their walls, they have the appearance of being lofty, especially near the entrance, or where, after descending till it nearly reaches the water, the roof is suddenly carried up again. For the most part, however, the height decreases gradually, with the breadth, till at length the cave ends in a low, dark tunnel, which the sea almost fills, and up which the boat can no longer proceed. Yet far beyond, where all is opaque darkness, one still hears the muffled wash and sob of the waves as they ceaselessly eat and eat into the hidden bowels of the rock. As the whole force and vastness of the ocean lies beyond this little tip of its tongue, to where may not such burrows extend? and might not, by a knowledge of their position and the direction in which they run, some inland towns be supplied with the blessing of sea-water ?

The water in these caverns is delightfully clear, revealing in every detail, through its lucid green, the smooth-rolled pebbles and great white rounded boulders which strew, or rather make, their floor. To look down at them is like looking up into the arched roof of some other cave. One might think it the reflection of the one overhead, till, glancing up, the difference is remarked—jagged, bright-hued peaks and niches instead of smooth, even whiteness. This effect, as of a roof beneath one, is due, I think, to the continuation downwards of the sides of the cavern, for this gives the same vaulted appearance, but reversed, that there is overhead, and the mind, as with the image on the retina of the eye, soon sets it the right way up.

These caves must have been known from time immemorial to as many as were accustomed to coast round the island, and it is interesting to think of who, and what kind of craft may, from age to age, have visited or sheltered in them. Recently, how-

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ever, they were first explored, if not discovered, by Mr. Hoseason (who has for years rented the island and done his best to protect the bird life upon it) in the spring of the preceding year, and they were at that time tenanted by numbers both of shags and rock-pigeons, who sat incubating their eggs on any suitable ledge or projection of the rock. Of the latter birds, to-day, there were none, but several of the former, though so late in the season, were sitting on eggs which, to judge by their whiteness, must have been but lately laid, and, no doubt, represented a second brood, whilst others, whose young were still with them on the nest, although full-fledged and almost as big as themselves, plunged, attended by these, into the water. The hollow sounds of splash after splash were echoed and re-echoed from sea to roof, and the air seemed filled with sepulchral croakings. It was easy to follow these birds as they swam midway between the surface of the water and the white pebbled floor of the cavern, and I was thus able to confirm my previous conviction that the feet alone are used by them in swimming, without any help from the wings, which are kept all the while closed. I have many times observed this before, but never so clearly or for such a length of time.

The young birds, after diving, made for the nearest rock or ledge on to which they could scramble, and they were so unwilling again to take the water that some of them allowed themselves to be caught by us, though showing every sign of fear—indeed, of extreme terror-which one might naturally suppose them to feel. This is a puzzling thing to understand -at least, to me it is. An aquatic bird that swims and dives all as easily as it breathes, and which has just before plunged into the water from a considerable height, stands now upon a rock but little above its surface, and watches a boat, the object of its dread, coming nearer and nearer, till at last it stops in front of it, and the hand is stretched out to seize and take, without ever escaping, which it might easily do in the way that it has just before done. What is the explanation? We may suppose, perhaps, that these young birds have not yet got to look upon the ocean as a place of long abode, that they enter it only with the idea of getting quickly out again, and that the rock is as yet so much more their true home that they cling to it in preference, and may even have a feeling of safety in being there. But if this last were the case, why should they leave it in the first instance? There would be no difficulty in understanding the matter if they refused to take the sea at all, but having done so once, it seems strange that they should so fear or dislike to, again. Possibly the having soon to come out-as being impelled to do so -and finding themselves no better off, but menaced as before, may give a feeling of inevitability and hopelessness of escape, sufficient to take away the power of effort. But this I do not believe-despair hardly belongs to animals, and if it did, imminent peril, with at least a temporary refuge at hand, ought

to conquer such a feeling. As the birds which we thus caught were only in the water for a very little while, exhaustion could have had nothing to do with their self-surrender. The paralysis of fear ought, one would think, to have acted from the first, instead of supervening after a period of activity, but perhaps mere bewilderment, by preventing sustained exertion, may have produced a similar effect. Had it always been the parent bird that led the way on the occasion of the first leap from the rock, this powerlessness on the part of the young to leave it a second time might be attributed to her absence-but as far as I can remember there was no fixed rule in this respect. Both old and young birds generally went off with great unwillingness, but at other times this was not nearly so marked.

In their swimming so quickly to the shore again, after their first plunge, and refusing thereafter to leave it, these young cormorants brought to my mind those amphibious lizards of the Galapagos Islands which Darwin mentions as never entering the sea to avoid danger, but, on the contrary, always swimming to land on the slightest alarm, though it might be there precisely that danger awaited them. This "strange anomaly" Darwin explains in the following manner : "Perhaps this singular piece of apparent stupidity may be accounted for by the circumstance that this reptile has no enemy whatever on shore, whereas at sea it must often fall a prey to the numerous sharks. Hence, probably, urged by a fixed

and hereditary instinct that the shore is its place of safety, whatever the emergency may be, it there takes refuge." The shag, as far as I know, has nothing particular to fear, either by sea or shore. His only enemy is man, who is not confined to either, but is as brutal and ignorant on the one as the other. But in avoiding danger the instinct of any animal would probably be to leave the place to which it was less accustomed, and run to that with which it was familiar-and this we constantly see. Thus a landbird that was beginning to take to the water would leave it for the land on any alarm, whilst a water-bird under similar circumstances would make for the water. But all water-birds were probably land-birds once, so that we might expect sometimes to see in their young that old instinct of taking refuge there, which had become reversed in the parents. We might also expect to find greater dislike, on their part, to entering the water; and certainly the young shags did enter it very unwillingly from the first. So, indeed, for that matter did the old ones, as already stated, but with them there was the love of being on their nests, or at least their nesting-ledges-a late continuance of the breeding habits-to be overcome. When once they had plunged, however, they did not, like the young birds, swim at once to the shore again, but made for the open sea, and it must have required a strong contrary instinct on the part of the latter not to follow them. The lizards on the Galapagos Islands have, no doubt, also taken to the sea

gradually, so that their habit of swimming to the shore when alarmed may, possibly, be due to a longenduring ancestral instinct, having nothing to do with sharks.

We passed, whilst exploring one of these caverns, just beneath a ledge of rock, where a shag sat brooding over two tiny little things, but just hatched, perfectly naked, and jet black all over. This poor bird showed an anxiety which could hardly have been overpassed in the most devoted of human mothers, and I almost believe her sufferings were as great-for surely all extremities are equal. Her hoarse, bellowing cries reverberated through all the place, and helped, with the gloom, the murky light flung by our candles, the lurid colouring, and the deep, gurgling noises of the sea, to make a weird, Tartarean picture, difficult to excel. But it was not in sound alone that she vented her displeasure, for she was angry as well as alarmed. As the boat passed, she rose on the nest, and, in a frenzy of apprehension, snapped her bill, and alternately advanced and retreated her long, snake-like and darkly iridescent green neck. Though my head was but a foot or two away from her, she kept her place on the nest, and becoming more and more beside herself, behaved, at last, in such a manner as it is difficult to describe, but which upon the human plane and amongst the lower classes, is called "taking on." Not until I actually took up one of the young ones, to examine it-for this I could not resist-did she fling herself into the water, and then it was with a dramatic suddenness that looked like despair. It

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was as though she had attempted suicide, but no cormorant, I suppose, would do so in such a way.

What a strange sight this was! What a gargoyle of a creature—alive, in these gloomy shades! It seemed not a bird, but something in *The Faerie Queen*, one of

The uncouth things of faerie,

—a line, by the way, which only resembles Spenser by being, probably, unfamiliar to most people. But our knowledge makes things commonplace. Did the fairies exist, they would be classified, and, with Latin names and description of their habits, would be no more *really* the fairies than are birds or beasts. Let one but know nothing, and these caverns are enchanted.

It is not often that one has so close a view of a shag as this. My head was but a foot or so off, and on a level with her own; my eyes looked into her glassgreen ones. One thing about her struck me with wonder, and that was the intense brilliancy of the whole inside of her mouth, which, in a blaze of gamboge, seemed to imitate, in miniature, the cavern in which she sat. Most stupidly I did not think to open the bill of the chick whilst I had it in my hand, in order to see what its mouth was like. As bearing on the conjecture which I have formed, this would have interested me, and such an opportunity is not likely to come again. I noticed, however, that the naked skin about the beak, which, in the grown bird, is thus vividly coloured, was very much lighter, and consequently not nearly so handsome, in the larger fledged young ones. That here the intensity of the hue was gained gradually through sexual selection, I—being a believer in sexual selection—can have no doubt, and the lesser degree of it in the young bird would be due to a well-known principle of inheritance, which has been pointed out or, rather, discovered by Darwin. If, therefore, the inner colouring has been acquired in the same manner, it ought also to be first light and become brighter by degrees.¹ I must now watch for these young cormorants to open their bills, for it is a habit which they share, more or less, with their parents, and out of it, as I believe, the adornment has grown.

I have no doubt that numbers of shags roost in these caverns during the night, for when I was lost on Raasey Isle in Skye, I came to a huge vaulted chamber in the cliffs, into which scores—perhaps hundreds—both of these birds and the common cormorant flew, after the sun had set. When they were all settled, every ledge, crevice, and pinnacle seemed tenanted by them, and never shall I forget the gloom, the grandeur, and the loneliness of this scene. I admired it, though naked, except for a torn pair of trousers which were half wet through. I should like to see them come flying into their caves here also, where I am not so forlorn; but the distance of my hut from this part of the shore, the lateness of the hour up to which the light lasts, and my having to

¹ This is, in fact, the case.

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cook my supper, makes this difficult, or, at least, inconvenient. But if I cannot see them fly in in the evening, I may see them fly out in the morning, and that should be "a sight for sair een."

Whilst rowing to these caves we had seen one black guillemot, or "tysty," flying over the sea with a fish in its bill, and another swimming with a young one by its side. The latter was of a greyish colour, and about a third smaller than the parent bird, which in shape and movements it closely resembled. These birds, therefore, breed in the Shetlands-a fact well known before, I believe; but I like to rediscover things. Another and more interesting thing that we saw was a seal swimming very fast, and leaping, at intervals, out of the water. I think I may use this expression, for if he did not leap quite free of it, he very nearly did, so as to show his whole body. He rose in a very bluff, bold way, with great impetus, as it seemed, and went straight, or nearly straight up, for a little, before falling forward again. Each time one seemed to hear the splash and the blow, but this was only in imagination, the distance being too great. When I say that this seal was swimming very fast I am giving my impression merely. All I saw was the leaps, which were quickly repeated, yet with a good space between each, and all in one direction. Between them, therefore, he must have been speeding along at a great pace, so that, each time he plunged up, it was as from a spring-board of impetus and energy. I do not remember reading of seals leaping

thus out of the water, but Mr. Hoseason had seen them do so before, though not often. There was a fine joyous spirit in the thing—" there is " joy, as well as " sorrow on the sea."

It is good to see an animal like this in this United Kingdom of ours—or at least in its seas—for, for a moment, it makes one think one is out of it, and in some wilder, more life-teeming part of the world. It is hard to have to live in a country, glorified as being "a network of railways," and to have no taste for railways. Oh, wretched modern world of ugliness, noise, improvement and extermination, what a vile place art thou becoming for one who loves nature, and only cares for man in books !—the best books *bien entendu*.

CHAPTER IX

DUCKS AND DIVERS

THE red-throated diver moves softly upon the gentle play of the ripples, seeming, rather, to float with the tide than to swim, for there is no defined swimming action. When it turns and goes the other way, it meets the opposing motion-the little dance of the sea-as if it were a ripple itself, assuming the shape of a bird. This shape is a graceful one, something between that of a grebe and a guillemot. One might say that a guillemot had been sent to a finishing-school and had very much profited by it; but this is not to imply that the grebe-I am thinking of Podiceps Cristatus-is slighted in the comparison-no bird that swims need think itself so. Much there is grebe-like in manner and action, and in shape, except for the crest. By the want of this, the bird, I think, rather gains than loses to the human eye, for handsome as the grebe's crest is, the delicate curve of head and neck is interrupted by it, and the effect is rather bizarre than beautiful-it loses something in purity, that beauty of the undraped statue, to which Cicero compares the style of Cæsar. The neck of the red-throated diver offers a wonderful example of delicate yet effective ornament. Down the back of it, and encroaching a little upon either side, run thin longitudinal stripes of alternate black and white, so

cleanly and finely divided that they look as though they had been traced by a paint-brush in the hand of a Japanese artist. There is a gorget of rich ruddy chestnut on the throat, but the rest of it, with the head and chin, is of a very delicious plum-bloomy grey, which looks in the sunlight as though it would be purple if it dared, but were too modest-a lovely and æsthetic combination, soft, yet bright, and the whole with such a smoothness as no words can describe. There is another effect wrought by the sun, if it should happen to be shining, and if the bird should be swimming so as to give a profile view. It then looks as though there were a broad, white stripe -white, but having almost a prismatic brilliancyalong the contour-line of the nape. This appearance is most deceptive, and it is only when the bird turns its neck so as to show the several thin delicate stripings that one sees it to be illusory. It is produced, I think, by the light being reflected from the white stripes alone, so that the black ones between them are overlooked. Whatever may be the cause, the effect is most striking and lovely, and if the stripes themselves are due to sexual selection-which I do not doubt they are-this far more beautiful appearance, being the effect and crown of them, must assuredly also be. Here is a neck, then ! and I have seen three, and once even seven, together !

In their way of diving, again, these birds resemble the grebes. Sometimes they go down with a very quiet little leap, but often they sink and disappear so gently and gradually that one is hardly conscious of what they are about till one sees them no more. As much as any creature, I think, they "softly and silently vanish away." Another habit which they have is shared by the cormorant and other sea-birds, and has often puzzled me. It is that of continually dipping their bills in the water and raising them up from it again, as though they were drinking, though that they should drink the salt sea like this, for hours at a time, seems a strange thing. What is the meaning of this action, which I have just seen a shag perform forty-six times in succession, at intervals of a few seconds, as if for a wager ? And this was after having watched it doing the same thing for some time before. After the forty-sixth sip, as it were, this bird made a short pause, and then recommenced. Is this drinking, and, if not, what is it? The head and part of the bill are, each time, sunk in the water, so that, as the bird moves on, they plough it like the ram of a war-ship. Then, in a second or two, the head is raised, not so high indeed as in an unmistakable thirsty draught-which I do not remember at any time to have seen shags indulge in-but with much the action of drinking. The bill, it is true, is very little opened, hardly sufficiently so to be noticeable, but very little would allow of water entering it. But why should the bird drink like this? It cannot be that the salt water makes it more and more thirsty, for this, as with shipwrecked sailors, would produce evil consequences-probably death-but, of course, this is out of the question.

Sometimes it has struck me that some small disseminated matter in the water might serve as food, and in regard to this, I have seen some large white Muscovy ducks, in the Pittville Gardens at Cheltenham, engaged for a long time, apparently, in carefully sifting the quite clear water of a little rill. Here, too, there was some action, as of drinking. On the whole, however, they seemed obviously to be feeding, but whatever they got must have been extremely minute. The waters of the sea are, no doubt, full of tiny floating substances, which a bird might yet be able to appreciate, and which would perceptibly add to its nourishment. If this were so, then drinking, as a special function, might become almost merged in the constant swallowing of water whilst taking food, and this may be the case with various sea-birds. Guillemots and razor-bills also act in this way, but not, I think, gulls. Gulls drink the fresh water of lochs and streams; whether they, of set purpose, also drink the sea, I am not quite sure. If they do, then no doubt I have seen them; but I have not set it down, and have no clear recollection of it.

These Muscovy ducks that I spoke of have another curious habit of drinking dew in the early morning. This, at least, is what it looks like. They walk about for hours over the well-kept lawns, and with their heads stretched straight out, just above the herbage, continually just open and shut the mandibles very quickly and very slightly, nibbling the dew as it were. They certainly do drink it—one can see it disappear

in their mouths; but whether that is all they do, or their chief object, it is not so easy to be sure of. Why should they walk about imbibing dew for such a length of time? and why should dew be so much preferred by them to ordinary water, of which there is abundance? These ducks, indeed, or at least the larger kind of them, which are of great size, are never to be seen swimming, but they often walk about by the edge of the lake. They have a most portentous appearance, and walk with an extraordinary swing of the body, first to one side and then another. They are fond of bread, but their ordinary eating and drinking is something of a mystery to me. I have seen them apparently browsing some long, coarse grass, more like rushes, but though occasionally they did crop a piece, the incessant nibbling was out of all proportion to what they got, and seemed for the most part to be simply in the air. They seem indeed to have a habit of incessantly moving the mandibles in this way, without any particular object, or, at any rate, without any clearly discernible result following upon their doing so.

But as I remember these fine white Muscovy ducks with their vermilion faces and wild, light eye, with something a look of insanity in it, I remember, too, that they are now gone, or, at any rate, that most of them are, and those the best—the hugest and most dragon-like. "Sometimes we see a cloud that's dragonish" and sometimes a duck. These wonderful, waddling, swinging red and white Muscovy ducks were, and to have them running after one, with uncouth hissings and with their heads held down, yet scooping up and wagged from side to side at oneand with that insane eye-made one think all sorts of odd things. Well, they are gone, nor are they the only ones that are. When I first, by necessity, came to live at Cheltenham, the ducks in the Pittville Gardens were a great consolation to me. There was quite a fleet of them, a gay little flotilla of all kinds and colours, and at the smallest hint of bread, on one side of the lake, they would all come flying over from the other; and then it was the sport to feed How diverting that was! Being in such them. numbers, one took notice of all the little differences in their dispositions, the different degrees of boldness or retiringness, of pugnacity, greediness, aggressiveness, pertness, impudence, swagger, imperialism, and so on, all of which one could bring out, in some amusing way or another, by the varied and nicelyschemed throwing of the bread. To contrive that a timid bird should always get it, whilst a boldly greedy one pursued in vain, that two should contend for a large piece, to the end that a third might swim securely away with it, to tempt some to walk on thin ice till it broke, and others to make little canals through it, each from a different place, each struggling to be first, to have one bird feeding from the hand, whilst a crowd stood round, looking enviously on, to see greed just drag on fear, or fear just drive back greed, or the two so nicely balanced that they pro-

duced a deadlock, so that the bird stood on a very knife-edge, trembling between a forward and a backward movement; and then, too, gradually to come to connect the look and bearing of each bird with its disposition, to know them, both outwardly and psychologically, to see them grow into their names that grew with them, and have the bold orange-bill, the modest grey, the swaggering white bird, the Duchess, the Fine Lady, the My Lord Tomnoddy, the Kaiser, the Swashbuckler, and so on, all about one, so many characters, so many amusing little burlesques of humanity—human nature stripped, without its guards, disguises, softenings and hypocrisies—all this was the solace and beguilement of many a tedious afternoon.

But there exists for some reason, in every town in England, a body of men who can do what they like, without asking anybody, to the annoyance of everybody, though everybody pays for them. One day, after an absence, I came with my bag of bread as usual, but there were no ducks to be fed; all had vanished-there was only the uninteresting pond. Alarmed, I inquired of the man at the entrance, and found that the Cheltenham Corporation had got rid of the whole of them on account of their being of no particular breed or strain, just ordinary tame ducks and no more. Their appearance, the indiscriminate diversity of their plumage, their infinite variety of colour and pattern, had been against them. It had, indeed, made the water gay, and gladdened F

the eyes of subscribers to the gardens, but it had not been creditable to the Corporation. True elegance, it appears, which can only come from true breeding, had been wanting. These ducks were "a mongrel lot," and though they might be pretty to look at and entertaining to feed, that was not what the Corporation cared about. What the Corporation did care about, presumably, was to read in the local papers, or be told by their friends that now, at last, there were some ducks on the Cheltenham lakes a little better than the "mongrel lot" one had so long been accustomed to see there, more worthy of themselves, more worthy of the town they represented, and so forth. So the poor "mongrel lot," the delight of all the children, and of many a grown-up person to boot-Charles the Second was grown up, and a clever man too-were done away with, and a few pairs of select, blue-blooded strangers (more soothing to gentle bourgeois feelings) were introduced in their place. The children who came to feed them said, "Where are the others? Where are all the rest gone to? There's no fun in feeding three or four." Nor is there, in comparison with feeding a hundred, as one grown-up person at least can testify. As additions, these new arrivals would have been welcome enough, and being of distinct species they would not, probably, have entered into mésalliances with the others, to make a correct Corporation blush. Why could they not have stayed ? But this, I suppose, was the way of it. Here were pleasure gardens for which the public

paid. This pretty little fleet of ducks, painted all sorts of colours and not one painted quite like another, made a very considerable part of the pleasure thus paid for. So the Corporation, vested with mysterious and almost unlimited powers of annoyance, decided that the proper thing to do was to do away with them, and they did do away with them, and the gardens have been the duller for it ever since. What they could have thought—— But there! they were a Corporation and acted like one. They had a precedent. They had previously done away with the peacocks.

CHAPTER X

FROM THE EDGE OF A PRECIPICE

HAVE been watching the black guillemots. Like the common ones, they often carry a fish they have caught, for a very long time in the bill, before swallowing it, or even before giving it to their young. They will swim with it for half an hour or so, constantly dipping it beneath the water, and apparently nibbling on it with the bill, whilst they hold it thus submerged. Then finding themselves near a rock which is ascendable, they ascend it, and lie couched there for a while, resting, always with the fish in their Anon, with refreshed energies, they re-enter bill. the sea with it, and, if very patient, and prepared to watch indefinitely, one may at last see that fish swallowed; but I hardly think I should be exaggerating were I to say that hours may pass in this way. They usually hold the fish by the middle, or just below the head, and if they want to shift their hold from one place to the other, they sink down their bills into the water, as though better able to do so through its medium. To mandibulate a fish in the air, quite freely, as does the cormorant, is, perhaps, beyond their power. Any moment, however, may show me that it is not. So, too, when I have seen them swallow the fish, they have done so in the same way. Instead of raising the head and gulping it down, they

gulped it up, with the water to help them; though I can hardly think that they are compelled to act in this way.

These little birds-old ocean's pets, his darlingsseem to me to play at fighting. Whilst swimming together in little changing troops-for the numbers are always increasing or diminishing-they constantly approach one another in a threatening manner, the body raised in the water, the head held straight up, and the mandibles opening and shutting like a slender pair of scissors—a thoroughly warlike appearance. Yet it hardly ever ends in anything, nor does the threatened bird seem really alarmed. Generally, the threatener, as he comes alongside, subsides into quiet humdrum, or two birds, after circling round one another in this way, each almost on its own pivot, like a pair of whirligig corks, both quiet down. Each, whilst thus acting, will, at intervals, drop the head and sink the beak a little in the water-one of their most usual actions. Sometimes, indeed, the menacing bird may fly at the one he menaces, who ducks at the right moment; but what makes me think it more play than wrath is that, often, instead of flying right at him, he flies to beside him only, and both then swim together, looking the best of friends. Yet too much stress is not to be laid on this either, and certainly it can be "miching malicho" on occasions. Often, when one bird is attacked, all the others will dive and scurry about under the water, in the most excited manner, seeming to pursue one

another, as though it were a game or romp. Sometimes, indeed, there will be a little bit of a scuffle; but if there be fighting, still more, as it appears to me, is there the play or pretence of fighting, which is tending to pass into a social sport or dance.

The antics of birds are often so very curious, and the whole subject of their origin and meaning is so full of interest, that nothing which might by any possibility throw light upon this ought to be neglected, or can be too closely observed. I believe that the feelings of animals, still more than is known to be the case with savages, pass easily from one channel into another, and that, therefore, nervous excitement brought forth by one kind of emotion is apt, in its turn, to produce another kind, so that if any special transition of this sort were at all frequent, it might, through memory and association of ideas, become habitual. If, however, a mêlée or scrimmage-to meet the case of these guillemots-became, almost as soon as started, a mere hurrying and scurrying about, it would be difficult to detect the one as the cause of the other, and this is just the difficulty one might expect, for in such a sequence the tendency would, no doubt, be for the first or causal part of the activity to become more and more abbreviated (what should delay the passage ?) till, at length, a mere start on the part of any one bird might set the others off dancing. Finally, what had become a mere pretence or starting-point might vanish entirely, or only survive as an indistinguishable part of the other, in which case there

would be the dance or sport alone, which would then seem a very unaccountable thing. In this way I can imagine the evening dances or antics of the great plover, which used to impress me so when I lived in Suffolk, to have originated. One might watch these performances a great many times without seeing anything to suggest that a feeling of pugnacity entered into them. Nevertheless, there is, sometimes, a slight appearance of this, for I have several times seen a bird pursue and wave its wings over another one. My theory is that an initial energy or emotion sometimes flows out into subsidiary channels, and that gradually this secondary factor may encroach upon and take the place of the primary one.

At any rate, to come back from the general to the particular, it is apparent to me that these little ebullitions, or whatever they may be called, of the black guillemots are of a blended nature, and I should think it misleading to describe them simply as fights. Whatever they are, they are very pretty to see. The actions of all the little dumpling birds are so pert, brisk, and vivacious—so elegant, too. Yet a bird will go through it all, play every part in the little *affaire*, carrying, all the while, a fish in its bill. It makes no difference to him; he will even threaten in the way I have described, whilst thus encumbered. Whether this makes it more likely that the whole thing is sport, I hardly know.¹ It seems strange to seek one's enemy

¹ On second thoughts it does not, since sparrows will attack martins though holding grass, etc., for nest-building, in their beaks—as I have seen.

with one's dinner in one's hand—the beak is used more as a hand here than a mouth—yet what is done with entire ease is as though it were not done at all. Even so do the guillemots—the common ones, I mean —but then, they used to fight for their fish. Here I saw little or nothing of any real attempt on the part of one bird, to take the fish from another.

In swimming under water the black guillemot uses its wings only—the rose-red legs trail behind it, a fading fire as it goes down. The body becomes one great glaucous-green bubble, which has, still more, a luminous appearance. The effect may almost be called beautiful, but it is still more odd and bottleimp-like. Most diving sea-birds exhibit this appearance under water, but not all in the same degree. Whether sexual selection has come into play here I know not.

A pair of these birds are now feeding their young. The nest is in a hole in the earth, on a ridge of the precipitous grass-slope of the cliff, just above where it breaks into rocks, and drops sheer to the sea. Both parents feed the chick—for their family is no larger but one more often than the other. They bring, each time, a single fish—a sand-eel, often of a fair size —and disappear with it into the hole, reappearing shortly afterwards. Once both are in the hole together, having entered in succession, each with a fish, but generally when the two meet at the entrance one only brings a fish and goes in, and the other, having nothing, stays outside. When the parent bird has fed

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its young and come out again, it will often sit for a little on the steep slope, above or below the hole, before flying away. It looks solicitously at the hole, and from time to time utters a little thin note that just reaches me where I am. Once both the birds sat like this, one above and one below the hole. What I particularly noticed was that when the bird that had taken a fish in had come out again, the other, even though it had nothing, would always go in too, as though to pay the chick a little visit. It stayed about the same time-less than a minute that is to say. How interesting are these little birds to watch, and how delightful is it to watch them from the summit of precipices that "beetle o'er their base into the sea," where all is wild and tremendous, and in the midst of utter solitude !

CHAPTER XI

DARWINIAN EIDER-DUCKS

HAVE seen a fair number of eider-ducks within the last few days. All the grown ones are females -not a male to be seen now-and the greater number of them are unaccompanied by ducklings. Of those that are, most have but one, and three is the maximum number that I have seen swimming together with their mother. Yet two years ago, in early June, the males here were courting the females, and when I left, about the middle of the month, but very few eggs, I believe, had been laid. This year, I learn, the birds have been very late in breeding, there having been some very "rough weather," as it is euphoniously called, in the spring-that is to say, the spring has been like a bad winter, and now the summer, though it has no very close resemblance to any of the four seasons as I have seen them elsewhere, yet comes nearest to a phenomenally bad November. I wonder, therefore, that so many of these mother eiders are without their young ones, for they should all have hatched out a brood of them not so very long ago. Why, too, should so many be swimming with one duckling only? Were these single ones of any size, one could understand the others of the brood having escaped from tutelage, but, like all I have seen, they are but little fluffy things. It looks as though their

fellow nestlings had come to grief in some way, and if so it is probable that many entire broods have also. Yet perhaps they have merely drifted away into the wide, watery world, where they may be able enough to shift for themselves thus early. To judge by these, however, they would not have left the mother duck voluntarily—they are dutiful, dependent little things.

Where the coast is iron-bound, in delightful little bays and inlets-those sea-pools lovely to look down upon-one may watch the eiders feeding on the rocks, and try, through the glasses, to make out exactly what they are getting. In this way I am amusing myself this morning, having just run round a projecting point, towards which a family of three were advancing, and concealed myself behind a projecting ridge. Over this I can just peep at some black rocks, up which, whilst their mother waits, the little ducklings now begin to crawl. So steep is the slope that sometimes they slip and roll a little way down it, but they always recover themselves and run up it again, none the worse. In the intervals between such little mishaps they seem to be picking minute shell-fish off the rock; but what shell-fish are they? for the small white ones, with which large areas of the rock are covered, are as hard as stone, and might defy anything short of a hammer and chisel to dislodge them. It is not on these assuredly that these soft little things are feeding, and now I see that where they are most active the rock is black. There

are broad, black bands and streaks upon it, but what these consist of, or whether they are anything more than seaweed I cannot quite make out; and here, where I lie, being above the sea's influence, there is nothing similar to instruct me. Rocks now I find -as I have often before-are inferior to foliage for concealing oneself, that is, if one wishes to see as well as to be unseen. One's head, projecting over their hard, sharp, uncompromising lines, catches the eye of a wary bird, and recesses made by their angles are not often to be found where one wants them. Twice has the mother duck been slightly suspicious, and now, to my chagrin-though it really should not be, for what can be more entertaining ?---she goes to the length of calling her ducklings off the rock. This she does by uttering a deep "quorl"-a curious sound, not a quack, but something like one-on which they come scurrying down to join her, putting off to sea with the greatest precipitation, like two little boats that have only just themselves to launch-no waiting for people to get into them. I have heard this note before, and always it has been uttered as a danger-signal to the chicks. There is another one that is used on ordinary occasions, and this much more resembles a true "quack."

In spite of these various alarms, however, the young eiders are soon on the rock again, and after a while the mother walks up it, too, and begins picking and pulling with her bill over these same black surfaces. I still cannot quite make out, though now

I surmise, what it is that gives this black, or rather indigo, tinting to the rock, and in trying to get nearer, the mother duck is again alarmed, and with another deep "quorl" or two, runs quickly down the slant, and slides into the water, close followed by her two little children. This time she swims away with them and returns no more, leaving me as disappointed as though I had thirsted for her blood.

Going down now to the rocks, where they have just been, I find that the black appearance of which I have spoken is caused by immense numbers of quite small mussels which grow thickly wedged together. It is on these that all three have been feeding, and I have no doubt that they form one of the staples of the eider-duck's food just now. Earlier in the year it seemed to be all diving, and when they brought anything up it did not look like a mussel. All about the rocks there are certain little collections of broken mussel-shells-often of a very pretty violet tintcoagulated more or less firmly together, and these must evidently have been ejected, as indigestible, by birds that had swallowed them; but whether by gulls only, or by both gulls and eider-ducks, I cannot tell. Gulls, I know, disgorge these queer kinds of pellets as well as others still more peculiar, since they occur over the interior of the island in numbers too great for any other bird to have produced them.

The eider-ducks, therefore, feed on the beds of mussels that the sea exposes at low tide, but they also, to go by appearances, devour the actual seaweed,

irrespective of anything that may be growing upon Having seen them do both, I see no reason why it. I should reject the evidence of my eyesight in the one case more than in the other. What interests me is that I have several times during this week seen the same duck, with her young ones, feeding along this one flat part of the coast-line, where it forms a beach, whereas all the others that I have seen have kept in the neighbourhood of the rocks. Even about the shores of this small island it seems as though a process of differentiation were going on, and that whilst the great majority of the eider-ducks affect a diet of shell-fish, and, therefore, haunt the broken, rocky parts where it is to be best obtained, some few prefer the seaweed growing on the smooth, shallow bottoms, which they therefore do not leave, or, at least, more frequently resort to.

A difference of food like this, involving a residence in different localities, must lead to change in other habits, to which structure would, in time, respond, so that, at last, upon Darwinian principles, two different birds would be produced. Thus anywhere and everywhere one may see with one's own eyes—or think that one sees, which is just as instructive—the early unregarded stages of some important evolutionary process.

It is a good thing, I think, thus to exercise one's imagination, and by observing this or that more or less slight deviation from the main stream of an animal's habits, to try and picture its remote future descendants.

Too little, I think, has been done in this way. The imaginative element is one without which all things starve. In natural history it is particularly wanted, and would have particularly good effects. Most naturalists think only of what is the rule in any animal's habits-exceptions they do not care about -yet, looked at in a certain way, they are still more interesting. Moreover, there is a great tendency to see an animal do just what it is supposed to do, and this tendency does not conduce to keen and interested observation. But the future modification of any species must depend largely upon deviations, on the part of individuals belonging to it, from its more ordinary line of conduct, so that any man who should wish rationally to speculate on this future must become, perforce, a patient noticer of such deviations, and, therefore, a great observer of the animal in question.

To support a theory is a great motive towards the collection of facts, yet a number of smallminded people are always deprecating what they call "mere theory" in field natural history, and crying out for facts only. Theory, however, is a soil in which facts grow, and there is a greater crop from a false one than from none at all. The history of astrology and alchemy are instances of this—if, indeed, the latter, in its fundamental belief, does not turn out to have been true after all. When have men been much interested in facts—apart from mere gaping wonder or amusement—except in connection with some idea in their mind, which, by giving, or seeming to give, them significance, as it were irradiated them? The "matter-of-fact man," as that lowest type of one is called, is interested in comparatively few facts even, and such fancy and imagination as he does possess plays around those few.

To return to the eider-ducks, I cannot, of course, be quite certain that it is always the same family party that I see along the beach by the fringe of seaweed, but I have little doubt that it is; for, in the first place, it always consists of the mother and three ducklings, and in the next, there is never another bird or party of birds there at the same time with them. The double coincidence is, I think, decisive, for most of the eiders that have ducklings at all, have either one only or two, whilst the greater number are without any. But then, to be sure, I have only been here a week, nor have I given the matter any very *special* attention. It is not quite *constaté*, only I like to think things, and then think as though they were as I think.

CHAPTER XII

ON THE GREAT NESS-SIDE

TO-DAY I was to see the cormorants fly out from their caves, but my hopes were too high, and so proper for dashing. Having gone to bed at six, I awoke at ten, dozed till eleven, read Shakespeare till near twelve, and, soon after, got up. It was night when I first opened the door and looked out, morning when I went away. The moon had possessed the world in fullest sovereignty, had streamed her silver over land and sea. Now she was deposed, dethroned, yet there had only intervened the short time necessary to resuscitate the peat fire and make a cup of tea. Yet it is not morning either, even yet-or only on the eastern sea and in the eastern sky; the one a lake of lucid light, hung in an all but universal pall of dun cloud, the other lying beneath it, bathed in it, glowing with reflected colours, which yet seem deeper and more lurid than those from which they have their birth. Two seas of surpassing splendour : and long lines of heavy purple cloud hang, like ocean islands, in the one of the sky. The other, the true sea, has a strangely opaque appearance-it does not look like water at all. It is this that makes the morning; all else is dark and shrouded. Standing here, upon a cornerstone of this island, one looks from night into day. Just before the sun rises the clouds about become G 81

rosy red, and then take fire ; but from the moment he has risen they begin to fade back into grey again. All flame himself, he puts all other out. It is a strange effect. The sun here wants his state. He has been up but a moment, yet, but for a very tempered glow just about him, all light and all colour is gone. Soon it will be all gone, for into the great grey cloudy continent that broods upon the one clear space and spreads from it, illimitable as the sky itself, he, "the King of Glory," is now entering, and there, in all probability, he will be for the rest of the sombre day. Here in the Shetlands the sky that waits for the sun is a much more wonderful sight than the actual sunrise, whereas elsewhere I have seen it throb to his coming and relume at his torch.

Walking to the caves, I miss my way and long overshoot the point. This is a pity, for it has grown lighter yonder, and I do not wish to disturb the shags, some of whom, no doubt, roost near the entrance. However, when I get there, the island is still dark and shrouded, and sitting, as I have to, with my face to the western sea, that, too, lies in a grey-blue something that is neither light nor dark. Through it and over it the Skerries Lighthouse still throws at regular intervals its revolving beam, showing that it still counts as night. The shags do not seem to wait for the true morning—the one over to the east. Many of them have flown out to sea like shadows, or great, uncouth bats, yet I hardly think they can have seen me in the greyness after I had sat down. I am not sure whether they came from the cavern itself or only from about its frowning portals. Wondrous noises the sea is making now, as, with the heaves of a dead calm, even —heaves that in their very quietude suggest a terrible reserve of power—it laps into and out of this awesome cavern—moans, rumblings, sullen sounds that want and seem to crave a name.

It is now near three, and the first gull yet-of its own free will, and not unsettled by me-has flown by. Just before, some very large fish-for I think it must be a shark, and not a cetacean-has passed on its silent way along the silent sea. It came several times to the surface, and showed each time a very long back, with one small pointed fin, very much out of proportion to its bulk, rising sharply and straightly from it, just as a shark's dorsal fin does. Each time it made that same sort of roll that a porpoise does, only more slowly and in a much greater space. This, indeed, does not suggest a shark-indeed, it can't be onebut one of the smaller cetaceans that is yet much larger than the common porpoise. Every time it comes up it makes a sort of grunting snort or blow. On account of this-for it gives itself more leisure to do it-and that its roll describes a longer curve, I doubt if it be the porpoise-the one we know so well. It must be a larger sort, nor should I ever have supposed it to be a shark had I not been assured that sharks of some size are common round the shores of these islands. This must be true, I think, for my informants could hardly have been mistaken.

At two I could see, though dimly, to write, and now, at a quarter-past three, I can as plainly as by full daylight, though it is not that yet. The Skerries light is still flashing, though it must be now superfluous; but even as I write this, it must have flashed its last, for the proper interval has gone by. There is now a great bellowing of shags from the cave, which may proceed either from a single pair or from several. No words can describe the strangeness of these sounds. They are more than guttural—stomachic rather. They harmonise finely with those of the sea, and sometimes, indeed, bear a curious resemblance to some of its minor, sullen gurgles, deep within the cavern. But no birds fly out.

Several times, again, now, I have seen this large small cetacean, and once another one, larger still-in fact, an unmistakable small whale, which came briskly up at no great distance away and blew a jet of oilylooking vapour from its nose. It looked almost black, and had the right whale shape, though not more, perhaps, than some dozen or twenty feet long. These small whales are common off the Shetlands, but suddenly to see one is very exciting. It reminds me of when, from the rocks of Raasey Isle, I saw in the clear, pale light of the morning, true whales-huge monsters of the deep-leaping, head first, out of the water and falling back into it again with a roar, which, though several miles off, I heard each time most distinctly, and attributed, at first, to the breaking away of portions of the cliff on the opposite shores of



FROM THE ROCKS OF RAASEY ISLE

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Skye. Nothing, it seemed to me, but a landslip was sufficient to account for such a tremendous sound, and it was with an interest the vividness of which I can even now feel that its true nature first dawned upon me. These whales, as, with their huge dimensions, I could see, though so far away, leapt almost if not entirely clear of the water, and perpendicularly into the air. At that time I was quite unaware that they ever did this, but since then I have both heard and read of it, and Darwin, somewhere in his journal, speaks of the cachalot or sperm-whale doing the same thing.

Puffins are beginning now to fly hither and thither over the sea, and terns are fishing about a low-lying eastern isle. They are the common kind, but some clouds above the island are becoming flame-touched, making them roseate terns. An Arctic skua goes by too, and a black guillemot flies with a fish to feed its young. Still from the recesses of the cavern come those deep, hoarse, bellowing sounds, but they must be uttered by shags upon their nests, and that do not mean to come forth. What there was to see I have seen-those bat-like shadows. There can be no more to speak of-it is too late-but, were there hundreds, I can no longer resist the impulse to walk and walk in the clear and cool-aired morning. The shags that roost in these caverns cannot, I think, be numerous, and they leave them, it would seem, whilst night still broods upon the sea.

True, there was the morning, clear and lovely, in the east, but, to see that, they would have had to peep round the point. Both in numbers, therefore, and impressiveness the *Ausflug* has been a failure, but the morning, with the almost midnight sun, a splendid success.

This was my last day on the island. In the afternoon my friends sailed over from Yell, bringing me my letters. One was from my sentry-box man, telling me the birds were still on the ledges, but advising me to come at once, if I wished to find them there—otherwise they might be flown. I therefore went back the same evening, and next day, which was Sunday, took steamer to Uyea Sound, from whence I walked through a barren desolation to Balta Sound, getting in, about 10 p.m., to tea and cakes at one of the most homelike, friendly-breathing hostels possible to find either in the Shetlands or the rest of the United Kingdom or, indeed, the world, to judge by probabilities—to wit, Mrs. Hunter's establishment, where many a one has had cause to say, like myself :

"Sleep (or rather rest) after toil, port after stormie seas, * * * * * does greatly please."

Next day I made what purchases I wanted, not forgetting a good serviceable porridge-spoon—I had used a stick before—and, on Tuesday, drove over to Burra Firth, where I was met by the watcher, and between us we carried my belongings up the great hill—or ness, to give it its Shetland name—to the little black sentry-box that I knew so well. The "pockmantle" fell to my share, and was the lesser

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burden. It was very heavy, however, and I had almost as lief be taken to a tea-party as have such another trudge. But how the skuas greeted me, again, with their wild cries, as we climbed the higher slopes where their nurseries are. Having set everything where it would best go, in the little cabin, I walked out and made my way to the cliffs.

CHAPTER XIII

MOTHER AND CHILD

THE young fulmar petrels here are still all in a state of fluff-not one true feather to be seenjust as I left them in the middle of July, on my last visit, though now it is the end of it. They are larger, however, which, with their softness, whiteness, and general appearance, as of a great powder-puff, makes them more marvellous-looking than ever. Their shape, as they lie on the rock, is that of a round flat disc-a muffin somewhat inflated, or an air-ball compressed. Only when they flutter their wings, or waggle out their legs, have they any more intricate shape than this, except that the funny little head, with the black eyes and black hooked beak, projects permanently out of their roundness. The latter is frequently held open, with the mandibles widely distended-sometimes fixed so, at others gently moving. The neck, on these occasions, is often stretched out and swayed from side to side, so that we have here, in embryo, those curious movements which, in the grown birds, are nuptial ones, and accompany the note then uttered. Although the chick, as would be naturally expected, often opens its bill in order to persuade the parent bird to feed it, yet after some hours' watching I came to the conclusion that the action was too frequent and too habitual to be alto-

gether explained in this way, and I look upon it as an inherited tendency. But may not the habit have originated in the hunger of the chick, and have been worked in, sexually, at a later age, when the reproductive system had become active ? Strong emotion, one may suppose, would require an outward manifestation in the shape of movements of some sort, and it would be such as were already known, that, by first coming to hand, would be likely to be first employed. If we had been accustomed to do one kind of work for which we had a suitable implement, and it became suddenly necessary to do some other for which we had none, it would be natural for us to catch up the one we had and make a shift with that. If a swimbladder can be worked in as a lung, or a pair of legs as part of a mouth, then why not a hunger-signal as a love-signal? Be this as it may, it is certainly strange to see little fluffy chicks on the nest going through the same sort of pantomime as their parents do when in love. But why do I call them little ? I have never seen such big baby things, and their size makes them look all the weirder. So great, indeed, is the chick's fluffiness that though the wings are tiny and the tail invisible, it looks almost, if not quite, as big as the graceful and delicately shaped parent bird sitting beside it.

The lethargy of these young fulmars is very noticeable. They do occasionally rise a little on their feet and shuffle about in the place where they sit, so that in this way they may, in time, turn quite round.

But after watching them now, for some two hours, I should doubt if they ever moved more than an inch or so beyond an imaginary line drawn close round them, as they lie. Here natural selection seems a demonstrable thing, for often, were the chick to move so much as six inches forward, or a few feet in any other direction, it must fall and be dashed to pieces. What but this force-or, rather, processcan have produced such a want of all inclination to move? It is the same, I suppose, with birds that nest in trees or bushes. With the nightjar, however, though the chicks become, after a while, somewhat active, so that the nest, or rather nursery, is shifted from day to day, yet for some time they lie very quiet, though well able to run about. Here the above explanation does not apply, so that one can never be sure. "Theories," says Voltaire "are like mice. They run through nineteen holes, but are stopped by the twentieth." Still, it would generally be an advantage for young birds to keep still when left by themselves, even in a field or wood, and how much more so where a step or two, or one little run, would be death. Looking at these fat, fluffy, oddlooking creatures as they sit motionless from hour to hour, and then at the grown bird sailing on spread wings, all grace and beauty,-a being that seems born of the air-the change from one to the other-from the fixed to the free phase of life-seems hardly less or more remarkable than that by which a chrysalis becomes a butterfly. Not the egg itself differs more

from this last stage of its inmate—this free flitting, gliding thing—than does the round, squat, stolid chick, which in appearance is nearer to an egg than to a full-blossomed bird.

The mother fulmar-for I suppose it is the mother -cossets the chick as she sits beside it, leaning tenderly over it, and nibbling with her bill amidst its long, soft, white fluff, the chick sitting still, the while, with its beak held open, but not at all as though it were thinking of food. Sometimes, by inadvertence, the mother pricks the chick a little, with her bill, upon which it turns indignantly towards her, with distended jaws. She, to cover her maladresse, does the same, but in a dignified, parental manner, as though it were she who had cause to be angry. But it is easy to see that she is really a little ashamed of herself, and purposes to be more careful another time. Mother and chick often sleep side by side on the rock, and then it is noticeable that whilst the mother has her head turned and partially hidden amongst the feathers of the back-" under her wing," as one says-the chick's is often held straight in the usual manner. Not always, however : at other times, it is disposed of in the same way. As far as I can see, the chick is in the charge of one parent only. On several occasions a bird, which I suppose to be the other one, has flown in, and settled on the rock near, but always, on its coming nearer than some three feet or so, the one in charge, distending its jaws, and with threatening gestures, has uttered an

angry "ak, ak, ak, ak !" and, on two occasions, has squirted something—I presume, oil—at the intruder, causing it to go farther off. This cry is sometimes preceded by a more curious and less articulate one of "rherrrrrr!"—at a venture : I would not answer for the spelling being exact.

I believe it is the mother who takes charge of the chick, and becomes so intensely jealous of it that she will not suffer even her *cdro spóso*, to whom she was so much attached, to come within a certain distance of it. One cannot, indeed, say for certain that it is the husband who thus sometimes flies up, and seems to show a wish to approach his wife or child, but it is not likely that a strange bird would act in this way —for all are mated—and if both parents fed the young one, why should either repulse the other ? I feel sure, therefore, that only one does, and this one is much more likely to be the female.

The chick, in order to be fed, places its bill within that of the parent bird, and evidently gets something which she brings up into it. This appears to be liquid and, I suppose, is oil. Had it been solid, I must, I think, at this close distance, have seen it or at least have seen that it was. Where, however, this supply of oil comes from, or how it is procured, I have no very clear idea. Though the actions of the old bird in thus feeding the chick are something like those of a pigeon, yet they are much easier and, so to speak, softer. The liquid food is brought up without difficulty or straining, as one might, indeed,



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expect would be the case, seeing the ease with which the bird can at any moment squirt it out, when angry, and the distance to which it is shot. Nor is this the only power of the kind which these petrels possess, for they are able to eject their excrement to a quite astonishing distance—greater even, perhaps, than that to which the cormorant or shag attains in this art—at least it seems so at the time. This power is fully developed in the chick—by whom, indeed, it is the more needed—and I notice that the rock where each one lies is clean enough, though all round about it is whitened.

When the mother petrel leaves the chick, she, for the most part, continually circles round in the neighbourhood, and almost at every circle looks in at it, sometimes waking it up as it lies asleep, causing it to give an impatient little snap of the bill towards her. It is as though she could not sufficiently love, cherish, and look at it. It is her only child, and a spoilt one.

I must not forget to note down—now that it is full before me—that the inside of the chick's bill, with the mouth generally, is somewhat more lightly coloured than in the old bird; it is more pink—which may represent the natural colour—and less mauvy. This difference, as in the other cases, is what we might expect to see, were the colour a sexual adornment; but why, if it is not so, should there be any difference depending on age in such a region ?

The great skua still reigns here in its accustomed

territory, which, whilst encircled on all sides by that of the lesser one, is not intermingled with it, even on the frontiers. Many of the young birds are still about, but being now feathered and active in proportion to their size, they are more difficult to find than when I was here before. Though the old birds still swoop at one, they are not so savage as they were when the chicks were young and fluffy; they do not actually strike, but swerve off, particularly if one glances up at them as they approach. The Arctic skua, on the other hand, is still as bold as ever, and will strike one as repeatedly and come as near to knocking one's hat off without doing it (not near at all, that is to say) as ever it did before; or the great one either, I might add, as far as my own personal experience is concerned. I would not, however, be unduly sceptical, and this I can say, that I could easily set my hat on my head so that either bird-or any bird-might knock it off again.

CHAPTER XIV

"DREAM CHILDREN"

VISITING these islands in the late summer impresses me with a fact that it is easy to forget, viz. that even the most oceanic of sea-birds-the wandering albatross or stormy petrel, for instancepass almost as much of their life upon the land as the water. The breeding season is no slight matter, lasting but a short time. It goes on for months and months, and sometimes, from its earliest beginnings, must represent a period not very far short of half the year. On the -----shire coast, for instance, the terns appeared in the earlier part of April, and I was told by the fishermen that they stayed sometimes till well into September. How the gulls at the end of July stand congregated on their nesting-grounds, as if the business of matrimony were rather beginning than ending, I have already mentioned, and it is the same thing here in August with the guillemots. Everywhere the ledges are crowded with them, as they were when I last came in June-indeed, if there is any difference, the numbers seem even greater. But though there is the same general appearance, the glasses soon reveal the fact that, with very few exceptions, all the young birds are departed. Such as remain are no larger than the chicks I saw in the spring, and as most of the parents were then still

incubating, besides that the young guillemot is known to leave the ledge whilst quite small, there is no room for doubt on this point.

No; the young are gone. Why, then, do the parents stay? They will rear no second brood, so that it seems as though they love the ledges better than the little fluffy things that they were feeding upon them, up to the moment of their departure. Affection apparently must be bounded by the sea, for whilst the parents, if we suppose them to have accompanied the chicks down, and swum about with them for a little, must have soon flown back, the chicks, owing to the undeveloped state of their wings, would have been unable to make the return journey. It would seem, therefore, that the first night after the down-flight must have separated mother and child for ever; but if this is the case we may well wonder how the rising generation of guillemots are able to support themselves. Up to now they have been fed upon the ledges, but henceforth they must dive and catch fish for themselves. That they should at once and of their own initiative acquire the skill to do this, or learn the art in so very short a time, from the parent birds, hardly seems possible. We must perforce suppose-or at least I must-that either the mother, as is most probable, or both the parents, remain with the chick for a little, feeding it now on the sea as they did before on the ledge, until in time-and no doubt very quickly-it learns to feed itself. But how strange, if this is so, that the grown birds return to the ledges

and stay there day after day-I know not for how long-without laying a second egg. If they do not do so, then none of these birds can have bred. But the ledges are alive with them, and they are of both How long does the mother bird remain with sexes. her chick upon the sea, and does she, during such period, remain with it there at night, thus abandoning the ledges for a time altogether, though she afterwards returns to them, or does she fly up each night to the ledges, whilst the chick roosts upon some rock at the cliff's base, to be rejoined by its mother next morning ? I cannot answer these questions in a satisfactory manner. It seems as though time must be wanting for such a little family exodus as I am here suggesting, for on the 16th of July, upon the occasion of my first visit, I left these same ledges crowded with guillemots, all, or almost all, of whom were still feeding their young, and now, on the last day of the same month, I find all the old birds still upon them, but nearly all the young are gone. This gives about a fortnight for the birds I left to have gone off to sea with the young ones, and returned to the ledges alone, supposing the exodus to have commenced almost on the day I went away. But did it ? As the few chicks that are still here are just about as big as the others were at the time I left them last year, I shall be better able to judge of this when I see how long they stay.

Meanwhile, there is something to interest me under my eyes—a curious matter as it seems to me, which requires some sort of explanation. As I have said, but very few of these guillemots have still a chick to look after, but those that have not, often seem to be under the hallucination that they are blessed in this way. But a little while ago, for instance, a bird-one of such a childless pair-flew in with a fish, and running with it to its partner, both of them stood together drooping their wings, and, at the same time, projecting them forwards, so as to make that little tent, within which the young one is so characteristically fed. Always either one or both of them had the wings thus drooped, as though to shield and protect something, though "nothing was but what was not." Standing in this way, they passed the fish several times to and from each other, and, alternately bending their heads down till its tail hung a little above the ground, appeared to wait for an imaginary chick to take it from them. Now had the fish, which was a sand-eel, been held by the head in the tip of the bill, very little stooping would have been necessary for this purpose, and therefore I might the more easily have imagined what I here describe. But instead of this it lay longitudinally within the beak, so that only about an inch of the tail projected beyond it, as is very commonly the case. Therefore, when the birds bent down as a preliminary to moving the fish forward along the bill-which, however, they can do as well in one position as another-it was in a quite unmistakable manner that they did so, and, looking almost directly

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down upon them from the edge of the cliff, at a height of not more than twenty feet or so, I was enabled to see the whole process. Judging by their actions, any one would have said that these birds had a chick, and were feeding it; and calling up the many such scenes that I was witness of when last here, I can think of no point in which they differed from this present one, except in the presence of the chick. This curious make-believe, or whatever it may be called, lasted for some little time, but at last, I think, one of the birds ate the fish. Between them, at any rate, it swam out of the ken of my glasses.

And now, what is the meaning of all this? Many birds, of course, are in the habit of feeding one another-conjugally or loverly-or the male is in the habit of feeding the female, and this seems the most obvious and natural explanation here. I do not, however, think that this is a special trait of the guillemot, and inasmuch as there are but few young birds now, it is quite a rare thing to see a bird flying in with a fish in its bill. I believe, myself, that when a childless one does so, it is with the idea of feeding the chick-the last one, the one that it remembers and pictures as still on the ledge-in its mind; and it is the more easy for me to think this, because I feel sure that this habit of conjugal feeding has grown out of the feeding of the young, and I can even imagine that, by one of those mental transitions which with animals (as with savages) are so quick and so easy, the bird offering the food, does,

occasionally and for a moment, put its partner in place of the young one.

We must not think only of the forgetfulness of animals-of their inability to retain past actions or events clearly in the mind, so as to remember them, long afterwards, in the way that we do. We should bear in mind, also, that they are influenced, like ourselves, by association of ideas, and that savages, whose psychology should stand nearer to theirs than our own, often confound the subjective with the objective-the idea of a thing in their mind, that is to say, with the thing itself, outside it. It would be quite natural, in my idea, that any of these guillemots should, by the mere catching of a fish, be reminded of the occupation it had for so long previously been engaged in, and the mental picture, thus raised, of the chick on the ledge, might well be so vivid as to overcome the mere negative general impression that it was no longer there. Under the influence of this delusion-let us say, then-the bird flies in with its fish, and, seeing it do so, its partner, by a similar association of ideas, is affected in just the same way, seeing also in its mind's eye-less blurred, perhaps, by innumerable figures than our own-a lively image of its child. What follows we have seen-a little play or pretence, as it looked like, on the part of the two birds, who thus, as it were, reminded one another of what both so well remembered. Of such conscious reminiscence, however, I do not suppose them to have been capable, but they may both, I think, have

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acted in something the same way that a bereaved mother may be supposed to, when she almost unconsciously lays out clothes or goes through some other once habitual process, in behalf of a dead child—forgetful, for a moment, or half-forgetful, of the change. All would have been brought about through association of ideas, one appropriate act suggesting and leading to others no longer so, but of whose propriety or otherwise the bird—or any animal—has probably but one means of judging—the presence or absence, namely, of the idea of them in its mind.

Now when, as Miss Kingsley tells us, a negro, chatting in his hut, turns with a smile or a remark, to his mother-deceased, but whom he supposes to be sitting in the accustomed place there-may not this also be through association of ideas, producing a strong visual image of what he has so long been used to see? There is hardly anything that so readily summons up the image, with the remembrance, of the dead, as the place where they lived or the objects amongst which they moved. How much, for instance, does the familiar chair suggest the presence of some one who used habitually to sit in it. "I know," says Darwin-referring to a visit to his old home after his father's death, which had occurred during his absence on the famous voyage-"I know if I could have been left alone in that greenhouse for five minutes, I should have been able to see my father in his wheel-chair as vividly as if he

had been there before me."1 If such an effect, so produced, may be strong-and it varies greatly -- in the civilised man, it is likely to be much stronger in the savage, who does not distinguish so clearly between the world without him and what is in his own mind. To him, therefore, the visual image of a deceased person, that is summoned up by the sight of anything that more particularly appertained to him, during life, might well seem to be that person himself, and thus, as it appears to me, a belief might arise of the continual presence amongst us of the departed, even without anything else to help it. That there is much else-real, as well as seeming evidence-I know, or at any rate I am of that opinion. I do not write as a disbeliever in real apparitions, in clairvoyance, premonitions, thoughttransference, or a host of other things, for I am one of those who really go by evidence in such matters -very few do-and to me no one thing in "this great world of shows" is in itself more wonderful or incredible than another-which is my own idea of what the scientific attitude of mind should be. But because there may be much that goes to prove what Myers calls the survival of human (which, to me, involves animal) personality after physical death, it does not, therefore, follow that the belief in man's immortality has originated through this, and still less that it could not have arisen without it. Association of ideas, producing a strong mental image, with the confusion between thought and objective reality,

¹ The Life and Letters of Charles Darwin, p. 11.

would, I believe, have been sufficient; for it must be remembered that man's ancestry leads up, through the semi-human, to the primeval savage, and it is amongst the lowest tribes of existing savages that the tendency last indicated is most noticeable. In regard to this, one should read Tylor, as likewise Clodd, concerning the probable effect that dreams have had in producing the idea of a soul. From the dream figure to that of our waking mind's eye there is but a step; and as animals dream, we may suppose that they likewise see mentally.

This seems clear, that wherever the visualising faculty-to give it a name-produced the image of anything, it would be mistaken for that thing if reason did not convince to the contrary. In animals, reason is weaker than with us, but that the power of mental vision, within the narrower range of their experience, is weaker also, I can see no reason to conclude. Rather, I think, it is likely to be the other way, and this should make it an easier matter for a guillemot than for a negro to see, or seem to see, an absent relative. But possibly this vivid conjuring up of the mere outward form of anything may not be required in order to induce the belief of its being there. The negro, perhaps, rather feels the presence of his mother than thinks that he actually sees her; and might not this effect, also, be produced through a strong association of ideas? If so, this is all that would have been necessary to give man that belief in his immortal destinies which, upon the whole, we find him with.

CHAPTER XV

NEW DEVELOPMENTS

IT is curious to see the guillemot-ledges so thronged now, when everything speaks of the departure of summer, if that, indeed, can be said to depart which has never, apparently, arrived. As I said before, there are very few young birds to be seen, and since the sexes in the guillemot are alike, one might think, at first, that the mothers had all gone off with their chicks, leaving only the males on the ledges. This, however, cannot be the case, since there is much cossetting, and sometimes a touch of "the wren," and "small gilded fly," of King Lear—I trust I express myself clearly.

I was beginning to think that there were no young guillemots at all here now, but just at this moment a bird flies in with a fish in its bill, and, running up to another one, with it, the chick immediately appears from under a projecting cranny of the ledge, where it has been concealed, and receives and eats the fish. It is the usual thing—the wings of the two parents drooped, like a tent, in which the little thing stands, and both of them equally interested. This chick seems of considerable size—as guillemot chicks go—is properly feathered, and the plumage has the colouring of the grown birds, except that the throat and chin are white as well as the breast—a continuity of white,

therefore, over the whole under surface. Moreover, from each eye to the base of the bill, on the corresponding side, there is a thick black line. The wings, which I have seen it flap, are small, with the quills not sufficiently developed for flight-at least, I should think not. Some time after this I saw a smaller chick which had been hidden hitherto behind the two parents. The non-locomotion of both was as marked a feature as ever-for this struck me very much the last time I was here. The smaller one I could never make out again. The other was for a long time invisible behind its slight escarpment, and then, though it came out and was active where it stood, it did not move more than an inch or so beyond it, or in any direction.

As this chick evidently could not fly, it, as evidently, could not have left the ledge, and returned to it. Imagine, therefore, that the chicks are conveyed down by the parents, in this state, as it is asserted that they are, and the emptiness of the ledges, of young birds, is explained; for by the time they could fly they would have forgotten all about them, even if they were not far away, as they probably by that time would be. But if they wait till they can fly before leaving the ledges, why do they not fly back to them, and then backwards and forwards, like the young kittiwakes, or the young shags? Why do they not accompany their parents when *they* return, since their parents *will* not stay with them upon the sea? All this is explained upon the supposition that the parent guillemot

flies down with the chick on its back, but it does not follow that there is no other way of explaining it. I think there is another; for though the chick, when it leaves the ledge, may not be able to fly in any true sense of the word, yet it might make a shift to flutter down to the sea, in a line sufficiently diagonal to avoid the danger of striking upon the face of the cliff where it projected at a lower elevation, or upon the rocks at its base. This may not be likely, but at least it is possible, and, on the other hand, if the parent guillemots do really carry their chicks down, why do they not do so shortly after they are hatched, or, at least, much sooner than they do? Why should they feed them on the ledges for a fortnight or three weeks, for I think they are as long as that there, during all which time they are getting larger and heavier ? Though the young guillemot keeps so quiet on the ledge, yet it has the full use of its limbs, and seems quite as forward and capable as are young chickens and ducklings. It would, no doubt, be at home in the water at once, if only it were put there. Does it, then, wait until it can get there itself, or does the parent bird take it? This question I hope to be able to answer before I leave here.

A bird that has no chick now brings in a fish to the ledge, and seems not to know what to do with it. At last he puts it down, and another bird—not, I think, the partner, but it may be—takes it. It seems as though the instinct of feeding the young still continued with this bird, though its young one is gone.

We may think "out of sight, out of mind" with animals, but what is probably wanted to make them remember is a reminder of some sort ; and when they are reminded, though their memory may be less capacious than ours, it does not follow that it is likewise less vivid within their own limited range. Indeed, I think there is some reason to conclude the contrary. The imagination of a great writer is such that he sees the scenes and persons that exist but in his own mind, as clearly, possibly, as we do our own familiar friends and their, or our, all as familiar surroundings. We must suppose so, at any rate, as we read Scott or Shakespeare ; and indeed their productions are such that it cannot be far short of this. I question if any man ever saw his absent friend more clearly than did Shakespeare his Falstaff, for instance, or Scott his Balfour of Burleigh. But does it, therefore, follow that either of these great writers would, when hungry, have summoned up before him a clearer picture of his approaching dinner, than does the equally hungry or very much hungrier boor? This I doubt ; and on the same principle I doubt if the said boor would see his dinner more clearly than a wolf, bear, or tiger would theirs when in quest of it.

The memory of an animal, as compared with that of a man, may be not so much weaker as less multitudinous. As a rule we remember those things best in which we take the greatest interest. This gives to man a much wider range of memory than any animal can possess, with a proportionately increased area for

association to work over. But there are certain primitive interests, as we may call them, connected with food, and the family and sexual relations, which are very strong in animals, and in regard to which the memory, when put in action, may be equally strong. Who shall say that a man, returning to his home at the end of the day, sees in his mind's eye a clearer picture of what awaits him there than does the bird flying to its nest, or the bee to its hive? Now could anything, by association, call up this picture, suddenly, in the bird's or insect's mind, they would, no doubt, act for the moment as though it were real -as did Darwin's dog when he called him after five years' absence; and thus I can understand one of these guillemots flying with a fish to its ledge, to feed its chick, although its chick were no longer there. It might be so; I can see no reason against it. In the actions of these two birds there may lie-for me, now, there does lie-a great psychological interest. Suggestive they certainly are. I shall keep this in my mind and watch the ledges more closely.

The larger of the two young guillemots is now frequently flapping its wings, and latterly it has been jumping up, at the same time, though always it keeps in one place by its mother, and does not run about. Mother and chick often delectate themselves by nibbling the tip of each other's bills. And now there comes a surprise. For the first time that I have ever seen, the chick moves right away from where it was, leaving its father and mother. It travels along the

ledge, often uncomfortably near to the edge of it, and at last gets round a corner, out of my sight. The parents, as far as I can make out, have not followed it. This is quite a new development in my experience of the chick, if not in the chick's own experience. It is not, then, quite immovable, till it flies or is carried down. Were it to fall now, how aptly would it illustrate that law of natural selection which I have called in to account for its general quiescence. I hope it won't though—which is to my credit surely.

I note one more thing before leaving. A bird picks up and, as it were, plays with some feathers lying on the ledge, one of which it now brings to its partner, lays it on the rock, and then both pull it about. This, too, I noticed when I was last here. I have mentioned it in my *Bird Watching*, and account for it by supposing that we here see a last trace of the once active nest-building instinct. Perhaps, however, the act is too trivial to need any special accounting for.

CHAPTER XVI

FLIGHT AND FANCY

WOULD God my home were here, that I might make a lifelong and continuous study of the wild sea-bird life about me! What more should I want, then ? except, indeed, a better climate, which is not a matter of culture. Of all that civilisation has to give I value nothing much (that I can get) except books, and those I might have here, at least in a moderate profusion, "the hundred (or so) best" ones -of my own choice bien entendu; the devil take any other man's. "Oh, hell ! to choose love by another's eves." But all my own writers-with never an impudent, pert critic amongst them to échauffer ma bile -awaiting me at home, with these birds-these dear birds-to look down upon outside, and I think I might be happy, as things go. But with such a strange blending of tastes and desires as nature has put upon me, how can I ever hope to be, to any satisfactory extent? What I want, really, is the veldt, or Brazilian forests, or Lapland, or the Spanish Marisma, with the British Museum library round the corner; but, as Cleopatra says of two other things, "they do not go together."

"Well, here's my comfort" for a time—my halfmeasure of content. Oh, is there anything in life more piquant (if you care about it) than to lie on the

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summit of a beetling cliff, and watch the breeding sea-fowl on the ledges below? In the Shetlands, at least, it is possible to do this in perfect safety, for the strata of the rock have often been tilted up to such an extent that, whilst the precipice formed by their broken edges is of the most fearful description, their slope, even on the landward side, is so steep that when one has climbed it, and flung oneself full length at the top, one's head looks down-as mine does now-as from a slanting wall, against which one's body leans. To fall over, one would first have to fall upwards, and the knowledge of this gives a feeling of security, without which one could hardly observe or take notes. The one danger lies in becoming abstracted and forgetting where one is. Those steep, green banks-for the rock, except in smooth, unclimbable patches, is covered with lush grass-have no appearance of an edge, and I have often shuddered, whilst plodding mechanically upwards, to find myself but just awakened from a reverie, within a yard or so of their soft-curled, lap-like crests. But I think my "subliminal," in such cases, was always pretty well on the watch, or-to adopt a more prosaic and now quite obsolete explanation-the reverie was not a very deep one.

At any rate, here I am safe, and, looking down again from my old "coign of vantage" of two years before, the same wonderful and never forgotten—never-tobe-forgotten—sight presents itself. Here are the guillemots, the same individual birds, standing—each

in the old place, perhaps, if the truth were knownin long, gleaming rows and little salient clusters, equally conspicuous by their compact shape and vividly contrasted colouring; whilst both above and below them, on nests which look like some natural, tufted growth of the sheer, jagged rock, and which touch, or almost touch, one another, sit hundreds and hundreds of kittiwakes, the soft bluey-grey and downier white of whose plumage, with their more yielding and accommodating outlines, make them as a tone and tinting of the rock itself, and delight with grace, as the others do with boldness. Seen from a distance all except the white is lost, and then they have the effect of snow, covering large surfaces of the hard, perpendicular rock. Nearer, they look like little nodules or bosses of snow projecting from a flatter and less pure expanse of it. An innumerable cry goes up, a vociferous, shrieking chorus, the sharp and ear-piercing treble to the deep, sombrous bass of the waves. The actual note is supposed to be imitated in the name of the bird, but to my own ear it much more resembles-to a degree, indeed, approaching exactitude-the words "It's getting late !" uttered with a great emphasis on the "late," and repeated over and over again in a shrill, harsh, and discordant shriek. The effect-though this is far from being really the case-is as though the whole of the birds were shrieking out this remark at the same time. There is a constant clang and scream, an eternal harsh music-harmony in discord-through

and above which, dominating it as an organ does lesser instruments—or like "that deep and dreadful organ-pipe, the thunder"—there rolls, at intervals, one of the most extraordinary voices, surely, that ever issued from the throat of a bird : a rolling, rumbling volume of sound, so rough and deep, yet so full, grand, and sonorous, that it seems as though the very cliffs were speaking—ending sometimes in something like a gruff laugh, or, as some will have it, a bark.

This marvellous note is the nuptial one of the guillemot, or, rather, it is that, swelled and multiplied by the echoes to which it gives rise, and which roll and mutter along the face of the precipice, and mingle with the dash of the waves. The effect is most striking when heard at a little distance, and especially across the chasm that divides one precipice from another. Under these circumstances it is less the actual cry itself than what, by such help, it becomes, that impresses one. Uttered quite near, by some bird that stands conspicuous on the ledge one looks down upon, the sound is less impressive, though still extraordinary enough. It can then be better understood, and resolves itself into a sort of *jodel*, long continued and having a vibratory roll in it. It begins usually with one or two shorter notes, which have much the syllabic value of "hărāh, hărāh "-first ă as in "hat," with the accent on the last syllable, as in "hurrah." Very commonly the outcry ends here, but otherwise the final "rah" is prolonged into the sound I speak of, which continues rising and falling—which is why I call it a *jodel*—for a longer or shorter time, the volume of sound being increased, sometimes, to a wonderful extent. It ends, usually, as it began, with a few short, rough notes which may be called a bark, as the other is called a bray, though to neither is there much resemblance if we make either a dog or a donkey the basis of comparison. Altogether it is one of the strangest, weirdest sounds that can be imagined, and nobody, not accustomed to such surprises, would suppose it could issue from the lungs of so small an animal as a guillemot.

I made a strange error in regard to the utterer of this note when I first came to the Shetlands, and the history of it will show either what a fool I was (and am, in that case), or else how possible it is for such mistakes to arise, even with great care and close and continued observation-I should prefer it to show the latter. I thought it was impossible that I could have been mistaken, but now that I know I was I can see how it happened perfectly. At that time I knew nothing about the matter, for though I love natural history I hate the "British Bird" books, nor am I often in the way of being told anything, since, to be frank, I am as much a hermit as I am mercifully permitted to be : therefore, when I first heard the "bray" of the guillemot, as it is called, I was lost in wonder, and as it came but rarely, and never from any of the birds upon the one particular ledge that I watched day after day-often

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for many hours at a time-I never suspected its true These particular birds never uttered any origin. sound more extraordinary than a kind of "ik, ik, ik !" and this though they were constantly fighting, whilst the performance of the nuptial rite was frequent amongst them. The note which so astonished me never came from very near; I heard it, as I have said before, only occasionally, and it always seemed to come from a part of the rock where a few pairs of fulmar petrels were sitting. When I mentioned it to the watcher, who occupied the little sentry-box on the ness, during the daytime, when I was out, leaving it for me to sleep in at night, he said nothing about guillemots, but expressed his opinion that the sound was produced by these fulmar petrels. Now the fulmar petrel, though I have never met with any reference to it, does utter, when on the breedingledges-or at least, it does in the Shetlands-a note which is sufficiently marked and striking, a sort of angry, hoarse, gruff interjection—guttural too—several times repeated, and sounding sometimes like a laugh. Often too, these notes are not divided, or else are so quickly repeated that they sound like one, continuously uttered for some little space of time. As I now think, I must sometimes have caught this note at the beginning or end of the cry of the guillemot, and put it down as a part of it. Then, when, with this idea in my mind, I watched the petrels at but a few yards' distance, and heard them uttering the note they do utter, to my heart's content-swelling

out the throat and rolling the head at one another, the while, in the way I have described—I was so foolish as to think that this was the cry that I thought so wonderful, but not at its best, and that the real one, when I heard it again in the distance—for, as I say, it never sounded very near—was the same one *at* its best. With this false idea in my head I went home, and when somebody, assuming the character of a "Fulmar Petrel" himself—assured me that I had mistaken the guillemot's note for his own, I was as convinced that he did not know what he was talking about, and that I did, as I am now to the contrary.

On one point, however, I am clear, and cannot possibly be mistaken, since I have verified it only in these last few days, having come, in fact, partly to do soat least that made another motive for my journey. The fulmar petrel, if it does not bray like a guillemot, has at least a nuptial note-and that a sufficiently striking one-of its own, which is uttered by both sexes as they lie on the rock, but never, in my experience, whilst flying. Moreover, just as the vocal powers of the guillemot are now marvellously increased-or rather multiplied-compared with what they were some weeks earlier in the year, on my last visit, so, if I may trust my own memory-which, however, I never do trust-those of the fulmar petrel have suffered a corresponding diminution. Ι attribute both these facts to one and the same cause. At the earlier date the guillemots were in the very midst of their domestic duties, so that those feelings

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proper to the courting period were in abeyance. Now, however, they are free, and, under the influence of returning emotion, have become noisy again, as no doubt, at the very beginning, they were noisier still. Though their physical energy may not be sufficient to enable them to rear another brood, that, I am sure -and there is plenty of evidence of it—is what they feel like — there is dalliance and a "smart set" morality. But with the petrels, at the same time, things had not gone so far-some, if I remember rightly, had not even yet laid their egg-and so their nuptial vociferations were more energetic than they are now-or, at any rate, I think they were. Here, then, was a mistake, and I have shown clearly how it came about. Some perhaps—especially those who get all their information from books, and feel as if they had found it out for themselves-may admit no excuse for it, my explanation notwithstanding; but, for my part, I think it is easy to make mistakes. Had but one of the guillemots on my own ledge been so good as to bray for me, all would have been well, but never a word did any of them say except "ik, ik, ik ! "

There was another point on which "Fulmar Petrel" took exception to what I said about him—or rather to what I seemed to say. In view of his oilsquirting and other unangelic propensities, he thought the descriptive phrase "half angel and half bird," which formed the title of my article, was not quite suitable to him. Well, I may tell him now that I

THE BIRD WATCHER

never thought so either-titles, as most authors nowadays have good cause to know, are not always one's own. I never compare birds to angels, for fear of thinking slightingly of the latter, and though I admit that, in the hands of a skilled artist, a pelican's wings on a pair of human shoulders may make a pretty enough combination, and that the whole human body need not look so heavy and unmanageable as it, no doubt, would be in reality, still, as far as flight is concerned, I confess I think it takes a bird to beat a bird. Angels are out of it in my opinion, or, if they are not, at least my powers of imagination in regard to them are. I shall always think of "Fulmar Petrel" as flying much better than the best of them, though, as his habit of squirting oil does not in the least degree lessen his aerial grace and beauty, as far as that alone is concerned I see no reason why he should not be half an angel, at any rate, if not a whole one.

Yes, here are powers indeed ! What buoyant ease ! What marvellous, least-action grace ! Surely no bird has ever flown before. This—this only—is flight; for a moment, at any rate, one forgets even the nightjar. And yet all these storm-riding, blastdefying powers belong to one of the most placidlooking, delicately dove-like beautiful beings of all air's kingdom. How soft is its colouring ! How gentle its look ! Was there ever a more "delicate Ariel" than this ?

One cannot, indeed, watch for long the flight of

the fulmar petrel without becoming dissatisfied, or at least critical, in regard to that of other sea-birds. The larger gulls grow hopelessly coarse and heavy; the kittiwake is not what it was, something is gone from the bold corsair-like sweeps of the Arctic skua, and even in the seeming-laboured grace of the tern the eye begins to dwell more on the labour and less on the grace. All these birds are bodies : the fulmar petrel more suggests a soul. Something of this it owes to its colouring, which, though approaching to blue above, and of the purest-looking white below, yet has in it that exquisitely smoked or shadowed quality which allows of no glint or gleam, avoids all saliency, and almost seems alien from substance itself. It blends with the air, of which it seems to be a condensation rather than something introduced into it. Yet most lies in the flight. In this there is conveyed to one a sense, not so much of power over as of actual partnership in the element in which the bird floats, as though it had been born there, as though it might sleep and awake there, as though it had never been, nor ever could be, anywhere else. It is, I suppose, the small apparent mechanism of the flight that gives this impression, the absence, or the ease, of effort. Sliding, as it were, from the face of the precipice, and often from the most towering heights of it, the thin cleaver-like wings are at once, or after a few quick, flickering vibrations, spread to their full extent, and on them the bird floats, sweeps, circles, now sinking towards the sea, now cresting the summit of the cliff,¹ but keeping, for the most part, within the middle space between the two. Ever and anon it sails smoothly in to its own rocky ledge, pauses above it, as though to think "My home!" then, with another quick shimmer or flicker of the thin shadow-wings, sweeps smoothly out again, to enter once more on those wonderful down-sliding, up-gliding circles that have more of magic in them, and are more drawn to charm, than had ever a necromancer's.

This light flickering of the wings, as I have called it, for they cannot be said to flap or beat-even quiver is too gross a term for so delicate a motion-is a characteristic part of the fulmar petrel's flight. They move for a moment-for a few seconds more or less -in the way in which a shadow flickers on the wall, and then the bird glides and circles, holding them outspread and at rest, opposing their thin, flat surface, now to this point, now to that, by a turn of the head or body, but giving them no independent motion. Then another flicker, and again the gliding and circling. When spread thus, flat to the air, the wings have a very thin, paper-knifey appearance. The simile does not seem worthy either of them or of the bird, but as it is continually brought to my mind, I must employ it, albeit apologetically. It is the shape of them that suggests it. Their ends are smooth and rounded, and they are held so straight that they seem

¹ The idea that the fulmar petrel never flies over the land is a delusion. I have often seen it do so, though that is not its habit. It goes but a trifling way, however, cutting off a cape or corner, and returns almost immediately.

to be in one piece, without a joint; though, just when the wind catches them freshly, and drives the bird swiftly along, they are turned slightly upwards toward the tips, through the momentary yielding of the quills. Strange though it may seem, this straightness-almost stiffness-of the wing-contour adds tonay, makes-the grace of the fulmar petrel's flight, and the pronounced bend at the joint, which, in the gull and kittiwake, causes the forepart of the wing to slope backwards in a marked degree, looks almost clumsy by comparison. The reason, I think, is that the petrel's straight, thin, flat-pressed wings look so splendidly set to the wind, suggesting a graceful ship-lateen-rigged-in fullest sail, whilst the others seem timidly furled and reefed, by the side of them. Sometimes, indeed, the wings do bend just a littlefor, after all, they have a joint-but the straight-set attitude is more germane to them, and soon they assume it again, shooting forward so briskly, yet softly, that one seems to hear a soft little musical click.

And thus this dream and joy of glorious motion, this elemental spirit of a bird, floats and flickers along, cradled in air, looking like a shadow upon it, sweeping and gliding, rising and falling, in circles of consummate ease. No, this is not dominion, but union and sweet accord. There is no in-spite-of, no proud compelling, here. Lighter than the air that it rides on, the bird seems married to it, clasps it as a bride.

CHAPTER XVII

MOUTHS WITH MEANINGS

THE young kittiwake differs in appearance from the parent birds in a quite uncommon manner, for, being prettily and saliently marked, it looks like a mature gull of another species, whereas the young of other gulls, being plain brown things, suggest their juvenility on the analogy of pheasants or birds of The general colour is mauvy grey, but paradise. black, falling here and there upon it, seems striving to Half of the wings are thus darkened, blot it out. and a broad half-moon of sooty black nearly encircles the neck, looking like black velvet on the back of it, where it is by much the broadest. There is a clouded black mark, too, on either side of the head, with some nuances of black between, black tips the tail, and the beak is all black. The tout ensemble of all this is very pretty, and the young kittiwake is a pretty bird. Mauve and black velvet is the dress it comes out in, and it looks like a soft little dove. Many might admire it beyond the grown bird, but, personally, I prefer the latter.

One of these well-grown young kittiwakes has just been fed by the mother, or father—but call it the mother, it always sounds better. Being importuned by sundry little peckings at her beak, she opened it, and the young one, thrusting in its own, helped him-

self as though her throat were a platter. It was much the same as with the fulmar petrels. Numbers of the young have left their nests, and keep all together, standing on the rocks or floating on the sea. Others remain, and I notice that these keep flapping their wings. This must strengthen them, and have the effect of preparing Dædalus for his first flight—for it seems probable that these particular ones have not made it. But they have, though, and bang goes a provisional hypothesis! Every moment, to laugh at me, one or other of them is flying out from the ledges, whilst others are returning to them.

When one of these young kittiwakes opens its bill, it is at once apparent that the inside of its mouth is much less brilliantly coloured than it is in the parent bird, being of a pale pinkish, merely, with, perhaps, a tinge of light yellow. As for the grown bird's mouth, one can hardly exaggerate the lurid brightness of it. The whole buccal cavity, including, as I think is usual, the tongue, is of a fine rich red, or orange-red colour, carrying on that of the naked skin adjoining the mandibles outside, with which, indeed, it is continuous. It is just the same in the case of the old and young shag. The mouth of the former presents a uniform surface of splendid gamboge, whilst that of the latter is almost the natural pink, only just beginning to pass into yellow. In the young guillemot, also, the interior of the mouth is pinkish merely, whilst in the grown bird it is of a pleasing lemon or gamboge. With the fulmar petrel again, we have much the same thing, though here—and this is significant—the difference, as well as the actual colour, is less striking. These varying degrees of brilliancy of colouring in this particular region, as between the mature and immature form, must surely have some meaning, and as it goes hand-in-hand with a similar, if not, as I believe, an identical difference in the hue of the naked facial integument, as well as with the pattern and shade of the plumage, I feel persuaded that all three are governed by the same general law.

As explained by Darwin-and nothing better, that I can see, than opposition has ever been opposed to his views-the beauty of certain birds has been acquired through the principle of sexual selection, and the lesser degree of it, which we notice in the young, represents the earlier and less-finished beauty of the adult in times gone by. Of all the elements which go to make up the beauty thus acquired, colour, on the whole, plays the most conspicuous part, and nothing can be more brilliant and striking than some of the colours that I am here speaking of. The only reason, therefore, why, in their use, and the laws that have governed their acquirement, they should be thought to differ from the hues and tintings of the plumage, or of the naked outer skin-the cere or the labial region -would be their habitual, necessary concealment. If, then, it can be shown that, far from their being always concealed, they are prominently displayed during the breeding season by certain birds which possess them in a marked degree, then, as far as

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these birds are concerned, there ceases to be a reason for thus, in idea, separating them. Let us see, now, how far this is the case. To begin with these kittiwakes, in their courting, or rather connubial actions on the ledges-as may be seen now, but much more earlier in the year-both sexes open their bills widely, and crane about, with their heads turned toward each other, whilst at the same time uttering their shrieking. clamorous cry. The motion, however, is often continued after the cry has ceased, and this we might expect if the birds took any pleasure in the brilliant gleam of colour which each presents to, and, as it were, flashes about in front of the other. The effect of this it is not easy to exaggerate, and if it is extremely noticeable to an onlooker at some little distance, what must it be to the bird itself, who looks right into the almost scarlet cavity? We have only to think of the inside of some shells, or of a large, highlycoloured flower-cup, to understand the kind of æsthetic pleasure that may be derived from such a sight.

Similar, but much more striking, is the nuptial behaviour of the fulmar petrel. A pair of these birds lying near together, on some ledge or cranny of the rock, will, every few minutes, open their bills to the very widest extent, at the same time blowing and swelling out the skin of the throat, including that which lies between the two sides of the lower mandible, until it has a very inflated appearance. In this state they stretch their heads towards each other, and then, with languishing gestures and expression, keep moving them about from side to side, uttering whilst they do so, but by no means always, a hoarse, unlovely sort of note, like a series of hoarse coughs or grunts, as though in anger—and indeed, it is uttered in anger, too. But though these motions, with the distension of the jaws, always, as far as I have seen, accompany the note when it is uttered, yet they are often continued afterwards, and sometimes commence and end in silence, so that one has to conclude that they are themselves of importance, and may have as much, or even more, to do with the expression of the bird's feelings as the vocal utterance has.

It is difficult to give an adequate idea of the strange, lackadaisical appearance which these birds present while acting in the above-described manner. With widely-gaping bills, swelled throats, necks stretched out, and heads moving slowly all about, now up, now down, now to this side, now to that, they look sometimes "sick of love," like Solomon, and sometimes as though about to be sick indeed-in fact, on the point of vomiting. All the bird's actions are peculiar, but none more so than this wide gaping distension of the mandibles, with the full view that it offers of the whole interior cavity of the mouth. This last is not indeed brilliant, as is that of the kittiwake, but, for all that, it is very pleasing, of a delicate mauvy blue, æsthetic in its appearance, and in harmony with the soft and delicate tinting of the plumage. There is no reason to suppose that the latter beauty is unappreciated by the

bird itself, when seen in the opposite sex. Why, then, should the pale mauve or blue of the inside of the mouth—this purple chamber flung open for inspection during the season of courtship or of nuptial dalliance—be not appreciated too?

The razorbill's mouth, inside, is of a conspicuous light yellow, which, when exposed suddenly to view, contrasts very forcibly with the black of the beak and upper plumage. In dalliance these birds throw the head straight up into the air, and, opening their clean-cut bills, so that one sees the gay interior like a line of bright gamboge, utter a deep guttural note, which is prolonged and has a vibratory roll in it, like the cry of the gorilla when angry -- si parva licet componere magnis -- as described by Du Chaillu. It is not loud, however, and so is easily lost amidst elemental sounds and the cries of other birds. The vibratory character of the note becomes more marked under the influence of excitement, and the mandibles themselves vibrate as they are opened at intervals, somewhat widely. In the midst of their duet the pair toss their heads about, catch hold of each other's beaks, and give quick little emotional nibbles at the feathers of their throats or breasts. If we can suppose that the birds are interested in each other's appearance whilst thus acting-that they admire or are sexually excited by one another-then it would be strange if the bright flashing yellow so constantly exhibited did not play its full part in producing this result. Imagine ourselves razorbills, and thus

acting. Could we be blind to such revelations? I think not.

The pretty little black guillemot-the dabchick of ocean-may often be seen sitting in a niche of the cliffs, and calling to another-its mate presumablyeither above or below it. The cry is, for the most part, a weak, twittering sound, but occasionally rises into a very feeble little wail or scream. All the while the bird is uttering it he keeps raising and again depressing his head and opening his beak so as to show conspicuously the inside of his mouth, which is of a very pretty rose or blush-red hue, almost as vivid as that of the feet. The beak is opened more widely than would seem to be necessary for the production of the sound, as if to show this coloration, even though, for the moment, there may be no other bird there to see it. If, however, the rosy inward complexion were in any way an attraction, it would be natural for a bird, wanting its mate, to associate the wish with the action of opening the beak, just as a lonely dove in a cage will coo and bow as to a partner. As a matter of fact, the crying bird very soon flies to the other one (or vice versâ), and, standing beside her, utters his little twitter as a greeting. She, being couched down, responds by raising her head, so that the tip of her beak touches, or nearly touches, his. Then he couches also, and sitting thus, side by side-comfy on the sheer edge of the precipice-the two turn, from time to time, their heads towards each other, open their bills, and twitter together. Every time they open them the

pretty rose tapestry of the mouth-chamber must be plain to each or either, and the more so that they are vis-a-vis.

In all these four birds, therefore, we have a nuptial habit of distending the jaws, side by side with a brilliant or pleasing coloration of the region which, by such action, is exhibited. Moreover, in the case of one of them, more particularly-viz. the fulmar petrel-this distension may be unaccompanied with any note, though it always is with the odd gestures and lackadaisical expression which I have tried to describe. In other words, the beak is sometimes opened as a part of the bird's nuptial actions, and not merely with a view to the production of sound. That originally this alone would have been the motive of its being so can hardly, I suppose, be doubted, but may it not be possible that the eye has gradually come to share in a pleasure which was, at first, communicated through the ear alone, and that a process of selection, founded, perhaps, on some initial freshness of colouring, has in time produced a special kind of adornment ? If this were so, we might expect that some of the birds so adorned would have the habit of opening the bill in this manner without uttering any note at all, or, at least, that they would very frequently do so. Such an instance we have in the shag, that smaller and more adorned variety of the cormorant, which is much more common on our northern coasts than the so-called common one. One of the most ordinary nuptial actions of these birds is to throw the head into the air,

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and open and shut the beak several times in succession; and sometimes they hold it wide open for several seconds together. Each time, as the jaws gape, a splendid surface of bright gamboge yellow is exhibited, which the human eye, at any rate, has to admire, and which exactly matches with the naked vellow skin at the base of the two mandibles on either side, where they become lost in what may be called the bird's cheek. This exterior brightly-tinted surface is continuous with the interior and much larger one, and my view is that the colour of the latter represents an extension of that of the former, by a similar process of sexual selection. There is no doubt whatever that this outward adornment largely adds to the handsome appearance of the shag, and probably those naturalists who believe in sexual selection at all will think it as much due to that agency as the crest and the sheeny green plumage. But if the closely similar colouring of the adjacent interior region is to be looked on as merely fortuitous (we escape here, thank heaven, from the all-pervading protective theory), why should the other be thought to be anything more? If the shag had not this habit of opening its mouth and thus displaying what is, in itself, so very striking, it would be difficult, I think, to accept sexual selection as an explanation even of the facial adornment, since, if the one effect were nonsignificant, so might the other be. As it is, I can see no reason why it should not have brought about both.

I have often watched shags thus throwing up their

heads and opening and shutting their jaws at one another, and though I have generally been fairly close to them I have never heard them utter a note whilst so doing. I consider these actions—together with other still more peculiar ones, which they indulge in during the breeding season—to be of a sexual character, and, if so, this silent and oft-repeated distension of the jaws must have some kind of meaning. The large and brilliantly-coloured surface which is thus displayed supplies this meaning, as I am inclined to think.

The fact that some birds-I have not the knowledge to say how many-which do not open the beak in this way, have yet the inside of the mouth brightly or conspicuously coloured, may seem to throw doubt on the theory here advanced; but of course sexual selection is not the only power which may have produced such coloration, and the likelihood of its having done so is decreased if there is no outer facial adornment to match that within. The cuckoo is one such example, for-I speak on the strength of young ones which I have seen in the nest-the whole of its inner mouth is of a really splendid salmon colour. When approached, the nestling cuckoo assumes a most threatening attitude, alternately dilating and drawing itself in, now receding into the nest, now rising up in it as though to strike, having all the while its mouth wide open and hissing violently. Its feathers are ruffled, and altogether it has a quite terrifying aspect, to which the triangular flaming patch that seems to burst out of the centre of it-for the head is drawn right back upon the body-very largely contributes. Especially is this so when, as is mostly the case, there is considerable shadow in the recess of the nest, amidst the surrounding foliage. If it can be supposed that the large false head and painted eyes of the puss or elephant hawk-moth caterpillars have been acquired as a protection against enemies-as to which see Professor Poulton's interesting suggestion 1-then it certainly seems to me more than possible that the flame-like throat of the young cuckoo has been developed in the same manner, pari passu with the loud, snake-like hiss and intimidating gestures. In conclusion, I would suggest that the bright or pleasingly-coloured mouth-cavity which some birds possess may have a distinct meaning, and be the product either of natural or sexual selection.

¹ The Colours of Animals (International Scientific Series).





AERIAL PIRACY

CHAPTER XVIII

LEARNING TO SOAR

I HAD not before imagined that the puffin was one of those birds that suffered from the extortions of the Arctic or lesser skua, but I have found it out to-day without knowing whether it is in a British Bird book or not. Twice have the two passed me, close together, and flying with tremendous velocity, their wings—especially, I think, those of the skua—making a portentous sound just above my head. The puffin, though hotly pursued, was a little in front, and such was his speed that it seemed doubtful if the skua would overtake him. I suppose, however, that the latter must be competent to do so, or, having learnt otherwise by experience, he would long ago have ceased giving chase.

The puffin, like the partridge and other birds that progress by a succession of quick strokes with the wings, flies with great rapidity. He is so small and light that perhaps one ought not to be surprised at this, so I reserve my wonder for the guillemot. How this solid and weighty-looking bird can, with wings that are small out of all proportion to its bulk, narrow to a degree, and by no means long, get through the air at the rate it does, how it can even stay in it at all and not come plump down like the wooden bird that it looks, is to me a mystery. The

wing, I think, is considerably smaller in proportion to the body than is that of the wild duck. When I see these birds going along over the sea at the rate they do, it does not seem to me impossible that a man should fly, if only his arms were to sprout feathers and his pectoral muscles enlarge sufficiently to enable him to move them with the same quickness. Is there, by the by, any special adaptation to the power of flight in the body and bones of a bat? We are generally referred to such arrangements in reference to the flight of birds, with a view to lessening the wonder of it, as if birds were the only things that flew. Bats, however, are mammals like ourselves, and their aerial performances are very wonderful. I have often watched them and the swifts together, at the close of a summer day, and have been hardly able to decide which of the two showed the greater mastery over the element in which both moved. The swifts indeed alone skimmed on outspread wings, without pulsating them; but in quick, sudden turns in every direction, in the power of instantaneously and abruptly changing the angle of their flight, and especially in descending, sometimes almost perpendicularly, the bats excelled them. In regard to speed, the disparity did not appear to be so great as I suppose it must have been. I do not know if any observations have been made to determine the speed at which bats fly, but they often seem to go very fast.

To return to the puffins, their powers of flight extend a little beyond mere speed gained by constant exertion, for they do sometimes make swift gliding circles through the air, not indeed without moving the wings at all, yet moving them but little, and at intervals—a few pulsations and then a sweep. Yet this is never very much. They seem to be just in the way of getting to something more advanced in flying, without quite knowing what they would be at. However, I think in time they will begin to understand, get a hint of their real feelings, like the heroines in novels, who find all at once that they have been in love for some while without noticing it. (Shakespeare's heroines, by the by, seem to have had a clearer insight into their state of mind-but then, there was more for them to know about.) They-the puffins, I mean, not the heroines-will often, when they leave their nests, mount up to a considerable height and then descend in a long slant to the sea. In this they are peculiar, as far as I have observed. and for some time I could not imagine why they did it; but tearing up some letters one day as I sat on the rock's edge and throwing them towards the sea, the pieces were carried upwards, some of them rising almost perpendicularly, and continuing to do so for some while before they were blown against the higher slopes of the cliff. The puffins, I then felt sure, must mount upon this upward current of air, either as a matter of enjoyment, or as finding it easier to do so. Probably it is the latter consideration which influences them, but ease is nearly allied to enjoyment, passes insensibly into it; and thus, in time, these little puffins may

learn to soar. I was wrong, perhaps, to speak of them as light, for they are solidly made, and no doubt heavy enough in proportion to their bulk. Still, for their type of flight, they seem to me to fly lightly; and there is a little—just a little—tendency, as I have noticed, towards a higher development. I may be mistaken, but I hope that it is so; no one can become intimate with the puffin without wishing him well. It is most interesting to see things in their beginnings, and to speculate on what, if they continue, they are likely, in time, to become.

The puffin has other and far more fatal enemies than the skua. His remains, all picked and bleeding -often as though a feast had but just been made on him-I am constantly finding about, generally on the rocks, but sometimes-once, at least-on the heather above the cliffs. At first, when I began to find these bloody relics, I thought of nothing but peregrines, and the one inhabitant of this great lonely ness confirmed me in this view. But I have never seen one of these birds (or any other hawk) all the time I have been here, and this seems strange if it is really their doing; for I have been out all day long whenever it has not poured continuously-which last, indeed, in spite of the wretchedness of the weather, has not happened often. I hardly think I should have missed seeing one or other of these large birds beating about in wide circles, as is their custom, did they really sojourn here; and yet what more likely place could be found ? Lately it has occurred to me

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the great skua, or the herring or black-backed gull, may be the authors of these tragic occurrences, but I have not seen any of them kill anything yet-not even young birds. However it be, many a scene of ruthless rapine is enacted on these black rocks, beneath these great cliffs, by the surge of the sullen None see it; most, I verily believe, forget it. sea. But it is there, and always there; and so, in ghastly and horrible multiplication, through the whole wide How unpitying, how godless is nature, when world. man, with his disguising smiles and honey-out-ofvinegar extractions, is not there to gloze and apologise, to strew his "smooth comforts false, worse than true wrongs"!

CHAPTER XIX

THE DANCE OF DEATH

ON this first day of August I was awakened early by something about the hut which I could not It kept shaking, and there was a noise understand. as of something in some kind of indirect contact with it. I only thought of man; and what any one should be doing on this solitary hill at such an hour I could not for the life of me imagine. The shaking and straining, however, continued; so I got up, and, on opening the door, away, with startled looks, rushed two sheep-a dam and her big lamb-who had been rubbing themselves against the iron wires that run from each corner of the roof of my little sentry-box to stakes set in the ground, to which they are fastened in order to strengthen the building. How they stared at me through the thin, damp mists of the morning, petrified at first ! and then how wildly they plunged away! I remembered then often to have seen sheep's wool hanging to these wires; and one of them is very much loosened. So there is a little harm done, even by these "woolly fools"; and were they wild creatures, the Philistine mind, which is the great controlling power in everything, would have nothing to set against it. Only the pleasure of killing it is thought worthy to be set in competition against the smallest degree of damage that a wild animal, however

beautiful and interesting, may do; but this is such a great set-off that the whole country might be ruined by beasts before any true sportsman would wish to have the evil ended together with his daily blood-draught. The same man who would keep up foxes, to the ruin of agriculture and the depopulation of poultry-yards, makes a shout against the poor cormorants, because to the million enemies that prevent any one kind of fish from crowding out every other kind, it adds its wholly inappreciable efforts. "This also is vanity and a great evil." But what a picturesque morning call to receive!

The three young guillemots are still where they were, but the fourth, which was the first one I saw, and the largest, seems to be gone. I saw this little bird pretty plainly through the glasses, and often flapping its little wings; and it seemed to me evident that it could not yet fly. But who shall say absolutely that it could not, seeing how soon young pheasants do, and how strange and little fitted for it they look? Still more, who shall say that, though it cannot fly, it may not have been able to flutter down to the sea? Until, therefore, the young guillemot is actually seen to leave the ledge, there can be no certainty as to the manner in which it leaves it. Perhaps it has been seen to. Je n'en sais rien, nor do I want to except through experience. What is a cake to me if I cannot eat it?

I have just seen a curious contrast. A pair of birds, for some reason, began to fight, and fought most vigorously. Suddenly they stopped, both of them in a funny set attitude, and each the counterpart of the other. A moment afterwards they were cossetting with the greatest tenderness—every mark of the strongest affection. It is to be presumed, therefore, that they were bird and wife. Guillemots, in their marital relations, are the most affectionate of birds; but this is compatible with the most violent jars—just as it is amongst ourselves. "Ce sont petites choses qui sont de temps en temps nécessaires dans l'amitié; et cinq ou six coups de bâton entre gens qui s'aiment, ne font que ragaillardir l'affection."

Now a bird flies in with a fish, and one of the two chicks left on this part of the cliffs is fed. It was just the same as in the make-believe yesterdayattitude, etc., and the other parent bustling upexcept that as the chick was there to take the fish, and wanted no pressing, the ceremony was much sooner over. It is such a cold, sharp wind, now, though the 2nd of August, that I have to tent myself in my Scotch plaid as though I were a young guillemot, besides having a Shetland shawl round my waist, to keep away the lumbago-which, for all that, still plays light fantasias on this poor "machine that is to me." So "here I and sorrow sit," on a razor-blade between two precipices, the one sheer, the other a horrible slant, and look down at another, on the ledges of which are my guillemots and shrieking kittiwakes. Heavens, on what slopes and inclines some of the former sit and crawl! They can fly, it is true; but

I cannot, and cannot but remember this, though I am so altruistic that I keep on imagining myself to be them. Now I see the chick that I thought had gone, making the fourth again, in all. It must have moved some distance, to get to where it is. And now comes the Shetland rain.

This was a sharp shower, and by being driven to take refuge I have found a better place. I now look down upon the same slab of rock, not thirty feet below me, that I watched before across a gulf. Seven grown guillemots are full in view, and, now and then, two of the chicks. In these I notice that the black of the upper surface is beginning to encroach upon the white of the throat, which, a day or two back, extended to the beak, being continuous with the breast and belly. Now a little collar of black is pushing round from both sides under the chin, and trying to meet, thinly and faintly, in the centre. The colouring of the adult bird, therefore, in which the neck and throat are dark like the body, is in process of establishing itself.

Each of these two chicks is guarded by a parent bird, who stands between it and the sea; but one of them more relentlessly so than the other. Another parent, who may pass for the mother, stands a little behind one of them, and stretches out a wing. The little one, snuggling up to her, presses its little head amongst the feathers of her side, just under this wing. The mother immediately clasps him with it, and, with half of him thus concealed, he squats down on the rock and evidently goes to sleep. And so close and

tight is the embracement that if the mother moves a little, to one or the other side, the chick, moving its little legs, goes with her, partly pulled and partly waddling, but as though all in one with her. Thus they sit together, mother and child, for half an hour or more at a time; and, at these intervals, the chick wakes up, comes out of his feathery dark-closet, and, standing on the rock, preens himself, like a spruce little gentleman. Then, in a few seconds, he goes in again, and the mother, as ready as ever, covers him up as before. The wing is just like an arm, tenderly pressing the child to the mother's side. But all this while-and I think I must have watched them about two hours-the other little chick stands free on the rock, and most busily preens himself. He is guarded, however, as I said. Had it not been for that other chick that I saw go for quite a little walk by itself, I should have thought that they always were, till they left the ledge. But probably as they get older they become just a trifle more independent, and possibly also the size of the ledge or cranny they are born on makes a difference.

A more marked or prettier picture of maternal love than this mother guillemot sitting thus on the bare, cold ledge above the great sea, and closely clasping her little one to her side, I do not think all bird life has to offer. Her feelings, too, are written in her expression; her looks are full of love, and of peace, which is ever ready to pass into anxious care and solicitude. It is good that sportsmen are not

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an observant race of men, for sights like this might upset them-however, to speak candidly, I don't think they would; that was only a façon de parler. But are sportsmen unobservant? for I make no doubt that some will demur to this proposition. There are, of course, exceptions to all rules, but my own opinion is that it is the tendency of sportsmen to overlook, or pay slight regard to, anything in an animal which does not lie in the path of its being killed by themselves. With its habits in relation to this, its ruses, wariness, and so forth, they necessarily become acquainted to some extent, generally in a very inappreciative and unsympathetic sort of way-a disgusting way, in fact -- "very," as Jingle says-but that, as a rule, is all, or nearly all. The actuating motive is to kill, and the rest-this that I say-follows of necessity. It is easy to deny this, but I appeal to sporting works generally. What a mass of them there are, and, off these special lines, what a little do we know of natural history from the greater number of them ! We do not sufficiently appreciate this truth, because the bulk of what we do know in this department comes to us from men who have in some degree been sportsmen. We cannot, of course, expect such knowledge from those whose activities lie in quite different directions-from chemists, astronomers, lawyers, artists, etc.--and the greater part of those who come much in contact with animal life do so-sometimes almost necessarily-as destroyers of it.

It is, I admit, an unhappy truth that the naturalist

is generally more or less in combination with the sportsman, but it seems to me that as either element gains ground the other weakens, so that if a man is really and truly a naturalist the passion of killingand also of collecting-tends to pass into that of observing. When the latter has become very strong in such a man, so that he is interested in the more minute and intricate things in the lives of animalsin their domesticities and affections, their instincts, their intelligence and psychology generally, and with the questions and problems presented by all of these -he is then, I believe, either no more a sportsman or very little of one, though, perhaps, he may not care to admit this to his old sporting friends. In a word, the two things-observation of life and the taking of it-are opposed to each other, though they may be often combined in one and the same man. But whilst the naturalist-by virtue of our savage ancestry-has almost always something of the sportsman in his composition, the sportsman has, for his part, little or nothing of the naturalist. I should never expect the same man to be great in both departments, and I believe that a list of names would support this contention. By "sportsman," however, I understand a man who kills animals primarily on account of the pleasurable sensations which he experiences in so doing. He who really only kills or collects for the purpose of increasing knowledge (so he calls his collection) is no sportsman, in my opinion-though I think he does a great deal more harm than if he were one. The collector I look

upon as the most harmfully destructive animal on this earth, and the more scientific the more destructive he is. The other kind wearies, or may weary, but he never does. His whole life, in thought or act, is one long ceaseless crime against every other life. His goal is extermination, and nature, for him, a museum. He is the most disgusting figure, in my estimation, that has ever appeared in the world, nor is there any thought more painful to me than that of the slaughter he is every day perpetrating, and the extermination of species resulting from it. What deaths may he not achieve in a lifetime! Of all Thugs, he has the biggest record. That he is often an agreeable, intelligent, and cultivated man-a very good fellow and otherwise unoffending member of society-is infinitely to be regretted. I would he were a street nuisance, a swindler, tsar or grand duke, to the boot of his much greater enormities, for then he might be put down, whereas now there is little chance of it.

Thank heaven he is not here, to put all these pretty little families under glass cases, and steal every egg on the ness. To get a thing dead, that is what his love of nature amounts to, and he does it for those like himself. I know the kind of people who enjoy those groups in the museum at South Kensington, and I am sick at heart that they should be there for them. Who is there, with a soul in his body, who can see a lot of young stuffed herons, say, in a nest with their parents, without feeling more disgust at the Philistine slaughter which procured them than pleasure in the poor lifeless imitation for the sake of which it is perpetrated, and will be perpetrated, over and over again, for wretched little fusty museums in thousands of provincial towns, who must all take this as their model. Some years ago-three or four, I think-a gentleman, commissioned to supply one of these, visited Iceland in the breeding time. Though, by the laws of the country, the birds and eggs, at this season, are most strictly preserved, yet he persuaded one of the magistrates to override these laws and give him a permit for the procuring of specimens, with over three hundred of which-young and old, nests, eggs, and everything, he returned to England. I commend the account of this matter to the notice of the Society for the Protection of Birds, and earnestly hope that, by communicating with the Icelandic-or Danish-Government they may be able to prevent the threatened repetition-for it was threatened in the account itself-of a thing so horrible. It does not seem altogether impossible that the magistrate in question, by allowing himself to be persuaded into granting such permission, committed an illegal act, for which, had it been known, he would have incurred the just rebuke of those in authority over him. If so, it should not be difficult to nip in its poisonous bud an abuse which, if unchecked, will make Iceland a paradise, not of birds for ever, but of bird shooters and stuffers for a few years only.

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I believe that these poor stuffed groupings of bird family life, for each of which a whole live family has to be killed, and which have been so much praised, are really nothing but an evil, or, at least, that there is no good in them at all comparable to the evil. All naturalists "of the right breed" who can see them alive, and not dead, will. Those who cannot will take little consolation in so poor a substitute, and will rather spend their time in seeing what they can than in filling their eyes with mere deadness. It is not for such that these odious slaughters, these revolting barbarities are committed, but for sauntering mechanics, booby children, "Oh my!"-ing servant maids, and a few panel-painting young ladies. These are the beneficiaries; but the real moving motive of it all-the causa causans-is the inextinguishable fire of slaughter that burns for ever in the human breast. It burns for ever, but, as time works his changes, some new imagined motive must be found for the old passion and the old deed; so over them both science now flings her ample, hypocritical cloak. "For the sake of science"-that is the formula of the professor who sends out the naturalist to slay, and of the naturalist who goes and slays. With that charm on their lips both quench the thirst of their hearts, and feel no evil in the draught. To the strong band of slayers they add their strength, nay, supply it, if that were needed, with an added incentive, preaching a crusade of destruction to its very enthusiasts who, though they love nothing better, yet may nod sometimes, like the

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good Homer, and are then urged and begged to continue with "Kill more, and fill our museums. Forget not us poor old professors wearying amidst empty glass cases. Throw us a specimen or two to mumble, while yet there are specimens left. For the sake of science, gentlemen, for the sake of science !" And so, for the sake of science, they add to the dearth of its living material, and kill, very complacently, the goose with the golden eggs.

Science might use her influence to check the dance of death, instead of making it caper more wildly, but there is something in a museum which brings down the high to the level of the low, and makes the learned biologist and the banging idiot the best of good friends and confederates. That museum must be filled, and when it is full the next thing to do is to fill it again; so the cry is ever for specimens, ever "Kill!" That the creature wanted is rare makes it all the more wanted, and a moment's pause in getting it may lead to another museum getting it first : perhaps-coveted honour !---only just before it becomes extinct. For extinction adds a charm to a specimen when once your own museum has obtained it : the rarer it becomes after that, the more the curators chuckle, and with its ceasing for ever rivals are left out in the cold. So science leagues itself with death, and the museums roar, one against another, "Kill!"

A young shag, now, to take these unpleasant reflections out of my mind, is being fed by one of the parents on a great slab of rock, which has no nest

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upon it that I can see. Now this young bird is nearly, if not quite, as large as the grown one, and only to be distinguished from it by its unadorned brown plumage and the paleness of the skin where naked. There is no doubt at all, I think, that it must long have been swimming, since I have seen smaller and younger-looking birds doing so. The young shag, therefore, must be fed for some time after leaving the nest, and taking to the sea.

CHAPTER XX

"BY ANY OTHER NAME"!

AT last I have been able to extract a young puffin from an all-turf hole, which, by reason of its straightness, shortness and narrowness, seems to have been made by the parent birds themselves, not merely found and appropriated by them. Comme il est drôle, ce petit !--- though not quite so comic as he will be by and by. Here we have a very salient example of the difference exhibited between the young and mature animal, in regard to some specially developed part or organ, since the beak of this baby is not only without the smallest trace of the colours which seem painted on that of its parents, but, to the eye at least, shows hardly anything of the mature shape, though measurement brings it out more clearly. It is of a uniform black, and hardly looks more than an ordinary beak when one thinks of the grown puffin, or rather when one looks at any of the hundreds standing all about. Though of a good size-some three-quarters grown perhaps-there are no true feathers on the body, at present-all fluffy, black above and whitish underneath. That this black, fluffy, colourless thing should ever become a puffin at all, seems wonderful.

This is not the only little funny thing I have seen to-day. On my way back to the hut I saw an absurd

little figure running before me, which, at first, looked like nothing, but soon became a little great skua ("my little good Lord Cardinal"). I pressed after, and when it found me overtaking it, it stopped and bit at me, but not as hard as another had done, nor was it so rude when I took it up. This little thing was still covered with a whitey-yellowish fluff, under which the brown feathers were well appearing. When I put it down it ran away lustily, yet in a slow and heavy fashion, as though a great skua through all. All the while, the two parent birds kept circling round with distressed cries of "ak, ak !" and swooping at me often. This they continued to do till I went right away, even whilst I lay on the ground at some distance, in hopes to see something between them and the chick. They never touched me, however, so that it is evident that the fierceness of these birds very much diminishes as the chicks get older. This one must have been out some time, I think, though still in the fluff-or partly in it-so that I cannot say exactly when the diminution commences; but the younger the chick, I think, the fiercer the attack. Valour, probably, has the same ebb and flow with the smaller skua, but I cannot be sure of this, since I did not see the chicks of the birds that attacked me lately. What I am sure of, however, is that they attacked me with unimpaired vigour and no loss of nerve, so that, had I set my cap for them to knock off, why, they would have knocked it off, and some one with a camera might have made a photograph of it.

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For all his hat tricks-and I have certainly felt mine move as he flicked it-this great skua seems to me a rather uninteresting bird, so far as he can be studied on land. His piracies, presumably, take place far out at sea, whilst jealousy to guard his young makes it impossible to watch him in his care and nurture of them. For the rest, he does nothing in particular, and he has no wild cry like that which rings out so beautifully to "the wild sky" from his smaller relative. In beauty of form and of colour, in grace and speed of flight, in the wild, inspiring music of its cry, in its sportings, its piracies, its pretty sociable ablutions, and in its attacks, too, wherein the boldness is equal and the poised sweeps more splendid and lovely, the lesser skua, say I, the Arctic skua-Stercorarius crepidatus-a bird that has only one thing prosaic about it, its prænomen of "Richardson's" namely, which is a thing it can't help, it having been forced upon it by prosaic people. Oh, how all the poetry seems to go out of bird or beast when it is named in that Philistine fashion, brought into perpetual association with some man-some civilised man-appropriated to him, made the slave of the "Smith," or the "Brown" or the "Robinson"! What a vulgar absurdity to make the name of a species a mere vehicle for the sordid commemoration of some one or other's having been the first to see and slaughter it! What, when we think of any wild creature, do we care to know about that? What should its name call up before us but a picture of

its wild self alone? Who wants some man's ugly phiz to be projected upon it ? The lion-the eaglethe albatross-we see them as we say their names. But Jones's lion-Smith's eagle-Thomson's or somebody's albatross, what do these body forth for us? Not only the animal itself, but everything it suggests, as pertaining to it, that should make its appropriate setting in our minds, the sea, the mountain peaks, the sand-swept, bush-strewn desert, with the ideas belonging to each, the feelings they arouse, the whole mental picture in fact, is blurred or cruelly blotted out by the obtrusive image of some human face or form, which insists upon fitting itself to the irrelevant human name, and which, as there is no knowledge to guide it, is made up, usually, of the most commonplace elements. Thus an indistinct prosaic figure of our own species is substituted for that of the species itself-obsesses us, as it were, and prevents that legitimate, placid enjoyment which a naturalist should receive through the name alone of any animal. I hate these obtrusions. Why, at least, cannot they be shrouded in the Latin only-since every species has its Latin name? Thus decently buried, the Temmincks and the Richardsons, the Schalks, Burchells, and Grevys, would not so much bother us. But for heaven's sake let the vernacular name of any creature have to do with itself only. It is intolerable to want to see a bird of paradise-" in my mind's eye Horatio"-and to have to see Herr Schalk, or a zebra and have to see Monsieur Grevy-a shadowy

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gentleman each time, which we know is not the real one—instead of a beautiful bird or beast. However, it's a prosaic age, and few feel strongly on such matters.

The other young great skua that I came across—a day or two ago—was almost full-fledged, with only hairs of fluff here and there. But though he looked much more emancipated he did not run away like this one, but lay crouched where he was. On approaching my hand, however, he bit it more fiercely than any gull yet has, and when I took him up his anger, or fear, or both, discharged itself at either extremity, for from one he ejected a fish, and from the other a mighty volume of white matter in a semifluid state. It took effect, fortunately, on my umbrella only, which I had to wash, and was very effective in allowing the perpetrator to escape λla cuttlefish.

The note of the puffin is very peculiar—sepulchrally deep and full of the deepest feeling. In expression it comes from the heart, but in tone and quality from somewhere much lower down. It varies a little, however, or rather there are more notes than one, and some of them are combined into a poem or symphony, which is the puffin's chief effort. This, however, is not often heard in its entirety—from end to end, like the whole of a fine poem. As a rule one has to be satisfied with extracts; but when one does get it all, it sounds something like this—for I can best express it by a diagram.

Another note is much more commonly heard, viz.

a long, deep, slowly-rising "awe!" uttered in something a tone of solemn expostulation, as though the bird were in the pulpit. In the general quality and character of the sound, this less-developed note resembles the more elaborate one, or collection of ones. It is more continuous, however; the theme is less broken. There are no separate headings; the remonstrance is general, and includes everything worth it in one grand diapason that never leaves off. I do not, therefore, consider it a mere part of the other—an extract from the full poem, or sermon—but something different, yet akin; another, though allied, treatment of a closely similar theme.

CHAPTER XXI

"NOT ALWAYS TO THE STRONG"

N the little black sentry-box where I pass the night there are two or three books belonging to its more permanent occupant. One of them is a British Bird book, and so last night when I got to bed I turned up the peregrine falcon. The author finds it the most infallible of all the hawk and eagle tribe; the one that least often misses its prey, and never attempts more than it is capable of performing. Never in his experience, I think he says, has he seen it strike in vain. I have not had his experience-I wish I had-but from the little I have seen and what I hear now from an eye-witness, I cannot help thinking that, in this respect, the peregrine does not differ greatly from others of his kind. It is there and thereabouts with him, I suspect, for under my very nose, down in Suffolk, he was foiled by a partridge in the most discreditable way, and here in the Shetlands he is quite capable of not succeeding with ordinary dovecote pigeons, as I will show, not upon my own evidence, unfortunately, for I wish I had seen it, but upon that of a lady, well known here, who saw it and told me of it herself. Ι got to Balta Sound last Sunday, and on the following Monday I called upon Mrs. Saxby at her pretty little white comfy cottage, who took me to look at a dovery which, since my last coming, she had had put up in

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her garden. Several rows of boxes were arranged against one side of the house, but a less usual and more attractive feature was a pretty little rockery on the lawn beneath, about which the birds loved to be. They cooed and strutted, or sat basking and sunning, on every little pinnacle and "jutty frieze" of it, thus at the same time emphasising their descent from the rock-loving Columbia Livia and the dullness and want of taste of the average mortal who, when he keeps pigeons, never thinks of providing a rockery for them, in accordance with their inherited tastes and proclivities. One glance was sufficient. It was instantly evident that not even on the most elegant cot do these pretty birds look nearly so pretty as amongst rocks and stones tastefully and conveniently arranged. This rockery was a flower-bed also, and with the flowers the pigeons did not interfere, whilst the beauty of them was greatly set off by their own, and their own by that of the flowers. The art of exhibiting birds and beasts to the most picturesque advantage, in which we should be equally studying both our and their happiness, as well as adding largely to our knowledge, is indeed hardly understood amongst us.

Mrs. Saxby told me that her pigeons had attracted some peregrines to the neighbourhood, and that they had several times attacked them, but, as yet, without success. In one pursuit which she witnessed a particular bird was singled out, separated from its companions, and struck at again and again, but always managed to avoid the rush of the hawk, and, at

last, got back to the boxes, where it lay for some time in a seemingly exhausted condition. Dr. Bowdler Sharpe, in his gossipy work, *The Wonders of Bird Life*, describes how, in modern falconry, he has seen a rook dodge, time after time, with the same success, till he at last reached the wood for which he had been making; and here, I think, the falcon was also a peregrine. For myself, therefore, I do not believe that this bird is a greater adept than others of the class to which he belongs, nor do I see why he should be. All have to live by overcoming in speed and agility birds whose speed and agility has been gained in direct relation to themselves, from which it should follow that the hunter and the hunted ought to fail and succeed about as often as each other.

There is probably no bird of prey that pigeons have not a fair chance of foiling. I have seen some wild ones that lived amongst the rocky precipices of a hill overlooking Srinagar foil a pair of eagles many times in succession, and I do not think one of them had been caught when I went away. The great downward rushes of these eagles, or rather the tremendous rushing sound that they made—for I only seem to remember them as swift, storm-like shadows on the air—as also the marvels of speed and quick turning exhibited by the pigeons, and their dreadful fear expressed sometimes vocally if I mistake not¹—I shall never, to the end of life, forget. In effecting their

¹ That peculiar coo of terror which anyone may hear who enters any place where dove-cot pigeons are kept, and approaches their boxes closely.

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numerous escapes, the face of the rock stood them in good stead, and they deliberately made use of it, in my opinion, for, dashing in and out, they would cling to or double against it in places where the eagles, as larger birds, could not follow them so deftly, and had perforce to check their speed. The principle was the same as that by which a hare would be enabled to run at top speed almost right up to a wall, whereas a man, pursuing on horseback, would be forced to pull up at a greater distance from it. The discrepancy, however, being here not so great, and the weaker party having often, in spite of the adage, to go from the wall, the interest and excitement-to say nothing of its loftier character-was in proportion. All this is vaguely, though vividly, in my recollection, but I can give no details; it was years ago, and I carried no notebook then. The sound, I find, is what has remained most strongly impressed on my mind; those wonderful grand rushing sweeps of the great pinions-the spirit of all storms seemed to live in each one of them.

CHAPTER XXII

CHILDREN OF THE MISTS

T was to-day that I saw that pursuit by an Arctic skua of a rock-pipit to which I have before alluded. It was over the heath, though near the cliffs. As to the rock-pipit never leaving the seashore (as I find stated), or any other bird or animal never varying its usual habits, that is a proposition which I will never accept, it being altogether against my experience. The skua pursued for some time, with murder, I thought, printed upon every feather of him; but the pipit was too quick, and by turning and doubling in a space proportionate to his own small size, eluded every sweep of the enemy, who, at last, gave up. It would appear, therefore, that this smaller skua preys on small things, for one cannot suppose him sinking so low as to rob a rock-pipit-who, besides, carried nothing that I could see. Possibly, however, the chase was for mere amusement.

These skuas bathe every day, and at all times of it, in the two little meres, or pools rather, amidst the heather, not far from the hut. Sometimes there are a dozen or more together, of all shades of coloration, and generally it is a social gathering. They seem very exclusive, for I have never seen a gull bathing in the same pool with them. This, however, is nothing, as gulls do not breed on this part of the ness, and but

seldom fly over it, being chased by the skuas when they do. Elsewhere I have seen them both bathing at the same time; but always, I think, a little apart. I never remember to have seen the great skua bathing; but then there is no special pool in his territory, and partly for reasons given, and also because of the hilly and bumpy character of the ground, it is difficult to watch him. I have done my best, however, and most of what I have to say about him I have said in *Bird Watching*; but it does not amount to very much.

These Arctic skuas bathe together very prettily. They sit high and light on the water, duck their heads under it, and throw it over them with their wings. Between their ablutions they often sport in the air, swooping at and chasing one another. Their motions are such as one might imagine those of elemental spirits to be, and their wild cry adds to this imaginary resemblance. Oh, that cry, that wild, wild cry, that music of the winds, the clouds, the drifting rain and mist-like them, free as them, voicing their freedom, making their spirit articulate! Who can describe it, or put down into poor, paltry syllables the glory that lives in it? Let none try. Let no clumsy imitation disfigure it, but let it live for ever in the memory of him who has sat on the great nessside, on the dividing-line of sea and sky, and heard it pealing so clearly, so cheerly, so gladly wild, so wildly, madly glad. So let it come to him again in his own soul's music, scudding with the clouds, driving with the driving mists, ringing out like "the

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wild bells to the wild sky." And never let that sky be blue that it rings to, unless in pale, moist patches, drowning amidst watery clouds; and never let there be a sun, to be called one, but only a glint and a gleaming, a storming of stormy light, a wet beam flung on a rain-cloud. Child of the mists, of the grey-eyed and desolate north-land, what hast thou to do with the robes of the vine and the olive? To be brief, I know of no cry, of no voice so exhilarating as that of this poetic bird.

If the guillemot is less poetic, he is still more interesting as a close study-or ar least one can study him more closely. Coming to my ledge again this afternoon, I find both the little chicks reposing beneath the parental wing, as described in the last chapter. It is a misty and mist-rainy day, which may incline them all the more to take shelter, if, indeed, they are open to such influences. But whether they are or not, they are not afraid to come out, and in about ten minutes there is an interesting scene. The partner of one of the two birds that have chicks flies on to the ledge with a fish that looks like a large-sized sardine in his bill. Instantly two or three of the birds standing about begin to utter their curious cry-a kind of shrieking Swiss jodel, ending in barks-till it swells into a full chorus. Full of importance, and with a very paternal look, the new-comer bustles up to wife and child, and the latter, emerging with great vivacity, receives the fish and gulps it down whole, showing

in the process such a receptive power as I have hardly seen excelled, even in a snake. He looks like a little bag that the fish goes comfortably into, and that with a little swelling might hold another. but hardly more. After this there is a matrimonial greeting scene between the two parents. They make little playful tilts at each other with their stiletto-like bills, and both utter the curious yapping note with which the jodel commonly ends. With this the effusion is over, and things settle down into their old course. The chick is now ready to go to sleep again, and, with the fish inside him, toddles to his mother, and pecks at, or, rather, rams with his bill, amongst just those feathers that make his accustomed awning. She, however, is not yet ready for him. She is preening herself, and for a few minutes she keeps her wing close. After that he is admitted, and the two repose in the accustomed way. In about a quarter of an hour the chick is out again, and this time goes a little farther afield than usual. He is alone comparatively-about a foot from the sheltering wingwhen all at once the other parent-the father-opening his bill, and jodel-ing, comes walking up to him, bends his head over him, jodel-ing still, then tenderly probes and preens him with the point of his bill. He acknowledges this by burrowing into his new guardian's side, upon which the paternal wing opens and closes upon him. It does not, however, seem to go so well as it did just before with his mother, and in a little while he comes out and goes over to her

again. She meets him, *jodels* over him a little, and soon they are lying close pressed together, as before.

I have now to mention that the parent who, up to the present, has taken most charge of the chick, and which I have therefore been calling the mother, has the curious narrow white circle, or rather ellipse, round the eye, with a straight line, also white, projecting backwards from the backward corner of it. The other one has no such mark, or rather he has it without the white feathers, for, as I believe is the case with all these birds, the same thing is represented by a depression or groove in the plumage, which is especially noticeable along the backward-running line. If we suppose the white mark to be an adornment gained by sexual selection, what are we to think of the depression which preceded it? Is it sufficiently obvious to be noticed by the birds in each other, and if so, can it be supposed to be pleasing to them ? Considering how close together guillemots stand on the ledges, I should think it must be as plain to their observation as a parting down the hair is to ours. Hair-partings are admired by us, and so, too, are gashes on the face, even in intellectual Germany. But though the mark may not represent any special sexual adornment, the white colour which so powerfully emphasises it may, and this, perhaps, has come about owing to the nipping in of the feathers, along the line of depression, having stopped the flow of the colouring pigment.

The little chick, now, pushing, as it seems, against

his mother, stretches his legs straight out behind him on the rock, and lies like this for a few seconds, as we sometimes see a cat or a dog do. Then he comes out, preens himself, and voids his excrement, and I cannot but record-for indeed it was very funny-that this hits exactly in the eye, and over the face generally, another guillemot standing about two feet from him on the edge of the ledge. The poor bird thus distinguished stands with a comical look, and for some while shakes its head very vigorously. Later, when it comes somewhat near to the chick, the latter's mother utters the jodel in a warning tone of voice, seeming to say, "Thus far, but no farther." The chick, having preened itself a little, goes again to its mother, and is received this time beneath her other wing, which is the farther one. I look down upon them now a little more perpendicularly, so that he seems almost to have disappeared altogether.

It is really wonderful—and the incident just given illustrates it—what a power all these sea-birds have of ejecting their excrement to a distance. Not only is it propelled with great force forwards, but also upwards, so that its course is crescentic; and in this, perhaps, we may look back to a time when the guillemot and fulmar petrel made nests, for it is by this arrangement that the nest of the shag is kept clean whilst the rock all about it is coated with excrement. I mention the fulmar petrel as well as the guillemot, because, whatever may be the case elsewhere, here

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these birds lay on the bare rock without a shadow of a nest.

I remark now what in my slaughterous days I remember noticing, without attaching any meaning to it, viz. that there is a particular line or scroll or outswelling of feathers on each side of the guillemot's body, all along the lower breast and ventral surface. They are longer than the close feathers in front, and begin to be flecked with grey. It is just into this zone of deeper plumage that the young guillemot insinuates itself when wishing to go "seepy-by." Also, when the old bird flaps its wings I seem to notice a little depression or alcove just underneath themthe chick's cradle, boudoir, or dormitory, as I am inclined to think-like a sleeping-bunk in the wall of a Highland cottage. Similar depressions I thought I saw once on the back of the dabchick, when I watched her domestic arrangements ; but I will not be sure in either case.

Once again the chick comes out and walks to a little way from its mother. Having preened itself, it goes back to her, and then flaps its little wings. The quill feathers are growing and look just about an inch long. They are a good deal separated from one another, and have a very feeble appearance. Still, they might serve to make a fall a long fall, which is all that would be required of them to take their owner to the sea. The preening over, the chick, with considerable insistence, burrows once more under its mother's wing, and I now leave, it being all mist and raining

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into mist. I had meant to see the fulmar petrels again before returning, but by the time I get to the top of the path leading down to them it is nearly six, the drizzle increasing, and the mist on the hills thickening. The hut stands sufficiently high for it to be always enshrouded when a mist comes on, and it may then be difficult to strike. However, from the round house where the signals are shown, each morning, to the lighthouse on the great stack opposite, by a man who walks up from the village at the foot of the ness, there winds a foot-track with posts stuck at long intervals beside it. When one gets near to the fifth post one should see the hut if the mist is not very thick, and even if it is, one has then a good chance of striking it. The signal-house, or rather shed, one may strike by going constantly upwards till the highest point is reached; but it is possible to miss it, and also the track between post and post. As the gulls and the two kinds of skuas have each their separate breeding-place upon the ness-thus, as it were, mapping it out - they, too, are of some assistance in finding one's way. Still, the possibility of a night out at the end of any day is not a pleasant thing to think of, and I am always very glad when I see the hut through the mists, and still gladder when there are no mists to see it through.

It seems wonderful that any corner of the United Kingdom can hold a summer like this—little as I mistake the United Kingdom for paradise. It is like a bad November in England, but with more of the

spirit of youth and freshness in it; always thought that the wind is perpetual and multiplied by about a hundred. I am told this summer is unprecedented, even in the Shetlands, but bad weather precedents are seldom remembered by the seasoned inhabitants of a place. I, as a visitor, can remember the June and July of two years ago, and "if it was not Bran, it was Bran's brother," as the Highlanders say.

I forgot to mention that whilst watching the guillemots on the ledges, one of them flew down into the sea, just below, which was like a great, clear basin, and thus gave me the first opportunity I have yet had of seeing a guillemot under water. It progressed, like the razorbill and puffin, by repeated strokes of its wings, which were not, however, outspread as in flight, but held as they are when closed, parallel, that is to say, roughly speaking, with the sides, from which they were moved outwards, and then back, with a flap-like motion, as though attached to them all along. Thus the flight through the water is managed in a very different way from the flight through the air.

The descent to these guillemot ledges—for they represent the first only, and lowest, of the up-piled strata of which the entire precipice is formed—seems to me, who am no particular cragsman, to get worse every day. There are parts of it which I very much dislike—a green edge, and not much of it, above a well-nigh precipitous slope of the same lush grass, starred, here and there, with points of rock, and

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ending in nothing-sheer vacuity. How one would fly down this, and then over !---but not like a guille-mot. It is horrid to think of, and the little painted puffins seem waiting to see it take place-grouped as they are on every rock and all over the green spongy turf, honeycombed everywhere with their breedingholes-a vast amphitheatre of impassive spectators. Lower down, when it gets to the rock, it seems safer, but I doubt if it really is. The path then leads over a great jagged spur of the precipice, made up of its down-tumblings from the heights above, which are piled very loose, so that the blocks are sometimes hardly held together by the soil between them, this having been formed entirely out of their own crumblings and disintegration. I was appalled, the other day, by displacing a huge one just above me, which I had been going to climb up. It looked as firm as it was massive, and I have been very careful since. That boulder, which, had it really fallen, would have brought down an avalanche with it, has a nasty look to me now, and I have to pass it each time, descending and returning, the whole path being a razor's edge, though the mere climbing is easy enough.

As I halted and looked back, this afternoon, in the midst of my ascent, I was struck by the figure of a shag, or smaller cormorant, standing in the exact centre of the highest ridge of one of those great isolated piles of rock that the sea has cut off from their parent precipice, and which are called here "stacks." It had the wings spread out, after its fashion, and looked thus, and in its "pride of place," absurdly like the heraldic eagle of some cock-crowing nationality or other : American, Austrian, Russian, or any of them —for they all crow and will all, one day, "yield the crow a pudding."

What month in the year was it that King Lear was turned out into the storm? This is August, but what a night! I can see no farther than a few paces outside the hut. All is mist, with spit-fire storms of rain, and a wind that seems as though it would blow the ness into the sea. "A brave night to cool a courtesan in," and so it was, last night; nor did it greatly differ the night before.

The wind is not so pleasant to hear at night-time here as it is in England. I cannot lie and listen to it with the same feelings. It has not the same poetry, for there are no trees for it to sigh and moan through, and therefore it cannot produce those sad, weird, mysterious sounds which appeal so powerfully to the imagination. Instead, it strikes the hut with sudden bangs and blows which upset one's nerves and have an irritating effect upon one. There is noise, racket, and bluster, but no mystery, no haunting mournfulness. It plays no "eolian harps amongst the trees." No, the wind here is "the fierce Kabibonokka" that—

> "Shouted down into the smoke-flue, Shook the lodge-poles in his fury, Flapped the curtain of the doorway,"

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but not the wind that one knows so well in England and hears for ever in those lines of *Maud*—

"And out he walked when the wind like a broken worldling wailed, And the flying gold of the ruined woodlands flew through the air."

There can never be a wind like that here, where there are no leaves when "summer woods are leafy" and no trees "when winter storms sing i' the tree."

Plague take the wind! It is like a bombardment.

CHAPTER XXIII

LOVE ON THE LEDGES

THE ledges are thinning. There are only thirtyseven birds now where I counted more than a hundred the other day; but some may be coming back. My special young one is lying on the ledge with its face to the cliff, and the white-eyed bird standing over it; but very soon it turns, and is under the wing, as usual. The left wing seems the favoured one. Always, except once, it has been that. The other young one is also lying under the wing, just as it was yesterday, and here, too, as always before, it is the left one. All these guillemots keep constantly uttering exclamations, as they may be called-different intonations of a deep "ur!" or "oor!" with an occasional much louder "ara !" or "hara !" of which last I have spoken. This has been the case since I came here. There is a great deal of expression in these sounds-quite as much so, it seems to me, as in some of our own exclamations. Any emotion which rises above the ordinary level of feeling, be it to do with fighting, feeding, loving, may give rise to the prolonged, deep jodel. The plain parent now flies in with a fish for the young one, and there is exactly the same scene as the last time, all the birds near, as well as the father and mother, jodel-ing excitedly. The fish is then laid on the ledge before the chick, who, getting it head downwards, swallows

it voraciously. Directly afterwards the white-eyed bird, for the first time that I have yet seen, flies from the ledge into the sea, but too far off for me to watch. The other one remains, but he does not seem ready with his wing. The chick makes several attempts to take sanctuary, but they are not responded to, so he is reduced to standing and preening himself, the father standing just behind him, between him and the sea. At last, however, he forces himself under the wing, but it hangs over him awkwardly, not clasping him at all, and very shortly—in less than a minute—he comes out again.

A well-grown young shag now, distinguishable only by its brownness, is fed on the rocks by the old bird. The manner of it is just the same as when on the nest. It flaps its wings the whole time it is being fed, as young rooks do, and the parent at last shakes it off and flies down into the sea. I cannot follow these shags for any distance under the water. They seem to strike deep from the moment they plunge, and the way they plunge, indeed, suggests this; but guillemots often swim for a long time, not far below the surface. Contradicted again ! to my very face, by some shags in the pool here. They have swum quite like the guillemots in this respect. Birds are sometimes very rude.

The eyed guillemot has now been absent for two hours, and all this time the chick has sat or stood with the other parent by him, but not under his wing, nor have I seen any further attempt on his part to get

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there. This certainly looks like a partition of office as between the two parents, but it is hardly worth while saying so, for everything one says or thinks one hour or day is contradicted the next. There is little or no uniformity in the actions of birds. That is my constant experience. The other chick has been for long clasped under the parental (left) wing, but whether it has always been the same parent I cannot say, for there is nothing here to distinguish the two. Now, however, there is an interlude, both the parent and chick standing and preening themselves. The chick stands comparatively alone, with nothing between him and the sea. Now he has disappeared, moving a little along the cliff's edge, but soon I see him again, clasped tight beneath the wing of one or other parent, who sits close brooding on the rock. I think there has been a change of parents here, so here is the accustomed contradiction.

Looking down through the glasses at the chick, it appears to me to be feathered, but to have, at least on the back, a close crop of down projecting above them. The beak is nothing like so long as the parents', either actually or in proportion to the chick's size, or the size of its head. The feet, however, are relatively quite as large, or even larger. The bird is getting on in size, and again I wonder why, if it is taken down on the parent's back, this flight is so long delayed. It is difficult, indeed, when one sees the little wings flapped, to think that the chick can fly yet, in any proper sense of the word, but it does not seem to me impossible that these little wings should be adequate to take it down in a slanting line to the sea, and the longer it stays on the ledge the less impossible does this become. This gives a reason for its staying so long; but why should the mother not take it, if she does do so, almost from the very first?

It seems funny to be looking over a ledge, all day long, and to eat one's lunch whilst so doing. But I just look up to make my notes, and on looking down again, almost right under me, I see a seal hanging lazily in this quiet shore-pool of the sea; for to-day there is hardly a foam-line round the stacks and rocks. When he sinks I can follow him for some time under the water. His hind fins or feet seem to become quiescent, as though only the front ones were used; but this last I cannot see. As he recedes, going both downwards and outwards, he becomes greener and greener, and the green darker and fainter, till, at last, having first looked dimly luminous, he disappears. Some guillemots are on the water, toothirty-two in all, that I can see-but not one of these has a young one swimming by it. Farther off, a kittiwake, I think, is feeding on the floating carcase of one of its own species-a young one. Horrid sight! The prettiness of the bird contrasts so with what it is doing. But what a joy should this be to the optimist, who always seems to extract a comfort from the most uncomfortable things, as though they not only justified his position, but made it self-evident.

Another half-hour has gone, and still the eyed or

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white-eyed parent has not returned, nor has the chick ever been taken properly under the wing of the other one, or stayed there more than a few seconds, when it has managed to squeeze itself in. For the last two hours and more, too, it has stood and squatted on the rock, giving up all attempts, and the parent never volunteering. Thus I leave them; but coming again the next day, about noon, I find the chick lying in the usual way under the right wing of the plain parent bird. It is evident, therefore, that this office may be performed by either parent; but I still think one of them—the mother, as I suppose—undertakes it more willingly and cheerfully. She—the white-eyed bird is off the ledge, this being the first time I have not found her there on my arrival.

The other chick is gone. Yes, gone; for I go to several points from which I can see the whole of this small ledge—on a part of which only I look directly down—and from none of them can I see the second chick, which, were it there, I think I must. Without any doubt, this time, I think, it is gone, and so must have either flown or been carried down within the last twenty-four, or rather twenty-two, hours; for it was here on the ledge with its parent when I went away yesterday, at two or thereabouts. There are only seven birds in all, on this ledge, now. On another one where, when I first came, there were more than a hundred, and, two days ago, sixty odd, there are now fifteen only. Elsewhere, counting all the ledges I can see, there are only forty odd birds—

so that soon the whole cliff will be empty. That, however, will be nothing to me. But my little chick ! Would I had seen it go !

A guillemot now flies up to the ledge underneath this one, and which I cannot see for this-for I have returned to my original position—and as it disappears there, there is a great *jodel*-ing from several birds-I cannot say how many. On going round to the point of rock which fronts them both, I see that there is another young guillemot on this lower ledge, squeezed into the corner angle of it, which I think I have missed all along. It is, indeed, extremely easy to miss a chick, even when one seems to see the whole ledge very plainly. Nevertheless, there can be no doubt that one of the two on my ledge is gone. My own little one-still under its mother's left wing-is the only one left there now. After a while it comes out, and the mother, as she stands by it, from time to time just stirs or nibbles the feathers of its face with the end of her bill-an action which has all the spirit of wiping a child's face or nose. The father now walks up, stops in front of the chick, bends down its head, and jodels. Then it lifts it up and jodels more loudly; then, stooping again, preens the chick's head and face a little with the point of its bill, and nibbles at it affectionately. The chick, after this, goes off on a little excursion along the ledge, then toddles back again, and, on getting near home, makes a little run to one of its parents, who, again bending down its head with the neck curved over it till the point of its bill

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almost touches the ledge, and with both the wings extended so as altogether to enclose it, *jodels* and trills softly, and then nibbles it as before. And are not these pretty little domestic scenes, on the cold bare rock, with the sea beneath and the blowing wind all about? What a snug little boudoir this ledge of the precipice—white with droppings and wet with the seaspray—becomes as one watches them ! Such tenderness amidst such roughness seems wonderful.

And now I have to make one of those doubtfulcertain entries-certain at the time, doubtful as one thinks of it afterwards-like that about the raven. It will be admitted that it was natural for me to suppose that the bird which has just acted this scene with the chick was one or other of its parents; but, to my surprise, just after it is over and the chick has toddled away to the white-eyed bird-undoubtedly its parent, and the only one so marked on the ledge-in flies another guillemot with a fish, and amidst loud jodelings from the few birds on the ledge, gives it to the chick. Afterwards this bird, who seems thus to have proved its relationship, walks a little way along the ledge, then returns, and he and the white-eyed one make passes at and then nibble one another with their bills so energetically, jodel-ing and barking the while, that it almost seems as though it would pass into a fight-more proof that they are married. Then the one that has brought the fish flies off to sea again. Now he flew in with that fish just as the chick had toddled away from the bird that had petted it, this

bird continuing to stand where it had been, and I had been watching them up almost to that very second, my head over the ledge all the time. Even could the bird which had petted the chick have flown off without my noticing it-which I do not think it could have done-it would have been impossible, surely, for it to have caught a fish and returned in so very short a time. The chick, therefore, appears to have been petted by a third bird, not being either of its parents, for the white-eyed one stood apart all the time, so that even if it had not been distinguished in this way I could not have confused it with either of the other two. This is interesting, I think, if it is really the case, for here, as with terns, we see the beginning of what might in time lead to something similar, in a social community of birds, to what we see in those of insects-the absorption, that is to say, of the individualised parental instinct into the generalised one of the whole community.

It is natural, at present, we will suppose, for every pair of birds in a colony of terns or guillemots to feel affection for, and to tend, their own young. Were this affection, and the active expression of it, to extend to the young of other members of the community, then, as every pair of birds would probably be able to supply the wants of more than its own young, a lesser number than the whole community would be sufficient for nursery work, leaving the others free for—what we cannot say, but nature might evolve her product out of the material thus placed at her disposal. Some

new activity might well arise, which, if fostered, would be of advantage to the general commonwealth. But let us consider the old ones. Terns, as we have seen, are vigorous in the defence of their eggs and young. They mob and attack any one-be it bird, beast, or man-who trespasses upon their breeding-grounds. If, therefore, only about half the colony were needed for the nurture of the young, and thus gradually came to be the equivalent of the workers amongst ants and bees, in the other half there would exist the elements of a soldier caste. Of these it would become at first the more special, and in time the exclusive business, to drive all enemies away from the ternery; and since efficiency in so important an office might well outweigh the otherwise ill effects of a loss of fertility in certain members of the commonwealth, the soldiers, both male and female, might, in the continuous prosecution of their task, come gradually to lose the sexual instinct, which, again, would allow the others to lay, with advantage, a greater number of eggs. I have mentioned the case of a dog making regular daily expeditions to a ternery, in order to feast upon the eggs; and if one dog could commit havoc like this, what might not some wild egg-eating species do, if not efficiently kept away? It is obvious that the eggs thus destroyed might amount to more in number than those by the loss of which they would be saved to the community; and, on the other hand, a caste whose sole task it was to guard the eggs and young might be competent to guard a greater number than

the whole community would be, if "a divided duty" claimed their attention.

It is not at all necessary to show that the socialism of insects has advanced along these lines-their greater fertility allowing of a still more remarkable specialisation-in order to make out a case for the possibility, or even likelihood, of its hereafter doing so in the case of some birds. There are insect communities, however, composed of males and fertile females, or of the latter only, that may be compared, without much violence, to those of terns or weaverbirds. There are the mason-bees, for instancenumbers of whom labour side by side, each at making its own nest, in which, perhaps, we see an early state of our more truly social hymenoptera. But in nature many ways constantly lead to the same goal, and what this is, or is likely to be, must depend on the kind of advantages which the general conditions prescribe and make possible. It is difficult in the case of animals, no less than in that of man, to imagine any great social advance except through, or side by side with, subdivision of labour; and for real social labour to be subdivided, it must first be extended, that is to say in common. The separate attention paid by each pair of birds in a community to its own young only is not subdivision of labour in the proper socialistic sense of the term; for this labour is not social, but solitary. It appertains, that is to say, to every solitary-breeding animal, or, if not to both parents, at least to one, so that, at best, we do not get beyond

the family, which in social matters is generally taken as a unit. Numbers of animals living and breeding together may be said to be social by virtue of their contiguity, and, no doubt, are so, to a greater or less extent, in their feelings. But until they help and support one another in some way, true social labour has not begun amongst them. When it does begin it will become distributed through the whole community, and it is only after this early point in social advance has been reached, that the other and greater advance, which consists in the limitation to a certain number of the labour which was before shared by all, can take place.

To this first stage these guillemots have, perhaps, not yet attained, but if some of them are interested in, and show kindness towards, the young of the community generally, as distinct from their own, then, as it appears to me, they are on the way towards it, and when they have reached it they will probably begin to advance socially along the general lines by which both man and social insects have advanced. This is why such a little incident as that I have just recorded is to me a matter of so much interest, so that I get quite excited in trying to be sure about it. It may be little or nothing now, but what does that matter if, in no more, perhaps, than another million of years, it has led to most important developments, if not in guillemots, yet in some other species of bird, possibly in a very great many ?--- supposing, that is, that we do not exterminate all of them-which is likely,

except perhaps sparrows—not counting poultry of course. Already the terns have gone a good deal further than the guillemots, for they not only show the liveliest interest in the common progeny, and combine together for their defence, but there is also, I believe, a good deal of communistic feeding amongst them. Other birds, perhaps, have gone further still.

In what does the interest taken by a bird-let us say by one of these guillemots-in a chick which is not its own originate? Does not the sight of it arouse, by association of ideas, all those feelings which, but shortly before, its own chick was daily arousing? And if this be so, does it not in a manner mistake it for its own? It would be interesting, were something to happen to the parents of this little chick, to see if it would be fed and taken care of by any of the other birds on the ledge. If it were to be, I should be inclined to think this the reason of it. That one bird (or pair of birds) should foster the young of another, knowing all the while that it was another's, and not its own, seems to me very unlikely. There must be some confusion of thought. By association of ideas the stranger chick would excite in the stranger bird the feelings proper to rearing, whilst at the same time supplying in itself the proper object for their translation into act. When once this point had been reached, the foster-parent, if it did not look upon the chick as its own, would have-always supposing it to be one of these guillemots here-to retain a clear recollection of the chick that it had

reared, all the while that it was rearing the foundling, to keep the two distinct, and remember not only that it had finished with its own chick, and seen it leave or gone off with it from the ledge, but also that it had not had another one since then. But though I believe that mental association may call up a very clear image of some past event in a bird's mind, I cannot credit it with such retentiveness and perspicuity of memory as this. Moreover, what idea of ownership in a chick can a bird have, other than those feelings which compel it to rear it ? When once they are roused, the chick before it is its own.

But has not this a bearing upon the nature and origin of sympathy? When we sympathise with others we, by a quick mental process, put ourselves in their place, and feel to a lesser degree in ourselves what we suppose them to be feeling. In a certain degree, therefore, we are them, but our reason assures us that this is not really the case. We can distinguish; but can animals, or can they other than partially? Anthropologists have much to say-sometimes, perhaps, almost too much-on the extent to which savages mistake their subjective impressions for objective reality; but what applies to the savage should apply with much greater force to the animal. When a herd of fierce animals-as, say, of peccaries-are filled with sudden rage at the sight of a companion struck down by some beast of prey-bear, jaguar, or puma-and attack the assailant, is each member of it distinctly conscious that he is acting in defence of

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another, or does he not, rather, imagine that he is repelling an attack made upon himself? I believe myself that this last, or something very like it, is really the case, and that sympathy, if traced far enough back along the line of our descent, would lead us to a time when it made no conscious distinction between itself and its object; thus rooting our best feelings in the purest selfishness.

There is, indeed, this to be objected against the noblest emotions by which the highest natures are actuated-those very exalted ones about which there has been, and still is, so much self-laudation-viz. that they are all tainted in their origin. This is an objection-I mean as against the optimistic standpoint-which nobody ever seems to consider; but with me it is a very grave one. What matters itthat is to say, what ground of jubilation is it-that some "noble numbers," as Herrick calls them, have somehow got into a great "sculduddery book," written upon a plan, and, as far as we can see, with an object which never contemplated or thought of them at all, but only of the sculduddery, in relation to which they exist as a small pool may by the side of a great muddy, turbulent river, out of which it has leaked, and, by some accident, become clear ? If this is all, then they are mere by-products, and it is not by a by-product that any scheme can be justified. It is to the scheme itself we must look, judging of it by what seems its clear object and intent, and having regard to the mass of the facts through which it

reveals itself; not to some few merely which may seem, at first sight, to be in opposition to these, but, looked at more closely, are seen to be sequences only, quite reconcilable with them, and not obstructing them in any way. In a word, we must think of the stream and flow of the river, not of some eddies in it, or a back-wash here and there. Though it does not seem to be, yet the water that makes these is really going the way that the stream is, and our "noblest numbers," when closely analysed, are found to be "sculduddery" after all.

> Es tanzen zwölf Klosterjungfraun herein Die schielende Kupplerin führet den Reihn Es folgen zwölf lüsterne Pfäffelein schon Und pfeifen ein Schandlied im Kirchenton.

But can I be quite sure that it was a strange guillemot, and not one of the two parents, that acted that little scene with the chick which I have described? It is easy, certainly, as I know by experience, for a bird to go off the ledge without one's noticing it—even under one's very nose—if one's eye is not actually on it all the time, and that, I suppose, mine was not. Again, the plain parent has just made a very quick return with another fish, though not, I think, quite so quick as the other one would have been, had it been he and not a stranger bird that I had seen on the ledge all the while. All I can say is that it certainly looked like what I supposed was the case, and I feel pretty sure that it was so; but I have never seen such a thing before, and it is more likely, perhaps, that I was mistaken. Still, one must remember the interest taken by the other birds when a chick is fed, as shown by their *jodel*-ing, and also that these have now no chick of their own to be busy with.

There is something in the sight and feel of a fish, indeed, which goes to the soul of a guillemot. Two, with one between them, have been making a most extraordinary noise, harahing and jodel-ing as they bend over it. It is laid on the ledge and taken up again several times, by one or another of them, and finally one swallows it. This jodel-ing note of the guillemot-and there is no other word, to my mind, which expresses it nearly so well-constantly begins with another and almost louder one, of two syllables, which is pretty exactly like the word hara ("hurrah!" but with the first syllable as in harrow). There is a moment's pause, and then follows a second "hara"-or "harrah" would be the better spellingin a higher key, and it is the last syllable of this which, prolonged in a wonderful manner, makes what I call the jodel, and this jodel often ends in a kind of barking. "Härrāh—härrāh—härrāh !" from one bird or another, without its continuation and in a low, sometimes almost a soft tone, is constantly to be heard on this ledge, and, no doubt, on all the ledges. Though suitable to any and every occasion, it seems mostly the vehicle of parental affection. As, for example, the chick which has been asleep, and almost buried for some time, now rouses himself, comes out,

and begins to walk along the ledge. The mother follows and says "harrah!" He stops and turns. She goes up to him with "harrah!"; then, bending down her head till her beak almost touches the rock, she *jodels* softly, as though very pleased both with herself and him. He moves on again. "Harrah!" ("Will he really do so?") He turns to go back. "Harrah!" ("In that case she will follow him.") And so on and so on, an "harrah!" for whatever he does, there being, in each one, a certain indefinable tone of interest, mixed with a little surprise.

During this last promenade the chick flapped its wings a good deal, and, once or twice, came a little towards the edge of the rock, nor did the mother keep so between it and him as I should have expected. By some instinct, however, he goes along the length of the ledge, but never for more than a step or two forward towards the sea. One of the two chicks is already gone, and this restlessness on the part of the other, which has never been so marked before, may be the prelude to his going too. I would fain see the flight, if I could, however it may be, but I have been here all day, and mother and chick are now, again, crouched together as usual. It is near seven, and so cold and wretched that I can stand it no longer, but have to go. When I get up I can hardly stand steady, and lumbago has crept upon me unawares. Understanding that he lodges with me, the toothache, later, pays him a little visit, and the two chat together all the evening. Bitterly cold it was during the last

hour or so, and a wretched sort of day altogether. Getting to bed at last-for cooking takes a woful time ---I turn to the British Bird-book again; and reading there about the plaintive cry of the young guillemot for food reminds me that I have not once heard either of my two little birds utter a syllable-at least, not to be sure. Once I thought I caught a very faint thin note, such as most young birds utter, but that was the only time. When I was here before, too, at a time when there were numbers of young birds on the ledges, I never noticed this cry, so find it difficult to believe that it ever attracted the attention of the French sailors sufficiently to make them name these birds "guillemots" in imitation of it, as is here suggested. To judge by all I have seen, the young guillemot is the most contented little thing, and generally squats asleep under the wing of the one parent, till the other brings it a fish, when it comes out, swallows it, swells, preens itself, and goes back to " seepy-by " again, like Stella.

CHAPTER XXIV

GROUSE ASPIRATIONS

THE wind last night was simply awful. Why it has no effect on the sea I cannot understand, for it is always calm now. No, there is little beauty in the sound of the wind here-no mournful sighings, no weary complainings, no intangible strange sounds, but a horrible howling and blustering, the whole night through, like a mere rage, so that it has not that soothing quality that it is wont to have in England: there is no lullaby in it. Bed here is dreadful, partly on account of its hardness, partly of its narrowness, partly of its coming-untuckedness, partly because the wind comes in on both sides, through walls and clothes, and shares it with one. With all this I lie in a continual prologue to a play of lumbago, with wandering pains all about me. Oh for a nice little cosy, comfy cottage here, with my good old Mrs. Brodby to cook for me! I could be always out For the outdoor part of it, "this life is most then. jolly," but the indoor part is a weariness, and, with all he can do, man, in this country and climate, is a wretched indoor animal. If it were not so, I would be beetling over the ledges, now, for though moist and damp, and under a heavy pall of dun-grey cloud, it is yet not raining, so may pass for a fine day here : it is not Tahiti. But to get up a fire, to wash, and

have some sort of breakfast—all in huge discomfort —takes time. Biscuits and cheese in my pockets serve me for the day, but rain and mist may drive me in, and something for a supper one must have. Oh the time that goes in waste of time, when one has to cook for one's self! And the washing first, at intervals—for I leave everything dirty as long as I can, that is my system—is worse still, much the worst. I thought, at first, I would only use one plate, and *never* wash it, but I had to give that up. How I do hate the washing! Oh, if there are meals in heaven, and I get there, I hope Mrs. Brodby may get there too !

This morning I heard a great noise of skuas—the smaller kind—and, coming out, saw a crowd of them chasing four ravens that were passing over the ness. I had previously seen them thus mobbing one. The ravens sometimes uttered an annoyed croak, and gave a twist round as though to defend themselves, but whether they were ever seriously attacked or pecked at I cannot say. The cries of the skuas, on this occasion, were different from their ordinary one, though the general tone and character was there.

On my island there were no ravens. Either the pair that bred there two years ago had hatched out another brood, and they had then all left the island together, or else, in spite of all Mr. Hoseason's efforts, they have been driven away by persecution—perhaps killed. A general raven battue is now in progress throughout the Shetlands, every landowner being anxious to exterminate this bird, so interesting both in itself and through the world of old legend and superstition that adheres to it, in order that they may have grouse to bang at over their barren brown moors. Had these men anything within them that responded to the real and only charms that these bleak northern isles they were born in possess, or ever can possess, except to vulgarians-their wildness, that is to say, their wild bird-life, and their past-they would care more for one raven than for a thousand brace of grouse. They would rejoice and congratulate themselves whenever they saw its sable flight, and think its presence amongst them a point of high superiority over richer and more fertile lands. They would see, then, how the gaunt, black bird was in keeping and harmony with their scathed hills and storm-lashed coasts, and, seeing and knowing and feeling, they would seek to keep it amongst them, with every other wild and waste-haunting thing. But no; instead of rejoicing they lament. Born to such a heritage, they would exchange it for a park and a game-preserve if they could; as they cannot-for the grouse will have nothing to say to them, it draws the line at the Orkneys-they will do their best to turn a living wilderness into a dead one, they will chase away the only smile that ever sat on the hard-featured face of their country, take away its youth-for the birds, each spring, are that-and leave it childless and unchildbearing, like a gaunt, hideous, barren old hag. That is what they will do, these romantic islanders, for the

rugged old mother that bore them.¹ "Kill, kill, kill

There is something, I verily believe, in a gun and cartridges, that dries up all poetry in a man's heart. Of all the inventions that this world has ever seen, I most deplore that of gunpowder-not because it kills men, but because it kills beasts-and next to that I deplore railways, which take away all charm from the country, and kill the ballads and songs of a people. Would that I had lived before them, in the quiet days of Gilbert White! It is the absence, I believe, of all reference to railways in the writings of our grandfathers and grandmothers that makes, or helps to make, them such pleasant reading. Who would care for Sterne's Sentimental Journey, had he made it by rail? and is it not delightful, when reading Miss Austen, to know that none of those dear little quiet-world circles, into which, for years, you have had the entree, and which have given you a thousand times more pleasure, through life, than you have derived from your real acquaintance—is it not delightful to know that they could none of them run up to town in an hour or a few minutes, as is the case now? How nice it is to have Highbury, through the whole of Emma, a quiet, untownified little place, and to know

¹ Not all, of course. To Mr. Lawrence Edmondston, of Unst, and to Mr. Hoseason, of Yell, all lovers of birds and wild nature are greatly indebted.

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that it was not till long afterwards that it became absorbed into London, like the village that you once used to live in. Considerations of this kind add a charm, I really do believe, even to the characterdrawing of Jane Austen. We are not so lucky with the other—the gunpowder. It is always, I confess, a little unpleasant to me to find Mr. Bennet going pheasant-shooting. I always wish he hadn't, such an *esprit fin* as he is. Bingley—or even Darcie—but I can't *see* Mr. Bennet pheasant-shooting. However, those were not the days of battues, and he would have worn knee-breeches, not knickerbockers.

Ravens, however, are very wary, and I hope may be able to hold their own in this their last stronghold of the British Isles, in spite of all the efforts of their unworthy and little-souled persecutors. Things seem to me to go very strangely in this world, and only satisfactorily to the optimist. In the days when Britain was full of birds and animals, before there were railways or breechloaders, before there was a large population, before the fens were drained or the broads crowded, in those days there were no naturalists, and now that there are naturalists the materials for natural history have disappeared, or are fast disappearing. Railways, towns, factories, golf-links, breechloading guns, quietude banished, solitude overrunall is over, and the real naturalist is not a man for this world. But regrets are useless, so let me on to the affairs of state.

Along the opposite shores of the bay that skirts this

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hill on one side, a raven or two are generally to be seen; and I once saw one, whilst flying at some height, make an odd sort of manœuvre, the meaning of which I did not quite catch. It appeared to me, however, that he brought his foot forward towards his bill, and, at the same time, disgorged something, which he caught hold of with it. A second or two afterwards, as he came back into his natural pose, I thought I just saw something fall from him, like a faint shadow on the air, and almost instantly disappear. This raven had not been carrying anything in his bill before-at least, I believe not, for nothing broke the clear outline of it against the sky. What I believe he did was to bring up one of those curious pellets of indigestible materials that birds, generally, are in the habit of disgorging. But who would have thought that he would have first taken it into his claws, whilst flying, before letting it drop? But though I cannot be quite certain, yet I feel certain that this is what he did do.

Herrings are still scattered over that part of the ness where the great skua breeds, and still they are headless, as I noticed the first time I came here, and have recorded in my *Bird Watching*. Out of twentyfour, for instance, that I have counted, all but three of them are in this condition. With the exception of the head but little of them has been eaten, and, of some, not any. Whether it is the old bird that eats the head only, before bringing the fish to the chick, or whether the chick helps to eat it, or whether it is eaten at all, I cannot say; but I have noticed that the guillemot, also, sometimes brings in a sand-eel to the ledges, that has been neatly decapitated. I can quite understand that the head of a herring, if swallowed by a greedy young chick, might have a bad effect on it, but that the old birds, through some process of natural selection-for we cannot suppose that they are impelled by ordinary foresight-should have acquired the habit of first decapitating the herrings and thus removing the risk, seems very unlikely. On the other hand, that they should eat one particular part, and no other, of each fish that they bring to their young, is almost as difficult to believe. I have elsewhere suggested another explanation,¹ but this too I find it difficult to adopt, and the only remaining one I can think of is that the gulls who catch these herrings, and who are robbed of them by the skua, either bite off their heads in order to kill them, or eat the head separately. Whatever the reason of it may be, I once more draw attention to the fact.

At the tail, so to speak, of this track of herrings, I find another young great skua, and sit down by him to make my entry. He is a big chick, but the fluff still remains upon his head, neck, and under surface, springing from the ends of the true feathers, which have thus gradually pushed it out. On the back it is almost gone, thin patches of it only appearing above a thick brown panoply of the mature plumage. This chick is of milder mood than either of the other two.

¹ Bird Watching, p. 117.

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He lets me stroke him, and though, when I approach my finger to his face, he opens his beak, yet he cannot be said to show much fierceness. The father and mother sail overhead, and once the chick reaches up with its neck stretched straight into the air, and opening its mandibles widely and excitedly, utters a thin little sound. This is to the parents, I feel sure-a cry of distress-and has no reference to me, unless it be to call a rescue. It seems like this, certainly, yet neither of them make, for some time, even a pretence of swooping at me. Now, however, they begin, but always swerve off when some yards away. Meanwhile the chick has run off: but when I follow him I find him just as he was before, crouched against a little bank of heather, with his head pressed somewhat into it. It is curious how he now, a second time, lets me stroke him, without in the least moving.

This instinct of crouching and lying still when young is one which both the skuas here share with terns, gulls, peewits, etc. All of them lie in a very marked attitude, with the head and neck stretched straight out along the ground; yet all of them, as soon as they learn to fly, quite give up this habit. The stonecurlew, however, which, when young, has a precisely similar one, is supposed to keep it through life, but though this may be the case, I am convinced, from my own observation, that the grown bird acts in this manner far less frequently. To run with great swiftness, and then, if they think it worth while, to fly, is their common practice when approached-I, at least, have found it so-whilst the young ones, according to Dr. Bowdler Sharpe, as invariably crouch. The question is if the latter, when of a respectable size, are not sometimes mistaken for the fully-grown birds, for certainly none of these have ever allowed me to come close up to them as they lay crouched, like a pheasant, revealing their presence, at last, only by the bright golden eye, as they are said to do. It is this element of confusion, in my opinion, together with the fact that it is "a ratite bird," and therefore ought to act like one, which has caused that strange scientific delusion in regard to the domestic habits of the ostrich; a delusion which, it seems, is destined to endure till some one or other of the learned persons responsible for it happens to be living on an ostrichfarm, instead of in a museum or a class-room, since the statements of those who have, or have had, that advantage are not regarded by them. No, no! the ostrich is "a ratite bird," and the scientific exigencies of such a position require it to do what it doesn't do. In regard to the above crouching habit, it may conceivably relate to an antecedent period in the life of the various species which, in their young days, practise it, during which they may have been flightless, though perhaps at a still earlier period they flew as well as, or better than, they do now. Doubtless, the ostrich once flew-so much of truth is contained in the Arab fable-and were any gradual change in the character of the countries it inhabits to render swift running less practicable whilst, at the same time, its

growth became stunted, it would be almost certain to fly again.

Young kittiwakes-as no doubt the old ones, too, though I have not yet noticed them doing so-bathe, or rather play about in the sea, very prettily. They flap their wings in an excited way, or hold them spread on the water whilst turning round, or half round in it, then, with their wings still spread, they make a little spring upwards, and flop down on it again, like a kite falling flat, and repeat the performance any number of times. There are staider intervals during which they duck and sprinkle themselves in the ordinary way, but this is not such a prominent feature as the other. I doubt if these little roundabouts, which seem to please the bird so much, are really in the nature of bathing, and the same doubt has been still more strongly impressed upon me in the case of the shag, and, to some extent, of the coot. To me it seems that the so-called bathing of many aquatic birds much more resembles an antic than movements made for a definite purpose-or rather I suspect that the one thing is in process of passing into the other.

The passage, as I believe, might take place in this way. A land-bird bathes in water with the express object of cleaning itself, and therefore the energy which it expends in so doing is both guided and regulated. It is confined within a certain channel, which it does not leave. But when this same bird takes to the water—for I assume all aquatic birds to

have been land-birds once-bathing, as a special activity, is not so necessary to it there as it was on the land. Being always in the bath, it needs not to specially bathe, or, always bathing, it wants no special bath. It finds itself, however, with an inherited habit which it is impelled to continue; but as the constant sensation of being in the water weakens the desire, as the fact of being there does the necessity, for special ablutions, this energy becomes gradually less governed, and its direction less fixed. The movements being no longer limited to the purpose in which they originated, or exclusively shaped by it, grow more violent, and corporeal activity producing mental excitement, which again reacts upon the former, this violence tends to increase. The result is a mad sort of romp, or play, more or less boisterous in proportion to the greater or less vitality of the bird, or its quieter or livelier disposition, which perhaps is the same thing; and when we have this we have what, in bird life, is called an antic. To generalise it, this antic will be due to the continuance of an energy once directed to a special purpose, but which is now no longer so, or not exclusively; and this, I believe, has been one of the principal paths along which antics have been evolved.

I can, I think, see another reason why the bathing of aquatic birds has passed, as I believe it has in several instances, into an antic or something partaking of that character. They bathe in their own element water—in which they are thoroughly at home, whilst

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the wide expanse of it around them allows of free and extended movement. But when a land-bird washes itself it does so under very different conditions, and a more or less lively tubbing is the utmost one would expect it to evolve out of the situation. Anything more than this would probably go hand-inhand with an increased liking for the water, that is to say with a gradual change of habitat. Some, perhaps, may think that the fact which I am trying to account for has not yet been made out, but I beg these, if they have not already done so, to watch shags bathing, and then I think they will say that it has. I have already described it in the work to which I so often have to allude,¹ but any mere description must be weak compared with the reality.

Numbers of young kittiwakes are still on the ledges; they look quite mature, and much like some pretty species of dove. Many are on the nests and close beside the parent birds, though sometimes, but not often, the latter seem impatient of their presence and force them to take flight. Anywhere else than on the ledges the young seem to keep to themselves, swimming together in large flocks upon the sea, or standing so on the rocks. One may sometimes see an old bird amongst them, but the association is half-hearted, nor does it last long. Of the fulmar petrels I have nothing more to record except that my statement in regard to the hen bird not permitting her husband to sit with her by the chick was incorrect, or, at least, needs quali-

¹ Bird Watching, pp. 170-1.

fication, as I have now seen several such family parties. The grown birds continue, in some cases, to swell the throat and open the beak at one another, rolling, at the same time, the head, and uttering the hoarse, scolding note which seems reserved for the ledges—for I have never heard it in the air.

CHAPTER XXV

UNORTHODOX ATTITUDES

WHEN I saw eider-ducks eating seaweed off the coast of my island I was aware that they were doing something which they had no business to be doing; for it is stated in works of authority that they are purely animal feeders. I have had misgivings, therefore, ever since making the observation, but now, having seen a black guillemot also eating a piece of this same brown seaweed, I feel more comfortable about it, for surely this bird should be as exclusively a fish-eater as the eider-duck is supposed to be a devourer of shell-fish, crustaceans, etc. It was certainly, I think, a piece of this seaweed-short, brown, bunchy, and covered with little lobes-that this particular bird had in its bill. Through the glasses I could see it distinctly, and most distinctly it swallowed it. I doubt myself if there is any bird that feeds exclusively on anything, or that is absolutely confined to an animal or vegetable diet. They seem ever ready to enlarge their experience according to their opportunities of doing so, thus illustrating one of Darwin's most pregnant remarks.

When this "tysty" dived it presented a beautiful appearance under the water, owing to the snow-white patches on its wing-coverts, which flashed out dis-

tinguishably for some time. Besides this-whether or not this had anything to do with it-it became all at once of a lovely glaucous green colour, luminous, and with bubbles flashing about it. Gradually the form became lost, but the luminous green was never lost, and after becoming dimmer and dimmer began to get brighter and brighter again, till the bird reappeared out of it on the surface at some distance off. It seems just possible that this effect may be due in some measure to the white patches, since when the shag dives nothing of the sort, or, at any rate, nothing so marked, is to be seen, nor do I remember noticing it either in the guillemot, razorbill, or puffin, which are all dark above and only white underneath. On second thoughts, however, the colouring can have little or nothing to do with it, since the effect is very marked in the eider-duck of both sexes, and the female is uniformly dark. But how is the effect produced ? by the clinging of innumerable small airbubbles to the bird's plumage? If so, they may not cling equally to that of all species. The seal presented the finest appearance of all, but his size may perhaps have had something to do with this. Whatever may be the cause, I do not remember to have remarked the same thing in river-birds when diving. It is more difficult, indeed, to follow them under water when they dive, on account of the absence of cliffs to look down from. Still, one sees them sometimes, and, as I say, I do not remember noticing this luminous effect, so that it must be, at any rate,

much less striking. I have seen the same thing with a shark at sea.

This morning the ravens again flew over the ness, going the other way, however, and I only saw three of them. As before, it was the skuas who informed me of this, but, in spite of their shrieking, they did not seem to meddle much with the grim, black birds. Though there is an impressiveness about the raven's whole appearance which, with the knowledge of what it is, sets the imagination working, yet there is nothing majestic in its actual flight, and these three, with their measured, laboured flappings, offer a clumsy contrast to the arrow-like grace of the skuas.

The chick is still upon the ledge, so I have still a chance of seeing him leave it; but even with two plaids, on one of which I lie and in the other wrap myself, like an embalmed mummy, it is cold work waiting—and still more when one has the lumbago. I was awakened early this morning by nasty pains, more right on the hip—the very bone of it—than in the true lumbagoey region; but it plays right lumbago music—"'tis enough, 'twill serve." This comes of lying on the rocks for six hours at a time in a Shetland summer. I was a fool, I think, to come here; but is there any one who is not, either in thinking or acting at any time *ici bas*?

> When we are born we cry that we are come To this great stage of fools.

Now I have the lumbago, with very little for it, and had I not come here I should be regretting the loss of

ten times as much as I have found, with no thought of the lumbago thereby avoided. Thus each way would have had its own particular foolery; and which way has not? Does not this apply to much greater matters, and often where there might seem to be no doubt as to where the foolery lay? The way of sin, for instance, that leads to remorse, has always been thought a foolish way, and that of virtue and clear conscience a wise one. Nevertheless, he who goes the first gains such knowledge by experience as can never be acquired in any other way, and is therefore to this extent the superior of the other unless he has already gained it, either in a life before this or in some other manner. If he has not, it seems probable that he will have to do so at one time or another, by the laws of development-assuming that personal life and personal development survive the thing called death. Who, then, if we make these assumptions, stands the better off, he who has learnt a great truth through his sinning, or he who, often owing to circumstances merely, has neither the sin nor the truth? Quite possibly, as it seems to me, the former ; for what do we really know except through our own actual experience ? What a dream must this life soon become to us if we are born, through death, into another one widely different fom it ! and seeing what death does to this body of ours, how can it be other than widely different? If, therefore, we could pass from life to life, or rather from stage to stage of life, keeping the knowledge gained in each to help us

in the next, such knowledge, however bitterly, or, as we call it, evilly gained, would be really all in all good. The gain would be eternal and the pain transient as well as necessary. We may suppose, too, that it would become an ever-lessening quantity, as "John Brown went marching on." But somewhere and somehow all deep, essential knowledge—as the knowledge of good and evil—must, I believe, be individually gained if the individual is to advance. Innocence, though so highly recommended, is really a very trumpery thing.

That the path of individual advance should be through evil to good seems, in itself, likely, since it has been that of the race, and, moreover, what other can be imagined? Perhaps, however, it should rather be said to be through ignorance to knowledge. Evil is a misleading word. We speak of it as though it were something fixed and unchangeable, whereas there is no thing, however evil it may be in one set of circumstances, that may not be good in another. Murder, for instance, is good amongst bees, and sometimes also ---so statesmen who make wars must think---amongst ourselves. Knowledge of good and evil consequently is knowledge of conditions; and how can one learn the conditions of anything better than by acting in disaccord with them? Putting aside, therefore, the question of inherited experience-another perplexing element in this perplexing problem-is it not possible that sometimes, at any rate, a sinner may be in a state of advance whilst a virtuous person is stagnating

merely, or that the former at any rate—for most virtuous persons sin pettily—may be advancing more quickly than the latter? I feel sure of it myself. "My dukedom," however (if I had one), "to a beggarly denier," that said virtuous person would think very differently—which makes him, perchance, just a little more but one of the "fools" on "this great stage," where there are so many.

It might well be argued, I think-at any rate, I have seen many such arguments-that Shakespeare, in the lines I have quoted, intended to convey all this, in which case I have his great authority to shelter under. Goethe, however-at least, I am told so -- supports me, if not more plainly, yet more categorically. He thought-or somebody, perhaps Eckermann, thought he thought-that we became good by sinning out our evil, and that evil still in us, in the shape of desire, was like prurient matter which ought to be discharged, and, at some time, would have to be, to the consequent benefit of the constitution. Given, as I say, a continuance of life and advance-I cannot, for myself, imagine the one without the other-there seems to me much force in this doctrine, and I commend it-as that sort of physic which Lady Macbeth so much needed-to the members of any cabinet that has made any war, and to politicians and millionaires generally. and to South African millionaires in particular.

All this must be the effect of lumbago, which is the effect of the Shetlands; but let me shake it off. The chick has been fed once, but I was taken by surprise,

and almost missed it. Now, at only a quarter of an hour's interval, he is fed again, and over this there is quite an interesting little scene. The chick, when a very substantial fish is brought in for him, is asleep under his mother's wing, and both parents seem averse to disturbing him. The plain one with the fish seems quite embarrassed. He approaches, stands still, looks at his partner as if for advice, shuffles about, turns this way and that, and several times, bending his head, gives a choked and muffled jodel, for his mouth is almost too full to speak. Still the chick sleeps on and still the parents seem to doubt the advisability of waking him. At length, however, they admit it to be necessary. The father shuffles up into his usual position, the mother rises by slow and reluctant stages, as though apologetically, and finally stirs the chick several times with her bill till at last he rouses. Then, in a moment, he brisks up, and, seizing the large fish, swallows it in one good wholehearted gulp. Perhaps there may have been a second, but it was a weak one if there was, and hardly necessary. It was more like the grace after the meal, that can very well be dispensed with. Instantly then the father, having done his business, flies off, the mother sinks down, and the chick, retiring with the taste of the fish still in his mouth, there is peace on the ledge again. The eye of the guillemot is very bright, and seems to beam with intelligence. No bird, I believe, ever looked more intelligent, albeit embarrassed, than the one just gone as he stood with the fish in his bill р

waiting for the chick to wake up. He, it will be remembered, was the plain bird; and such are very greatly in the majority. The white mark round the eye impairs this look of intelligence. It is lost in strangeness, and the bird so adorned has something the appearance of one of those queer kind of demons that one sees in Japanese drawings. The eye itself is black.

The chick, therefore, has had two good fish-one a particularly large one-within twenty minutes. There is now an interval of near three hours, and then the father flies in again with yet another fish-a very long sand-eel it looks like, even bigger than the lastand the chick seizing it as it is let drop, before it touches the ledge, it disappears by a process which looks like magic. They are like little bag-purses, these guillemot chicks, and when they are full of money-*i.e.* fishes-it is difficult to think that there is room for anything more inside them—anatomy seems out of the question. Just before this, this particular one has lain in the queerest way under his mother's wing, flat upon the rock, with his legs stretched straight out behind him as one sometimes sees dogs lie. He has lain like this several times altogether, but never for long at a time. Now, after his surfeit, he has retired again. By the way, the inside of the little chick's mouth is pinky-flesh-coloured merely, whereas that of the old bird is of a fine lemon. Why should we, in so many species, find this difference in coloration between young and old in such a region

—the mature tint being, in all of them, so vivid and so often exposed—unless sexual selection has been the operating cause? We would not, I suppose, find a corresponding difference in the colour of the internal organs, according to the age of the bird.

The mother guillemot, now, for the first time whilst I have been here, utters that guttural, yet sharp "ik, ik, ik," note, which, two years ago, in June and early July, was the only one I ever heard on the ledge I watched so closely. When another fish is brought in there is some more of it, mixed with the *jodel*-ing; so that it seems now to be becoming more frequent. But never have I been able to make out with anything like clearness that the chick has uttered any note at all. No undoubted sound from it has reached me. The time before last that it was fed, however, I thought I heard a sharp little cry, but it was impossible to be sure whether this was from the chick or some of the thronging and clamouring kittiwakes perched and flying all about. In any case, it was nothing particular.

On the ledge, where there were fifteen birds yesterday, there are now only eight; on my ledge, which from here I see in its entirety, only the mother and chick, another bird—not the father—having just flown off. On all the others together I make out only thirty-six. I see but one other chick, but a bird is sitting as if she might have one under her. Nothing can be plainer than that the old birds have stayed behind on the ledges after the young ones

have left them, though whether the latter went by themselves or were conducted by their parents, who afterwards returned, I cannot tell. As the ledges, when I first came, were thick with guillemots, and as both sexes were represented, there being still a considerable amount of coquetry and dalliance, carried sometimes to an extreme length, there is no room for the hypothesis that the great majority had gone with their chicks, leaving only a few, who, for some reason, had not reared one. Had I got here to-day only I might have thought this, but, as it is, I should rather think that, full as the ledges were on my arrival, they were fuller still a few days earlier, and that the proportion of chicks was not much greater. The statement, therefore, which is made in works of authority, that, at the end of the breeding season, the young and old guillemots go off together for good, seems not to be in accordance with the facts of the case. Certainly it does not apply to the state of things here, in this particular year.

The chick is again stretched out quite flat on the rock with its legs behind it, looking most funny. Well, funny as you are, I must leave you for a little, for I've the cramp, as well as lumbago, so

> I am gone, sir, and anon, sir, I will be with you again.

And I am back at about seven, and find my little Sir still on the ledge, clasped by his mother's wing. I almost expected he would be gone, but have still a

chance now to see the flight down-if it should not take place in the night-a parlous fear. I was away for some four hours, and during this time had a splendid sight of seals. Quite near to where I watch the guillemots there is a little iron-bound creek or cove, walled by the precipice, guarded by mighty "stacks," and divided for some way into two by a long rocky peninsula running out from the shore. On the rocks in one of these alcoves were lying eight seals, which were afterwards joined by another, making nine, whilst in the adjoining one were four-also, as it happened, joined by another whilst I watched-making fourteen in all : such a sight as I had never seen before, except something like it as the steamboat passed a small rocky islet on my way to Gutcher. Here lay, indeed, some nine or ten seals ; but oh, the difference in the conditions! The horrid, vulgar steamboat, with the whistle blowing to frighten them ; the men, the women, the remarks-a stick pointed gunwise—oh, dear! Oh, the difference, the difference ! They were soon all in the water and, with their little oasis, left far behind. The sooner the better. Worse than "crabbed age and youth" "together" is wild nature seen from amidst vulgar surroundings, in vulgar company-like a drive through paradise with the Eltons "in the barouche-landau." But here-ah, here it is different. Not one human being save myself (and one excuses oneself), no tiresome prosaic figure---" godlike erect "---to break the sky-line above the mighty towering precipice that rises just behind

THE BIRD WATCHER

this dark, still, frowning bay. I can gloat on what I see here.

I watched these seals of mine on this, my first meeting with them, for a considerable time from the top of the cliffs-the glasses giving me a splendid view-and soon knew more about them than I had before, and got rid of some popular errors. For instance, I had always imagined that seals had one set attitude for lying on the rocks-viz. flat on their bellies-a delusion which every picture of them in this connection had helped to foster. Imagine my surprise and delight when it burst upon me that only some three or four were in this attitude, and that even these did not retain it for long. No; instead of being in this state of uninteresting orthodoxy, they lay in the most delightful free-thinking poses, on their sides, or much more than on their sides, showing their fine portly columnar bellies in varying degrees and proportions, whilst one utter infidel was right and full upon his broad back-yet looked like the carved image of some old crusader on the lid of his stone sarcophagus. Then every now and again they would give themselves a hitch, and bring their heads up, showing their fine round foreheads and large mild eyes; a very human - mildly human - and extremely intelligent appearance they had, looking down upon them from above. Again, they had the oddest or oddest-appearing actions, especially that of pressing their two hind feet or flippers together, with all their five webbed toes spread out in a fan,

with an energy and in a manner which suggested the fervent clasping of hands. Then they would scratch themselves with their fore feet lazily and sedately, raising their heads the while, looking extremely happy, having sometimes even a beatific expression. And then again they would curl themselves a little and roll more over, seeming to expatiate and almost lose themselves in large luxurious ease—more variety and expression about them lying thus dozing than one will see in many animals awake and active.

Even in this little time I learnt that they were animals of a finely touched spirit, extremely playful, with a grand sense of humour and-once againfilled "from the crown to the toe, top-full" of happiness. Thus one that came swimming up the little quiet bay, in quest of a rock to lie upon, seemed to delight in pretending to find first one and then another too steep and difficult to get up on to (for obviously they were not) and would fling himself off from them in a sort of little sham disappointment, gambolling and rolling about, twisting himself up with seaweed, and, generally, having a most lively solitary romp. A piece of bleached spar, some four or five feet long, happened-and I am glad that it happened-to be floating in the water at quite the other side of the creek, and, espying it, this delightful animal swam over to it and began to play with it as a kitten might with a reel of cotton or a ball of worsted. Morefrolicsome, kitten-hearted, and withal intelligent play I never saw. He passed just underneath it, and, coming

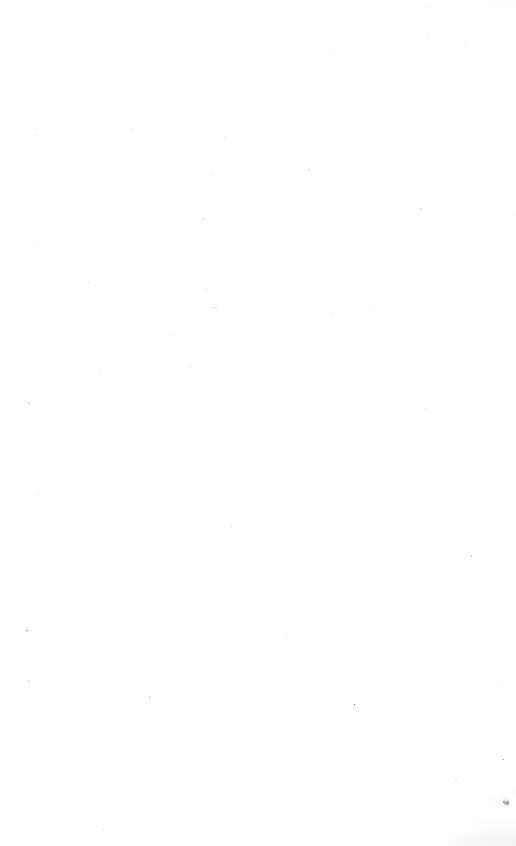
up on the opposite side, rolled over upon it, cuffed it with one fore-foot, again with the other, flipped it, then, with his footy tail as he dived away, and returning, in a fresh burst of rompiness, waltzed round and round with it, embracing it one might almost say. At last, going off, he swam to a much steeper rock than any he had made believe to find so difficult, and, scrambling up it with uncouth ease, went quietly to sleep in the best possible humour.

What intelligence all this shows! Much more, I think, than the sporting of two animals together. This seal was alone, saw the spar floating at a distance, and swam to it with the evident intention of amusing himself in this manner. That spar may be a piece of a shipwreck, may have floated out of the crash and confusion of human agony, hands may have grasped it, arms clung around it, to be washed off, stiffened in death. Now, in these silent dream-pools of the sea's oblivion, it is played with by a happy animal. And of all those influences that cling about a thing lifetouched, and tell their several tales to the clairvoyant, I would choose to feel and breathe this last.

Later, another seal played with this same spar in much the same way; yet both of them seemed to be quite full-grown animals. Then I saw something which looked like a spirit of real humour, as well as fun. Three seals were lying on a slab of rock together, and one of them, raising himself half up, began to scratch the one next him with his fore-foot. The scratched seal—a lady, I believe—took it in the



A SEAL'S PLAYTHING



most funny manner—a sort of serio-comic remonstrance, shown in action and expression. "Now do leave off, really. Come now, do leave me alone" and when this had reached a climax the funny fellow left off and lay still again; but as soon as all was quiet, he heaved up and began to scratch her again. This he did—and she did the other—three times, at the least, and if not to have a little fun with her I can hardly see why.

On my last return from the guillemots, the tide was rising, and most of the rocks where the seals had been lying were covered. I was in time, however, to see one-an immense parti-coloured sealgradually floated off. He lay upon a great mass of seaweed, and as long as he could stay there, he did; but little by little, as the waves came in, he rose unwillingly, seeming to cling to it to the last. Whether he really did grasp the seaweed with his hind feet, and stay, thus anchored, as long as he possibly could, I cannot say; but certainly, for a good many minutes, and keeping in much the same place, he stood, or rather floated, perpendicularly in the water, even including his head, so that his nose, which projected just a little above the surface, pointed straight up into the air. This was, at once, seen to be the case when he brought it down and stood with head in the usual position, as he did at intervals. Finally, he rolled slowly over and sought the depths in a vanishing blue streak. Another seal clung, in like manner, to the smooth rock he was on, letting the rising waves wash him about till at last he swam off.

CHAPTER XXVI

PIED PIPERS

HAVE just seen a sea-pie several times pull and tweak with his bill at the seaweed, apparently, till he secured something that had a white appearance. Holding this between the extreme tip of his mandibles, he each time retired up the rock with it, placed it, as it seemed to me, amidst some seaweed, and then This was looking down upon a great stack of ate it. rock at some distance, so that it was impossible to be certain in regard to such minutiæ. It seemed to me, as it has seemed before, that he had pulled, not hit, some small limpet or other shell-fish from off the seaweed, and then wedged it amidst other seaweed higher up so as to be able to pick out the inside more easily. Possibly, however, he merely laid it down without wedging it, but I cannot tell, and it is very difficult to get close enough to see just what these birds really do when they feed. On the grass, which they probe like starlings, one can get a pretty good sight of their actions, but not on the seashore. One thing I cannot help noticing, that whereas limpets are all about on the rocks and need no looking for, they walk about as if they were looking for something, and they leave the bare rock that is all stuck over with them for the parts that are covered with seaweed, and at

this they pull and tweak. In spite, therefore, of the peculiar wedge-like bill with its obtuse tip that seems so well adapted for striking a limpet or other shellfish with a sudden blow from the rock to which it had been clinging, I am beginning to doubt whether they often use it in this way, and especially whether limpets are a special food of theirs. I remember, however, once seeing a sea-pie make just the sort of blow required on the theory, but ineffectively, and in a peculiar half-hearted way, as a man might feebly clench his fist and strike in his sleep. It is curious that this trivial action, which seemed to be of an involuntary nature, made under a misapprehension discovered in time to check, but not to stop, the blow, has remained in my memory with a strange persistence and vividness, and on the strength of it I still think that limpets are sometimes struck from the rock in this way. There must, I think, have been something very specialised in the movement of the head and bill, slight as it was, to make me retain it so long in my mind's eye.

Afterwards I watched several of these birds feeding on the rocks, and I distinctly saw one with his beak amongst a bed of the same small blue mussels that I have seen the eider-ducks feeding on, picking and pulling at them in much the same way. Others, like the first one, pulled at the brown, or black, seaweed with which the rocks are plentifully hung. They ran down upon it when the sea receded, and back, or else jumped into the air or flew to another rock, when it

foamed in again. The sea boils in about the rocks off these iron shores in a tremendous manner, even when, like to-day, it is quite calm. On the stillest day, indeed, there is often a sullen swell which makes varying patches and long chequered lines of foam all around them. The sea never sleeps in these islands only slumbers uneasily like some terrific monster that anything may awake.

It is observable that some of these sea-pies are bolder than others in outstanding the swell of the waves. Some flee it before it comes, others fear not to have it wet their feet, whilst others, again, will almost risk being soused in it. But are these different birds, or are they all different at different times? On that, of course, must depend whether a process of differentiation, on evolutionary lines, is in action amongst them or not. For myself, I think the first, and that, from waders or paddlers, some of these birds may in time become swimmers-which would make them a sort of sea moorhen. The redshanks has gone farther in this direction, for he sometimes swims, but I know of no intermediate form, no sea and seashore bird corresponding to our moorhen or coot .---Mussels, then, and the beak thrust in amongst seaweed; but no limpets up to the present. Now limpets, as I said before, are all over the rocks, and so need no searching for. Why so chary, then, if the birds really affect them ?

> What ails ye at the puddin'-broo That boils into the pan, O?

Under favourable circumstances-solitude and nonmolestation are, no doubt, the most favourableoyster-catchers leave the foreshore, and browse, in flocks, over the grass-land beyond it. There are now, for instance, twenty-one, at the least, browsing, and I have watched them for some time digging their beaks well into the soil-to half their length, perhaps, sometimes-and then tugging violently at something. What this was, however, I could not, in any case, make out. It appeared to be taken into the beak before the latter was withdrawn. At last, howeverfor I like to see it all through the glasses, if I can -I went to the place, and, going down on my hands and knees, commenced a minute investigation. All about were round, straight holes going down through the grass into the turf, like those on a lawn after starlings have searched it, but, of course, larger. With my knife I cut down into several of these, and in two or three I found a small worm quite near the surface of the soil. It seemed as though the bird's bill had passed it in looking for or aiming at another one deeper down. Be this as it may, worms, it seems likely, form a common food of the sea-pie, for what else could these ones have been searching for? Worms, however, must be taken to include grubs, caterpillars, and so forth, an ordinary land diet, in fact, and did these birds get to preferring it, their habits would rapidly change. These, I should think, must a good deal depend upon locality, and perhaps, too, on their numbers, for birds become bolder when

they go many together. Even here the sea-pie is wary, and in a more populous place I doubt if anything would tempt him inland. Yet it is curious that in an island where I have been the one inhabitant I have never seen these birds feeding or walking anywhere except on the tidal shore, quite near the sea, though they often flew over the island, whereas here, in Unst, I have seen them thus searching the greensward in the neighbourhood of Burra Firth, which is a village, though a small one. But then they are much more numerous here, and it was always in the close neighbourhood of the beach, even when not upon it, that I saw them. In this last instance, too, they were no distance at all from the sea-but again, most of the smooth, turfy stretches, where it would be easy to find worms, are so situated. Here, then, is another path along which differentiation might proceed, and by which, in time, an oyster-catcher might become a bird with the habits of the great plover. It is curious that one of the cries of the latter bird in the spring, though very much weaker, is a good deal like the "ki-vick, ki-vick, ki-vick, ki-vick, ki-vick!" of the sea-pie, so that the one rendering might stand for both.

It is pleasant to see a fair-sized flock of these birds gathered together on a smooth stretch of sand just above the line of the waves. Some walk about or stop to preen themselves, others lie all along, whilst a few stand motionless upon one leg, fast asleep, with the head turned and the red bill hidden amongst the pied

plumage. Sometimes, when excited, or about to fly, they will run, for a little, over the sand, holding the wings elevated above the back, which has a quaint yet graceful appearance. They keep together, generally, in a group or series of groups, but at other times stand in a long row amidst or but just beyond "the light sea-foam" beating from the waves, looking as though the sea had cast them up, like a line of drifted seaweed. Gulls often come down amongst them, and the two sit or stand, side by side, quite indifferent to one another, each hardly conscious of the other's presence-so far, at least, as one can judge. Besides the piping note I have mentioned, these seapies have others-"queep, queep!" and a kind of twittering trill leading up to it-which remind one strangely of the great plover, and suggest a common ancestry.

I have confirmed to-day all that I said in *Bird Watching* (pp. 90-3) about the love-piping of these sea-pies. For some reason or other—rivalry, I think, passing into a form—two birds, that I put down as males, seem to like to pipe together to one who, by her quiescence and general deportment, I judge to be the female. I have seen this twice since coming here, once yesterday, and now again within these few hours. This last time it was almost as marked as in the instances I have described, and towards the end one of the piping birds showed a tendency to go down on his shanks, as though kneeling to his lady love. I do not think he quite did this, but he bent towards it. I am convinced myself that the dance of three peewits, as described by Mr. Hudson in *The Naturalist in La Plata*, has had some such origin as this. What one wants, in order to arrive at the real nature of the latter, is a number of detailed descriptions, instead of a mere general one, never in my opinion of much value in such matters. Pains, also, should be taken to ascertain the sexes of each of the three birds that takes a part in the show.

Another nuptial sport or play which these birds indulge in belongs to air-where, indeed, they pipe as strongly and easily as upon the ground. This that I speak of, however, appeals in an equal degree to the eye and ear. Two birds pursue each other closely, mounting all the while in a steep slant, till, having gained some elevation, both turn at an acute angle, and descend in the same manner, in a reversed direction, thus tracing the shape of a pyramid. Having completed the air-drawn figure, they immediately reproduce it, and thus they continue on quickly vibrating wings-now upwards, far above the cliff-line, now downwards, almost to the sea-piping the whole time in the fullest-throated way. Even in a small and sober-suited bird such a performance might attract attention. How much more here where, to the boot of the large size of the two artistes, and the noise they make, the boldly contrasted black and white of their plumage, the deep rose-red of the bill, and pale rosepink of the legs, give it a very lovely appearance. For myself, I have seen few things more striking.

CHAPTER XXVII

A BITTER DISAPPOINTMENT

A MAN here—one accustomed to the sea, but not a Shetlander-had told me that seals come up on the rocks as the tide goes out, and are floated off them as it comes up again-and this, indeed, I have He did not seem to think that they lay on the seen. rocks independently of the tides, so, as the tide today should be out about 5.30, I resolved to go to the same place as yesterday-the accustomed haunt of seals here-about two, so as to be in good time. I arrive accordingly, but what is my astonishment to see, on a vast, sloping slab of rock, ending in a miniature cliff, far above the highest line of moist seaweed, and comfortably independent of all tides, twelve seals, of varying figures and different degrees of obesity, lying, roughly, in two rows, and in all sorts of attitudes and depths of repose. What a sight ! What beautiful, fat, sleepy things ! and what a lovely little secret creek of the wave-lashed, iron-ribbed coast have they found to sleep in ! How the waters sleep in it, too ! How gently they creep to shores strewn with a wild confusion of titanic black boulders heaped about still huger fragments of the cliff's wastage, so huge, some of them, that they are dwarfed only by the frowning precipices that tower behind ! How they lick up upon the brown hanging seaweed that drips against the

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high, dark walls of this their boudoir, falling back from it again with a deep-sucked gurgle that ravishes the ear! What a snug sea-chamber, formed and fashioned by the waves! How the cormorants dive and fish in it, how the gull tears at the drifted carcase of its kind, how the puffins, in ceaseless flight between ocean and their myriad burrows, arch and dome it in ! Oh, it is a fine apartment! Its portals on either side are columns of spouting foam, and beyond lies the wild, houseless sea. A seal's dormitory !---how well do the wild things choose! So here, at once, one learns something different to what one is told. Seals care nothing about tides when they can get great slanting slabs that lie high and dry above them. At high tide, or low tide, or middle tide, they are equally ready to sleep.

I came down the steep descent in a way which made me and everything I had on, or carried with me —which was everything I have here to keep me warm and dry—both wet and dirty. At the bottom there was a mass of nasty, brown, wet discomfort; but it had successfully stalked the seals. They lay now right before me, so near as to make the glasses almost a superfluity. Yet how splendidly they showed them up—every mark, turn, and expression, their whiskers, wrinkles, and their fine eyes. And now, still more markedly than yesterday, I note that the favourite attitude of a seal, when lying asleep or dozing, is either on its back or half or three-quarters rolled over towards it. Out of all these twelve, only one lies in

IN THE SHETLANDS

the way that all illustrations persist in depicting them as lying. Three are absolutely on their backs, with their faces, or rather chins, looking, for long periods, straight up into the sky; others are almost as supine, but, by turning their faces sideways, seem to be less so, whilst the rest vary between this and full on their side, in which position they look much like a huge salmon lying on a fishmonger's dresser. Who has ever drawn seals like this? Where is there such a rendering? Always, as far as I can remember, they are made to lie on their stomachs. Yet here is the living thing.

As various as their attitudes seems to be the degree of their rest. Some raise their heads and look to this side or that, at irregular intervals that are not very long apart. Others seem sunk in deep and heavy slumber, their very attitudes—or rather, their attitudes more than anything else—expressing "the rapture of repose that's there." Yet even these, if watched for long enough, are seen occasionally to raise their heads, or scratch themselves lazily with their front paws, or expand or interlace their hind ones, moving them sometimes in a very curious manner suggesting the rotating screw of a steamer. It would seem, therefore, that, however fast asleep they may look, they are really only in a sort of doze.

Many of these seals are scarred and marked in a very bad way; raw and bleeding the places are sometimes, and I notice here and there what looks like a deep and gaping bite. These wounds are mostly on the belly, but the tail of one seal is bloody all round, as though another had seized it in its mouth and severely bitten it. No doubt it is all due to fighting, and the claws, I think, must have played as great a part as the teeth. Two other seals lie on a smaller rock, raised similarly above high-water mark, and a third on one that has only just become uncovered. Altogether, then, there are fifteen of them, making me think of Virgil's description of the Protean herds, written in those happy days before the accursed gun had thinned, as it now has, almost to the verge of extinction, the brave, honest, animal world. Surely the lower thing rules on earth for ever. Those who love living animals, with souls inside them, must see this world made dead and empty by those who love only their skins, stuffed with straw. They conquer, these Philistines, and the finer-touched spirit lies bleeding and suffering beneath them. How grossly we deceive ourselves! . . . I say that the "pale Galilean" has not conquered here, but that Thor has, though often in his rival's name.

The modern Christian poet speaks truth as though it were falsehood, and falsehood as though it were truth. Hear Longfellow, for instance—

> Force rules the world still, Has ruled it, shall rule it, Meekness is weakness, Strength is triumphant, Over the whole earth Still is it Thor's-Day !

Now that is truth—simple, plain truth. So it is put into the mouth of Thor—a heathen god—who, of course, is brought up only to be knocked down, and what he says confuted. Only through some such machinery can poets now speak the truth.

These seals differ greatly from one another, both in size, figure, markings, and colour of the fur, and especially, as a result of all, in beauty. Most of them look rough, swollen, dropsical creatures, but some are very pretty and elegant, and as these are smaller I suppose them to be the females. Often one may see a look and action in them that seems to speak of coquetry and being wooed.

It is curious that the one seal that lies on its face is the only one out of the twelve that is turned towards the sea. The sea, however, in this case is only a narrow inlet between the rock on which it lies and the shore, the great expanse of it being entirely hidden by the rock itself, which rises perpendicularly, like a cliff, from the highest point of its upward slope. The seal, therefore, really looks shorewards, but across a narrow strip of sea. His eyes, I notice, seem never shut, and at frequent intervals he turns his head to one side or another. All the rest lie either sleeping or dozing, though, as said before, most of them from time to time raise their heads a little and give a lazy look before sinking back into slumber. Is the one seal a sentinel? It looks like it. But why, if this were their custom, should seals ever sleep singly? And this they often do.

In spite of the shortness of all their four limbs, yet seals, as they stretch themselves, throw up the head, bend the neck and back, raise their fore-feet into the air, or push out the hind ones to their full length whilst at the same time stretching them apart, often have a very startling resemblance to a man. The curves and symmetries of the body-especially the upper portion of it-are sometimes wonderfully suggestive of the human torso, and the resemblance is often helped by the shape of the rock, which, by curving away from the body, allows the lines of it to appear. Nothing, in fact, can look both more like and more unlike a man than do these creatures. See one lying quiescent, a great, swollen, carrot-shaped bladder, and one may scoff at the possibility of any such resemblance; but wait and watch, and in a hundred odd ways one will catch it. When a seal scratches one of his front flippers it is wonderfully like a man scratching the back of one hand with the other. The hind feet can look almost more handlike. It is true that when the toes are distended to their full width the whole foot is just like a fish's tail in shape, but when they are not stretched so widely apart, and those of the one play, as they often do, with those of the other, then they have a wonderful resemblance to fingers-swollen, gouty fingers, it is true; gloved, too, they look-but still fingers.

Another interesting sight now in the adjoining cove, or rather in the adjoining half of this semidivided one! A seal comes to its rock there before the tide has sufficiently gone down to let it lie upon it. It plays about the rock, fawns upon it, caresses it, woos it, one might say, dives down and circumnavigates it, tries or pretends to try to lie upon it, even under the water, swims away and returns, and does the same thing several times; and as soon as the water is sufficiently shallow to allow of it, it reclines, sea-washed and gently heaving, till the receding tide leaves it high and dry. A pretty thing it is—very—to see a seal thus waiting for its chosen rock to appear.

I was at the ledges about twelve, and found my particular one a blank-not a bird there. Mother and child-father too, and every other bird besideswas off; the cupboard was bare. A bitter disappointment seized hold upon me, sunk into my very soul. Yet what else could I have expected? They may have gone in the night; and, in any case, how, except by actually bivouacking above that ledge, could I have hoped to be there at the exact moment when the departure took place? This I might have managed, or at least have managed better, had my little black sentry-box been a cottage, with some one in it to cook for me. Then I could have got to bed by eight, or at least nine, and been up by three or four; but without this it was impossible. I can do-and I do do now-with as little as most men, but porridge here is like charity, and oh, the time that it takes to make! They talked to me of ten minutes or a quarter of an hour at the outside, spoke even of

boiling milk flung upon the raw meal-said it would be good like that. "Women said so, that will say anything." Sweetly they smiled, but they understood not the conditions. Oh fire that will not burn up ! Oh kettle that will not boil! Oh egg that will crack when you drop it in ! Oh one spoon that goeth a-missing! This, and much more "of this harness," as the Spaniard says, has kept me up till ten or later-till eleven, once, when the frying bacon, "in the very moment of projection," was breathed on by the flame of paraffin. (Nothing but paraffin will make a fire burn up in the Shetlands, and even that gets damp sometimes.) So that, having my notes to extend and decipher, and with hard boards, and the wind, and a flea or so, and sometimes the lumbago, I may say, with Comus, almost any night, "What has night to do with sleep?" but without being able to continue, for certainly it has no "better sweets to prove."

But perhaps I should have missed it in any case. Perhaps—nay, I will be certain of it, to lessen heartache—they went off in the night. To think of it ! that young, tiny creature ! And was it then, in the dark night, when the wind was blowing so furiously, that you were carried down—a little soft, fluffy, delicate-looking thing—to be put upon the great tumultuous sea? through mist and driving spray, with neither moon nor stars to light you, to toss, for the first time in life, on those tumbling, rough-playing waves ? I, a grown man, was glad of all I could heap on my bed

to keep the wind away. I lay and thought of shipwrecks as I listened to it roaring, but I never thought of you, flitting out to sea through it all, cradled so delicately on your mother's back-if that, indeed, was the way of it. How could I imagine it? Even to watch you, as you lay warm on your cold ledge in the daytime, gave me the lumbago, though wrapped in two good plaids. But at night, and with nothing round you, to leave even that shelter, to cast off from the sheer, horrid edge "into the empty, vast, and wandering air," and then souse into yeasty salt water, without cold or chill taken, without a touch of lumbago-oh. what an iron constitution ! You are not the lathe painted to look like iron; you are feathers in steelwork, rather, a powder-puff made out of adamant. But here I register a vow that I will return here, some day, in the height of the putting-off season, and see the little guillemots fly from their cliff's cradle, or ride down on one cradle to another-their mother's soft, warm back, and then

In cradle of the rude, imperious surge.

CHAPTER XXVIII

TAMMY-NORIE-LAND

SEAL-COVE again to-day, and there, upon the same great slab, and at much the same time, five great seals are lying, whilst on other rocks there are six more. The tide is coming in, and one that is on a low rock goes gradually off with the wash of it. The others lie on, though now, at high noon, the tide, I think, must be in. Seals, therefore, do not go off their rocks at high tide, as a custom, unless the water leaves them no choice. Of course if they have a favourite rock which is covered at high tide, they are then compelled to do so, but in that case they can seek another one which is not so restricted, and lie there sleeping, if they will, "the washing of ten tides." Their bed-times are not governed by the ebb and flow of the sea.

The larger seal which I spoke of yesterday is called here, locally, a bottle-nosed seal, or at least some so designate it. He is here again to-day, rising at intervals and staring at the sky, in the other of these two-in-one-contained bays, which seems to be more particularly his own. When he rises he remains for a full minute standing upright, as it were, in the water, with his muzzle about six inches above it and pointing straight into the sky. Then it sinks for an instant, and the next his whole head appears above

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the surface, held horizontally. Another moment, and his back makes a bent bow in the water, as with a rolling motion, something like that of a porpoise, he dives and vanishes. He always makes for a great mass of brown seaweed clothing the rocks, now covered, where I had first seen him lying, and extending down into the depths. In this I lose him, but whether he stays there or merely coasts along it I cannot tell; but he always rises in about the same spot, and this suggests that he comes each time from the same place. Seals may, perhaps, lie upon the bottom, under the overarching edges of the rocks they bask on at low water, and wound amongst the seaweed that grows on them; but their sleep, if they slept, would be broken.

I took out my watch and measured the time this great seal stayed under water, finding it to be, on an average, from ten to twelve minutes, his longest submersion being fourteen minutes and a half. I then thought I would descend the cliffs and get along the shore to just opposite where he usually came up, which would be very near him. This I easily managed, concealing myself once, when I knew that he would rise, and going on again as soon as he was down. When he next came up I had the satisfaction of beholding him from some dozen or twenty yards. He was considerably larger than the common seal, his skin perfectly naked and of a bluish colour, which, with the breadth of his back, gave him something the appearance of a hippopotamus in the water. This was when

I just got his back, without the head or other parts. Seen *in toto*—or as much of him as could be seen he more suggested, both by shape and colouring combined, a gigantic mole; or again, his head, with the long cylindrical-looking nose, had a very porcine appearance. But whilst floating upright in the way I have described, he looked like a buoy merely, of which the muzzle, with its round-bore nostrils—they looked as if a ping-pong ball would just fit into each of them—was the apex. All resemblance to a living thing was then gone; but when the great beast brought down his head again into a natural position, and looked about with full eyes, dark and mild, one saw that he was an intelligent and refined animal.

Modification seems to have gone considerably farther in this species than in the common seal. The skin, except for the long, strong whiskers, is absolutely smooth and hairless. The nose, head, and neck are more in a line, whilst the back rises from the latter with a still gentler undulation. This elongation and prominence of the nose, or rather the muzzle, which is broad, also, in proportion, take away from that full and rounded appearance of the forehead which gives such a look of intelligence-almost of humanity-to the common seal. But this, no doubt, is an inferiority in appearance only, and "the eye's black intelligence" remains. But though the jewel is there the setting of it is very poor. There appears to be no defined eyelid, so that when the eye is shut it looks like a mere slit in the naked skin. Eyebrows, however,

are represented by three or four strong white bristles on either side. The nostrils open and close with strong expansive and contractive power, and blow the water away from them almost like the spouting of a miniature whale. When wide open they look as round as the aperture of a champagne or beer bottle, which they somewhat suggest, and this, perhaps, has given their bearer his title of bottle-nosed. Whether this is more than a local name amongst the Shetlanders I do not know. It is here that I first heard it, and that was two years ago when I was describing this very selfsame animal, as I now believe, to a young man who suggested that "perhaps it was a bottlenosed seal."

Such was the peculiar creature which I now set myself to observe, and which, except for a long interval during which it disappeared altogether, continued to rise and sink and rise again, till after five, when I left, having observed it thoroughly. Several times he went down with a fine roll over, sideways, as well as forward. This I should not have seen had I gone away in an hour or two; but why I stayed so long was that I hoped to see this great bottle-nosed seal lie upon the seaweed-covered rocks at low water, as I had seen him do once before. For some reason or other, however-I doubt not there is a good onethere has been no such low tide since that day; the seaweed has but just shown for a little, and the great creature, who could hardly have lain there, has not lain anywhere else-not, at least, in this cove which he

affects, or for the greater part of the time. He seems to be a much less lazy sort of seal than the common kind. I am not quite sure why he went away, as he did for an hour, from about three. I thought at the time I had alarmed him, for although I lay flat upon a huge slanting rock, with my head not projecting beyond the edge, he seemed to look full at me with a questioning countenance, and then till four o'clock the pool that had known him knew him no more. Whilst he was gone I, with a lot of labour, brought a number of flat stones from the chaos of rocks and boulders which makes the beach here, and with these I made a sort of loopholed wall, through and from behind which I could look, as I had done before to watch the shags on my island. That, by the way, was still standing when I got there again after two years. I wonder how long this other may remain on this most lonely shore, to which no one, to judge by all appearances, ever comes down, from one year's end to another. Long may it be so !

Just before beginning my masonry I had an interesting experience. From a crevice in the pilings of these huge black boulders that lie strewn in wild confusion between the base of the cliffs and the sea making the gloomy beach—from amongst these, I say, and within about three steps of me, forth hopped a little wren, and began immediately to procure food in the more or less near neighbourhood of my boots. The boulders had hitherto seemed bare enough, but wherever the wren went numbers of little hopping

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things, with long bodies and many legs, began to hop and skip about like a routed army. They seemed to know the enemy was amongst them, and for the wren, he pursued them with the most relentless activity, and looking very fierce about it. He came so near me that I could see him catch them individually, see the whole chase, all his little runs, hops, turns, flights, flutters, each with its distinct object; nor did l ever see him chase one that he did not shortly capture. From the very first, something in the bird's manner shot into me the idea that he had never before seen mannever, at least, with the eye of a full recognition. Supposing him to live and breed in this one great rocky amphitheatre, this would be likely enough, for even at the top of it, on the ness-side, one man only lives, and that but for three months in the year. It is true that during those three months the ness is often visited-by thieves and others-but none, it is safe to assume, either know of or come down to this cove.

At any rate this wren came at last so near me that I expected every instant he would hop on to one of my boots, and although he did not actually do this I believe it was simply because he saw nothing there to catch. He often ran up the steep, rough sides of these great blocks with the greatest ease, investigating all their chinks and every little piece of moss or lichen that adhered to them. Always he had an air of severity, something *farouche*, about him, which was very amusing to see. It is fascinating, I think, thus to

watch little familiar woodland birds by the wild sea shore and amidst stupendous scenery like this.

Puffins, at the right time, are, no doubt, very amorous, as even now, when they should be a little *passé* in such matters, I have seen them so. In this state they will sometimes indulge in quite a little frenzy first of kissing and then of cossetting—nibbling, that is to say, each other's feathers about the head and face. Indeed, such pretty little lover-like actions mostly on the part of one bird of the two, I presume the female—were never seen.

But they are not only loving, these little birds. They are playful too, and, as I think, sympathetic. Thus when one, standing on the rock, gives its wings a little fluttering shake, another by the side of it-its mate, probably, but perhaps only its friend - will sometimes catch one of them in its adorned beak and playfully detain it. This is done with wonderful softness-obviously in good part, and so it is received. Is it not fun, then, playfulness? Perhaps it is not. It may be but a part of the passion-play, and we should not step too lightly in our judgment from primaries to secondaries. On my last visit here, for instance, whilst climbing painfully along this black beach-a horror of heaped stones and fragments, making, often, unscalable, albeit only miniature, precipices-I happened to see-looking down from a huge tilted rock that guarded one entrance to a little dark valley of confusion-I happened to see there a poor little puffin that had got its head caught in some

way amongst the rocks at the bottom, and was struggling and flapping its wings to escape, as it lay flat along one of them. Another puffin was standing beside it, and whilst I looked it took hold of the distressed one's wing and, as it seemed to me, pulled at it as though trying to assist, but in a feeble half-knowing sort of way, which had its pathos. But here, too, how careful one should be in attributing motives, either to birds or men; for this puffin may merely have taken hold of its companion's wing, as I have seen others do whilst standing together at their ease. If so, then the action was not prompted by any idea of aiding, but merely by general good-will, unsharpened by a proper realisation of what had taken place. Here, once again, was a flapping wing, which may have suggested no more to the mind of the bird taking hold of it than it had upon other occasions. Not that I think this myself, but in the little I saw there was no certainty. Unfortunately, I startled away the helper (as I like to think of him) and this to no purpose, since after various attempts to get to the distressed puffin I had to give it up, for though I might have reached it there seemed a likelihood, if I did, of my having to remain there indefinitely in its place. To slide down a steep rock is one thing, but to climb up it again quite another-nor was there any other way that I could see of getting back when once at the bottom. Some time afterwards, however, I could not see the bird, so, though I purposely did not look very closely, I am glad to think that it had got free.

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This little incident gives a hint as to some of the mischances which may befall puffins here. With such a jumble of heaped rocks and boulders there are great facilities for slipping or getting between them in such a way as might make it difficult to get out again, and an alarmed bird, caught as this one was, would, of course, pull and pull, wedging itself all the tighter. If found in this situation by a gull—or perhaps, skua its fate would be sealed, and its picked and disembowelled carcase would then be left upon the rocks, as I have so often found it. Such a misfortune, indeed, cannot be supposed to be of common occurrence ; but the hundreds of thousands of puffins must be considered.

I have said that puffins are amorous. They are bellicose also-the two, indeed, are interwoven together-and have a tendency-but this, perhaps, is included in the main proposition-to fight in mêlées. When two are about it a third and then a fourth joins, and so on, and several will stand menacing one another with their sharp, razor-like mandibles held threateningly open, and often moving like scissor-blades. Then, all at once, one springs on another, seizes him by the scruff of the neck, and-so it has often appeared to me-endeavours to throw him over whatever edge they both happen to be near-for they are generally near the edge of something. It is curious-or at least it takes one by surprise-that when the beak is thus opened it looks quite different to what it did before. Being divided, its breadth, which is such a

peculiar feature, is much diminished, and the leaf-like shape is also lost since the mandibles diverge more and more widely towards the tips, like a real pair of scissors. Thus the bird itself, since the beak is so salient a part of it, suddenly loses its characteristic appearance.

Marvellous is this beak, and indeed, as far as its appearance is concerned, it exists now wholly and solely for courting and nuptial purposes, being put on each spring before the breeding season commences, like the false nose in a pantomime, which, though not so artistic and without the same justification for its employment, seems equally a necessity to the æsthetic susceptibilities of a British audience.¹ It reminds one something of the bill of a toucan, much abridged -beginning, as it were, from near the tip-and as far as it goes it is perhaps even more wonderful, for not only is it brilliant with rose-red, lemon-yellow, and bright bluish-grey, but the lines of colour correspond to alternate ridges and furrows running down the length of it, which give it a fine embossed appearance, as though both the sculptor and painter had exercised their art upon it. The funny little orange-vermilion legs are more brilliant even than the bill, but they are cruder. You do not think of a real artist in their case, only of a clever artisan with a paint-pot, who, employed by the other, has taken

¹ No wonder, when such a play as *The Palace of Truth* as played here by refined amateurs before the cultured and cultivated, is thought to require one—and very like a puffin's, too, it was, before it began to melt.

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up each bird as its beak was finished, and given it several good coatings. That is what it looks like, and so close do the little toy things stand, and so little do they seem to think or care about you that, with the proper materials, you almost think you could do it yourself; yes, and would like to try, too—if only there were a few with the paint off—black coats, white waistcoats, vermilion legs and all : except the beak and face, which are beyond you, unless, indeed, you are an artist—and a clever one—yourself.

It is wonderful sitting here. To have a dozen or twenty of these little painted puffins on a rock within three paces of you, in full view, with nothing whatever intervening, some standing up, others couched on their breasts, some preening, some shaking their wings, most of them unconscious of your presence, a few just looking at you, from time to time, with an expression of mild curiosity unmixed with fear, seeming to say "And who may you be, sir?" is almost a new sensation.

Yes, this is Tammy-Norie-land. Puffins are everywhere. They dot all the steep, green slopes, and cluster on the flat surfaces or salient angles of half the grey boulders that pierce the soil, or lie scattered all about it. Great crowds of them float on the sea, and other crowds oppress the air with constant, fastbeating pinions, passing continually from land to sea and from sea to land again, whilst many, on the latter journey, even though laden with fish, circle many times round, in a wide circumference, before finally

settling. The soil, too, is honeycombed with their burrows, and in each of these, as well as in the nooks and chambers of rocks that lie closely together, there is a young fluffy black puffin, which increases the population by about a third, to say nothing of those parent birds which may also be underground. A million of puffins, I should think, must be standing, flying, or swimming in the more or less immediate vicinity; the air, especially, if it be a sunny day-or, rather, for a sunny minute or so-is like one great sunbeam full of little dancing bird-motes. On the shore they stand together in friendly groups and clusters, and leave it for those much larger gatherings where they ride, hundreds together, ducking and bobbing on the light waves like a fleet of little painted boats, each one with a highly ornamental birdor, rather, puffin-headed prow. Thus their duties are carried on under the mantle of social pleasure; it is all a coming and going between a land-party and a sea-party, so that the domestic life of these birds would be a type and pattern of feminine happiness if only they were a little-by which I mean vastly-more noisy. Puffins indeed are somewhat silent birds-at least they have been so during the time I have seen them-from the middle of June, that is to say, till the middle of August-though as they can and do utter with effect, on occasions, they are, perhaps, more vociferous at an earlier period, before domestic matters have become so far advanced. Not that amidst such a huge number of them, their note-which I have

described---is not frequently heard; but still, whatever I have seen them doing they have generally been doing it dumbly. This includes the series of funny little bows or bobs, accompanied by a shuffling from one foot to the other, which the male, one may say with certainty, is in the habit of making to the female, but which probably the female-as in the case of other sea-birds I have mentioned-also sometimes makes to the male. A display of this sort is usually followed by a little kissing or nebbing match, after which, one of the birds, standing so as directly to face the other, will often raise, and then again lower, the head, some eight or nine times in succession, in a half solemn manner, at the same time opening its gaudy beak, sometimes to a considerable extent, yet all the while without uttering a sound. All this looks very affectionate, but I have often remarked that after one such display and interchange of endearments, the bird that has initiated or taken the leading part in both, turns to another, and repeats, or offers to repeat, the performance-for on such occasions it does not, as a rule, receive much encouragement from the second bird.

The male puffin, therefore—for I hardly suppose it to be the female who acts in this way—would seem to be of a large-hearted disposition. This silent opening of the bill which I have spoken of is, therefore, an accustomed—probably an important—part of the advances made by the one sex towards the other; and here again I have been much struck by the bright

yellow colour of the buccal cavity which is thereby revealed, and the display of which supplies, in my opinion-as in the other cases I have brought forward Handsome-or, at any rate, outré-as the puffin's beak is, it is hardly, if at all, more striking to the eye than is this vivid gleam of one bright colour, revealed suddenly in a flash-light by this distension of the mandibles. It is like the sword gleaming out of the scabbard, whose brightness comes as a surprise, whereas the latter, however rich and ornate, is a permanent quantity, and so lacks the charm of novelty. The fact that the puffin's beak is a superlative ornament does not, in my opinion, render it unlikely that there should be another one lying within it. It is absurd in such a matter to say that this or that is enough, and in the puffin's case we are certainly debarred from doing so, since not only has the beak been decorated, but the parts adjacent to it, as well as the whole head, have also been, so as to join in the general effect. The eye is almost as salient a feature as the beak itself, and moreover, where the mandibles meet at their base, there is on either side a little orange button or rosette, formed by foldings of the naked skin, which must certainly rank as a sexual adornment in the eyes of all who believe in such a thing, and with which, apparently-as in the other cases—the inner coloration is continuous.

The puffin, therefore, makes the seventh species of sea-bird in which, as I believe from my own observa-

tion, the buccal cavity is displayed by the one sex as a charm or attraction before the eyes of the other, having been specially coloured in order to render it so. A question, however, is raised by this conclusion in regard to which I have, as yet, said nothing, but which I will shortly discuss in a separate chapter, since I have been unable to compress it into any of the foregoing ones. It had occurred to me as a result of my general field observations, before these particular ones which have only served to emphasise it.

CHAPTER XXIX

THOUGHTS IN A SENTRY-BOX

THAT wren was an interlude, and the puffins another. When he of the bottle-nose returned, I at first used the shelter which I had constructed during his absence, but soon left it for another great precipice of a rock that also overhung the pool, and in which a huge fracture, half-way up, made a splendid natural concealment. Afterwards, however, I came to the conclusion that as long as one behaved with any sense of propriety, avoiding loud or startling noises, and not putting oneself shamelessly *en évidence*, these seals would never take alarm, for indeed they seemed to have lived all their lives in a happy unfamiliarity with man, upon which terms I devoutly hope they may continue.

Well, like the world, one does go forward, though slowly. Not so many years ago the sight of these seals would have made me want to shoot them. God alone knows why—or, rather, I know why, perfectly well : the inherited instinct of the savage, which is not in itself, as some humanitarians think, a bad thing, or at any rate in the savage it was not, only it is now out of place, and reason and morality together ought to insist upon crushing it. It is because the wish, or rather passion, to kill wild animals is so natural, that it seems so right to those who have it, for the strong

desire to do almost anything makes almost anything seem right, or rather the impelling force in such cases is a force, whereas that which seeks to restrain it is weak, cold, frigid, like the voice of reason in love.

Moreover, I believe that to sin out the evil in one is nature's true way of progress-in which I join issue with the spiritualistic doctrine of repressionand therefore were it not for the many ill consequences, the worst of which is specific extinction, I should not think a man did wrong to prey upon the animal world as long as to do so was his nature-that is to say, the stronger part of his nature; nor can it be denied that he who does so is acting in accordance with the scheme of the universe, as far as it is possible to make it out, whereas the humanitarian seems for ever to be flying in the very face of the deity, who, "with no uncertain voice," has said, through all time, to all His creatures :-- "Kill one another." Whether one would be right to obey such a deity after one's nature has begun to rebel against His methods is another question, though, as plants must be included amongst the creatures, it would be rather difficult not to; but that, at any rate, is what He, or nature, or whatever we may choose to call it, has most clearly said, and I think that humanitarians, though they may be very right, ought to consider the difficulty here involved. My impression is that they shirk it.

But in regard to sport, I wish that every civilised representative of the savage in this particular respect

would arrive at the point where I now stand, by the same natural process which has brought me there. One cannot long watch any creature without insensibly beginning to sympathise with it, to enter into its state, to imagine oneself it-which is to be it-and then, how can one shoot oneself? Why, it would be suicide. As for me, I watch wild animals, when I get the chance, not only with sympathy, but with envy. I am eternally wishing myself them-strange as it may appear to some who, I suppose, rate themselves That was Iago's case. "Ere I would," says highly. he, etc., etc. (something very preposterous), "I would exchange my humanity with a baboon." Well, and why not? With a guarantee against getting into the Zoological Gardens, most of us would be gainers by the bargain. I, at any rate-I say it merely as an expression of my conviction; let my enemies make the worst of it-I, at any rate, would. As to the advantages which would have accrued from the arrangement in Iago's case-not only to himself, but to almost all the dramatis personæ of the play-they are too obvious to need pointing out. Baboons, however, stand so high in the scale that the change for many of us would, except in regard to surroundings, be hardly perceptible, so that the desire to bring it about may offer too little proof of that force of sympathy which I pretend to. But I do not stop there, and even at this very moment I would gladly exchange myself with this bottle-nosed seal I am watching, could I bring myself to cheat the poor fool so. Oh that fine

sensuous roll in the water ! made with such sense of enjoyment—so slow, so lazy, eking it out—the whole of the animal seeming to smack its lips.

We "human mortals," I believe, quite underestimate the sensuous pleasures of animals. Their mere ways of moving must often be infinite joys to them, seeing that besides the motion itself-as with this seal, the gnu, or the springbok, the halfflying arboreal monkey, or the soaring bird-there is the ecstasy of perfect health and strength and the freedom of perfect nudity-absolute disencumbrance. The first of these may be felt almost, perhaps, in as great a degree by some savages, but if I may judge by my own experience it never is and never can be by a civilised man leading a civilised life. With us, speaking generally, health is more a negative than an affirmative proposition. To be well is not to be ill. But in the veldt, where one walks all day and eats one hearty meal by the camp-fire at the end of it, it is like a strong wine that one has drunk. It is a mighty, stirring, active, compelling force-ending, however, in fever, which the animals don't get. No doubt the pleasures of the intellect are of a higher order than those which spring from mere corporeal ecstasy; but is the civilised man, writing a treatise, happier than the savage in his war-dance, or the capercailzie going through his love antics? "That is the question"; or, in other words, does civilisation make for happiness ?

Who, in spite of much laboured reasoning to the

contrary, can doubt that more happiness enters into the life of most savages than into that of most civilised men? Not I, who have seen the Kaffirs, unblessed by our rule, and read Wallace's account of the Papuans in The Malay Archipelago, which, to show that I am not talking nonsense, I will here quote : "These forty black, naked, mop-headed savages seemed intoxicated with joy and excitement. Not one of them could remain still for a moment. . . . A few presents of tobacco made their eyes glisten; they would express their satisfaction by grins and shouts, by rolling on deck, or by a headlong leap overboard. Schoolboys on an unexpected holiday, Irishmen at a fair, or midshipmen on shore, would give but faint idea of the exuberant animal enjoyment of these people." The grown Papuan, therefore, is happierso it struck Wallace—than the civilised schoolboy. It is a well-chosen point of comparison. We are not ashamed, most of us, to look back to our boyhood as to a state of high-tide happiness that, upon the whole, with a fluctuation or two not quite in favour of the intellect, has been receding ever since; but we kick at thinking savages happier than ourselves. Kick as we may, the Arab on his horse or his swift dromedary, the Lap on his snow-shoes, the Esquimaux in his canoe, the Indian chasing the buffalo-as he used to do-or the Pacific Islander surf-riding, carry it, I believe, as far as sheer happiness is concerned, high over the civilised man with all his greater powers of mind and his advanced morality.

"But witchcraft, with its terrors," says some one. True; but I have lain in a Kaffir village on the banks of the Zambesi, within the murmur of its Falls, and watched the young men and maidens dancing together in the full moon—there seemed little of terror there. And I have seen my own boys talking and smoking *dacha* round the camp fires. Where was the brooding terror, or the dark cloud? Savages do not anticipate, as we do. They feel no uncertain evils, not, at least, till they are very near indeed, till the wizard is actually "smelling" them out; they live, like the animal, in the joy or pain of the moment, and their moments have more of joy and less of pain in them than ours.

But if witchcraft were the "dark cloud that hangs for ever over savage life," that Lord Avebury (Sir John Lubbock) tells us it is, have we no dark clouds, and have we less or more capacity for feeling them ? What is an engagement to dine then, or an enforced call ? and consider the dark cloud of having to go every year, en famille, to the seaside, that hangs over the civilised married wretch ! Surely the certainty of things like these is worse than only the risk of a witchcraft exposure, a thing which, when it occurs amongst savages (and it was the same with ourselves) is often, if not generally, deserved—for evidence of which I would refer to Miss Kingsley.¹

Then take travelling. It is referred to by Lord Avebury as one great source of pleasure which civilised people enjoy, but which savages do not.

¹ West African Studies, pp. 157-68.

He should have restricted the proposition to civilised women. No word more terrible in the ears of a husband than "Paris" on the lips of a wife. What worry, what anxiety, fear of adventurers, horror of waiters, hatred of hotels—what misery, in short, of almost every degree and kind, do not men go through who have to travel with their families! How they would all stay at home if they only could, and how glad they are—but this is a setoff—when they get back! As a real fact—and every one must really know it—a very great number of socalled civilised pleasures are much more in the nature of pains—and acute ones—to those who are most truly civilised. The joys of the savage, however, are real joys.

But comparisons of this sort are of little value, since they can only be drawn by those who belong to one of the two states, and not to both of them, and who, therefore, besides their prejudices, and that their wish is generally father to their thought, are of necessity unable to feel, or even to imagine, much of what is felt by members of the opposite one. Practically, of course, it is always the civilised man who passes judgment, and in doing so he often adds cant and insincerity to the disabilities under which he labours. For whilst insisting to the utmost on all the pleasures—many of them empty and artificial—which belong to and represent the civilised state, he says little or nothing about certain elementary, and, therefore, very real ones, which savages enjoy much more

unrestrainedly than do we. Very fair, very impartial, truly, when the question is not which is the more advanced man, but which is the happier man. We have much the same sort of thing in the case of comparisons made by Christian divines and historians as between paganism and Christianity-their relative degree of truth, merit, influence in a right direction, etc.; judgment, of course, being always given in favour-generally immensely in favour-of the latter. Seeing that the pagans are all dead and cannot answer any point made against them, I wonder these complacent bestowers of unqualified approval on themselves are not ashamed to bluster so, where they have it all their own way. When I read one of these prejudiced panegyrics, affecting the form and manner of impartiality, I always seem to see a picture of some reverend old learned priest of Jupiter or Apollo, who, in similar pompous periods, and with the very same tones and gestures which one can imagine in the Christian author, goes over the same ground, and, with the same show of absolute fairness, settles everything precisely the opposite way.

As I have slidden out of a consideration of the relative happiness enjoyed by man and the lower animals into a similar appraisement as between the civilised man and the savage, I will just express my opinion (at this moment) that wherever the latter has the advantage over the former, the animal *a fortiori* has it still more. Amongst animals, moreover, there is not the same inequality of pleasure, as between the

sexes, that there is, or is thought to be, amongst savages. But this is enough of *la haute philosophie*.

How snug it is, now, whilst I write this by the red fire in the little sentry-box, on the great lonely ness that the wind howls over, whose head-gear are the wreathing mists, and whose skirtings the sea and the sea-birds! There is no one within near three miles, and I myself am alone. On the "great lonely veldt," as city journalists like to call it, you have your boys, the fires, and the oxen sitting by the waggon-chain, and chewing the cud—a picturesque, a romantic and interesting scene, but not a lonely one. Here it is real aloneness—yet I wish I had not to say, with Scipio, that "I am never less alone than when alone." True solitude should imply no fleas.

During the time that this large bottle-nosed seal was away, a small common one-the same that lies on the rock in this sea-pool every day from before it is uncovered to the flowing in of the tide-came and disported himself-as usual I had said, but it was not quite the same. He first began to dive and reappear, at regular intervals, as does the great one, and I soon found that he was behaving like him in all things, even to the standing on end in the water, like a pegtop, with his nose straight up in the air. As his body, however, is not so bladdery, and his nose not so extraordinary, he did not present so strange an aspect. He differed, moreover, in the length of his immersions, which was not more than five or six minutes, whilst those of the other one-the great, S

portly bottle-nose-were as under, viz., from 12.6 to 12.15; from 12.16 $\frac{1}{2}$ to 12.26; from 12.27 to 12.36 $\frac{1}{2}$; from 12.37 $\frac{1}{2}$ to 12.48; from 4.26 to 4.39; from 4.40 to $4.54\frac{1}{2}$; from $4.55\frac{1}{2}$ to $5.7\frac{3}{4}$; from $5.9\frac{1}{2}$ to 5.23; from $5.24\frac{1}{2}$ to $5.37\frac{1}{2}$; from $5.38\frac{1}{2}$ to 5.51; from $5.52\frac{1}{2}$ to $6.4\frac{1}{4}$; from $6.5\frac{1}{2}$ to $6.18\frac{3}{4}$. Thus only three out of a dozen of his subaqueous excursions was for less than ten minutes, the shortest one being for nine minutes and the longest for fourteen minutes and a half. His stays above water were of even more uniform duration, varying between a minute and a minute and a half, except in one instance where he stayed a minute and three quarters. An animal of regular habits, by my fay! No doubt the great bottlenose can stay down longer on occasions if he wishes it, but as this is his usual period, it must, I suppose, be what he finds most comfortable ; and the same should apply to every other kind of seal. The nostrils of this larger one have the appearance of being more highly developed than in the common species, and this may have something to do with his more prolonged submersions, if I may take what I have seen in these two individuals as typical of their respective communities.

Returning now to the common seal, what distinguished him this afternoon from the bottle-nosed one was that, after he had come up and gone down again several times, he at last remained floating for half an hour or more in this perpendicular fashion, his head for the most part straight up in the air, whilst at

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intervals he would open his mouth widely, and keep it so for some seconds at a time, then shutting and again opening it, as though he had some special object in so doing, though I can form no conjecture as to what it was. The inside of his mouth being-especially the parts farthest down-of a deep and bright red, contrasted most vividly with the cold grey of the water and the general colourlessness of this northern scene. The grass must be excepted from this picture; but though bright enough if looked at by itself, it is unable to overpower the general effect imparted by sky, by sea, by naked rock and precipice. After a considerable time spent in this curious performance, the seal at last desists and swims to his rock, now but thinly covered by the waves. He circumnavigates it, hangs about it affectionately, lies upon it in the wash of the waves, swims away again, returns, and now, it being just possible to do so, reclines in earnest, adjusting himself to his greater satisfaction as the tide recedes.

But it is not only on the rocks that seals lie sleeping. They do so also—as one is doing now—in the sea itself, rising and sinking with the heave and subsidence of the wave, advancing and retiring with its flux and reflux without exhibiting any kind of independent motion—less, indeed, than they indulged in, in basking on the rocks; for they do not, whilst thus floating, seem so inclined to scratch or kick or stretch the legs, or go through any other of their various quaint, uncouth actions. The eyes are shut, but they open at long, lazy intervals. They float, or rather

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drift, thus, mostly belly downwards, but will roll to either side or even round on to the back, not lying horizontally, however, but aslant, with all except their head, or rather face, sunk down in the water, just like a sack of something, quite enough asleep to seem dead; in fact, as much as possible they make the sea a rock. Delicious they look, thus idly swayed about with the play of the waves—drawn this way and that, sucked down and then back again; mixed up with a tangle of seaweed. An amateur watcher of seals feels inclined to wonder what they ever do except sleep, or try to sleep. Great sleepers they certainly seem to be, and this is the daytime. Are they, then, nocturnal? The carnivorous land animals from whom they are descended probably were so.

CHAPTER XXX

INTERSEXUAL SELECTION

IN all the birds which I have enumerated as having a bright or pleasingly coloured mouth cavity, acquired, as I believe, through the agency of sexual selection, the sexes are alike, both in regard to this special feature, and also in their plumage and general appearance. They are alike also in their habit of opening and shutting the bill, as it were, at one another, and in their other nuptial actions or antics. The first of these two identities involves no difficulty. In many birds of bright plumage the female is as gaudy, or almost as gaudy, as the male, and it is then assumed (by those, at least, who follow Darwin) that each successive variation in the hue and markings of the latter has, by the laws of inheritance, been transmitted in an equal or only slightly less degree to the former. As far, therefore, as the particular kind of beauty which I am here considering is, in itself, concerned, the arguments for or against its acquirement by the male, through the choice of the female, are the same as in regard to that of any other kind, nor do they extend any farther; but in the display of it by the female as well as by the male a fresh element enters into the problem, as it does also in the case of any other nuptial display common to the two sexes.

The brilliant mouth-cavity can, of course, only be exhibited by the opening of the bill, and in doing this-in the particular way, and with the accompaniments described in each case-both sexes act alike. In other words, if there is really a conscious display in the matter then each sex displays to the other. What conclusion are we to draw from this? Either, as it appears to me, we must assume that both the male and female equally strive to please one another, or that, while the actions of the male mean something, those of the female mean nothing, or nothing in particular, having been transmitted to her, through him, by those same laws of inheritance which have given her, in these and other cases, his own ornamental plumage, and not in accordance with any principle by virtue of which she has been rendered more and more attractive to him. For, except in some special cases where the female is larger and handsomer than the male, the Darwinian theory does not suppose that the hen bird has been modified to please the taste of the cock, whose eagerness, it is assumed, has made this quite unnecessary.

But any uniformly repeated action is a habit, and habits must bear a relation to the psychology of the being practising them, from which it would seem to follow that whatever be the mental state of the male bird through whom any habit has been transmitted to the female, such mental state, being the cause of such habit, must have been transmitted to her along with it. To suppose, however, that the female acts in a certain

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way in order to please the male, but that since she has not learnt to do so under the true laws of sexual selection, but has acquired her character incidentally, merely, by transmission from the male, and that, therefore, her conduct has no effect upon the male, since it has not been brought about in relation to his disposition, which is so eager as to make it indifferent to him what hen he gets, as long as he gets one-to suppose all this is-well, for me it is very difficult. The plain common sense of the thing seems to be that if the female displays her charms to the male in the same way that he displays his to her, she must do it for the same purpose, and is no more likely to be wasting labour, or expending it unnecessarily, than is he. If we do not give the same value to actions identical in either sex-if we will not allow "sauce for the gander" to be "sauce for the goose"-we become involved, as it appears to me, in inextricable confusion; and, moreover, can it be supposed that a habit which bore no fruit would remain fixed, or be governed by times and seasons, even if it did not cease on account of its inutility? Assuming, then, as I feel bound to assume, that the languishing actions of two fulmar petrels when sitting together on a ledge, or the throwing up of the head and opening the bill at each other of a pair of shags, each during the breeding season, are equally pleasing to one sex as to the other, may we not, or are we not rather compelled to think that such special adornments as we admit in the male to have been acquired through the agency of sexual selection

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(whether we include amongst these the bright colouring of the mouth or not), have been acquired by the female also in the same way—that there has been, in fact, a double process of sexual selection instead of a single one only; that the male, as well as the female, has been capable of exercising choice ?

Great stress has been laid upon the eagerness of the male, as contrasted with the covness of the female, in courtship, throughout nature; but were the latter to possess some eagerness also, her share of it need not be so great as the male's, so that we should not, by supposing her to, be contravening this principle : she might even fly, or seem to fly, from his pursuit. How, then, might her own ardour become valid to the extent of influencing the choice of the cock? As it appears to me, this might be brought about through the jealousy inspired in one hen bird by the sight of attentions paid to another. She, the jealous one, might have behaved coyly had the same, or another, male wooed her, but her feelings become inflamed and her modesty is lost when she sees that which, for all her seeming, she would have wished for herself, bestowed upon another. She interposes, let us say, at first, by attacking the favoured female, but if this one is as strong and as determined as herself, there will be now a series of indecisive combats, of which the cock will be the spectator; and why should not these combats be varied with displays, or something of that nature, on the part of either combatant, with the view of attracting him? If so, the cock who has previously,

we will suppose, been chosen for his good looks, becomes in his turn—for how, under such circumstances, can he help it ?—the chooser between those of others ; and thus there will be a double process of selection carried on between the two sexes.

But may we not go a step farther in our suppositions ?- for which, as I believe, there is a considerable body of evidence, in spite of the frequent great difficulty and consequent absence of proper observation. The theory of sexual selection is based upon the assumption that choice is exercised by the female, and this exercise of choice must go hand-in-hand with a corresponding development of the critical faculty in regard to the comparative merits of different males, which again would involve a power of taking a liking, or a dislike, to any one of them. How are we to reconcile all this with that quiescent, waiting-tobe-spoken-to frame of mind which we assume to be that of the hen bird in regard to the cock, during the season of courtship? A decided preference should show itself in actions. Why should she never exercise her critical faculty except as between such males as are rivals for her favour? If, for instance, she is courted by two or more males, why should she not declare in favour of a third or fourth that is either indifferent or courting another hen, on the ground of his superior beauty alone ?

Why, in fact, should it not be with birds as it is with men and women? Women, to casual observation, seem at least as coy and modest as do hen birds, in whom, however, there can be no idea of modesty. They are supposed to be wooed, and not to woo; but they both can, and, to a considerable extent, do exercise the latter power. If they cannot ask, they can demand to be asked; and to think that the latter is a less powerful agency than the former is to think very naively. If women were not often, in reality, very active wooers, such common expressions as "setting her cap at him," "drawing him on," "throwing herself at his head," etc., etc., could hardly have arisen, and it must not be forgotten that the same thing can be done both coarsely and refinedly, visibly and so as to be hardly perceptible. No doubt there is something called modesty amongst civilised women, but there are also jealousy and prudential considerationsvery powerful solvents of anything of the sort. Yet with all this we have the prevailing idea that (even in a civilised state of things) it is man who woos and woman who is won; man who advances and woman who retires; man who seeks and woman who shuns. The reason probably is that the actions of man are of a more downright nature, and easier to observe and follow, than those of woman-who, as a clever writer has remarked, approaches her object obliquely-and, secondly, that it is man mostly, and not woman, who has given his opinion on this and other matters through the most authoritative channels-for it is man who, by virtue of his intellect and his selfishness, holds the chief places of authority.

May not these factors have affected in some degree,

also, our conclusions in regard to the lower animals? Here, too, the actions of the female may be often more subtle and difficult to follow than those of the male, though in many cases, as I believe, they are seen plainly enough, but, for a reason shortly to be mentioned, attributed to the male. Yet in the case of birds, at any rate, it is very noticeable in some species that the females, after the couples have once paired off, are extremely eager in their enticements of the males to hymeneal pleasures, and it seems difficult to reconcile this eagerness after marriage with any very real coldness before it—especially as the supposed coy sweetheart of one spring has been the forward wife of the spring before. But there is another point, in this connection, which it is of the utmost importance for us to bear in mind. Birds in which, if in any, we might expect to find the courting actions alike or similar in the male and female (and this would imply an active wooing on the part of each) are of two classes-viz. (1) those in which the sexes are alike or nearly so, and (2) those in which, though they may differ conspicuously, the one is as handsome, or nearly as handsome, as the other. In the first case, the colours of the hen must either be due to the selective agency of the cock, or they must have been transmitted to her through the latter (as being prepotent), in which case they can have no significance as far as the theory of sexual selection is concerned-two possibilities which equally require proving. In the second casebut examples of this nature are not, I believe, numerous

-a double process of sexual selection seems the only available explanation. Only when the female is plain and unadorned, and the male gaudy, does it seem primâ facie evident that the latter, alone, has been selected for his beauty. But it is just this last class of cases that has attracted the largest amount of notice, for, as might have been expected, it is precisely here that we find the males-often the most ornate of birds -indulging in the most extraordinary antics, which, of course, arrest attention. In observing these birds, however, the sexes are at once, and without difficulty, distinguished, and as the females do not share in such antics, we assume, when we see similar ones on the part of birds, the sexes of which are indistinguishable, that here, also, the same law holds good, though there is by no means the same presumption that this should be the case. Confronted with a certain effect, which implies a corresponding causal process, in one case, we assume this same process in another, though we cannot there see the effect. We see, for instance, one stock-dove manifestly court another, and at once assume that the courting bird is the male. The courtship, as is often the case, ends in a pretty severe battle, where blows with the wing are given and received on either side. We may be surprised to see the female so belligerent, but we do not yet doubt the fact of her being the female. The courting bird is, at last, repelled, and a fight of much the same description takes place between him and another stock-dove. This one might just as well be a female as the first, but in

the midst of the strife both birds bow, several times, according to their custom, and we then feel sure that both are males. Meanwhile, however, our assured female, who has been left where she was, is seen to bow to another bird who has alighted near her, upon which we change our minds, conclude that she is a male after all, and that what we, at first, thought to be courtship, was only a fight between two cocks. And thus we go on, correcting and correcting our opinionuntil in a gathering of perhaps a dozen or more stockdoves there would seem to be no female at allbecause if they were pheasants or blackcocks the hens would not behave in this way. Again, when one first sees a shag throw itself down before another one, and go through a variety of strange gestures to which the latter makes no response-if not by a caress of the bill-it is impossible not to feel sure that the bird thus acting is the male shag, and the other the female. But when one afterwards sees two birds at the nestmale and female beyond a doubt-mutually or alternately performing some portion of these antics, though without the primary prostration,¹ what is one to think then? In such cases as these, where the sexes are not to be distinguished except by dissection, or having the bird in one's hands, we cannot be sure that it is always the male we see displaying to the female, and never the female to the male. I believe, however, that we have tacitly assumed this to be the case.

An incident which I have recorded elsewhere seems

¹ I instance only what I have actually seen, and go no farther.

to me to bear upon the foregoing remarks.¹ Here a stone-curlew that had been sitting quietly for some time rose and uttered some shrill cries, in obedience to which another came running up, and after the two, standing close together, had each assumed a remarkable and precisely similar posture, the nuptial rite was performed. Were it not that, even by the witnessing of this last, it is not always possible to differentiate the sexes of birds. I could say with certainty that it was the female stone-curlew, in this instance, that called up the male; but the very striking attitude which the birds assumed, and which, if it was not a sexual display, it is difficult to know what to call it, was identical in both. Again, in the case of a pair of crested grebes that I watched during two successive springs everything (and there was once something very striking) in the nature of an antic or display was indulged in equally by the male and female. Peewits, also, behave during the nuptial season in a very marked manner, both whilst flying and upon the ground, and as far as I can make out-though I will not here speak with certainty-the conduct of both sexes is the same throughout.

The nuptial cries or notes of birds are a chief way in which the one sex, on the theory of sexual selection, endeavours to render itself pleasing to the other. When these charm our own ears to an extent which we think deserving of the name of song, it is usually the male alone that utters them, those uttered by the

¹ Bird Watching, pp. 18-19.

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female not rising to the height of such a definition. To how great an extent this law prevails I have not the knowledge to say, but it is not universal. The female canary, robin, lark, and bullfinch all sing, especially when widowed, though their song is not equal to that of the male, whilst in the red oven-bird of Argentina both sexes frequently join one another for the express purpose of singing a duet. Surely in this last case, especially, if it be assumed that the song of the male is uttered with the purpose of pleasing the female, or has that effect, the converse ought also to be assumed : and if so, why should not the hens, as well as the cocks, be sometimes chosen for their song ?

But all nuptial notes of birds are equally song, in the sense that they are uttered under the impulse of sexual passion, and many of these are the same in both the sexes. Here, again, there is a danger of assuming, without sufficient evidence, that the characteristic courting or love-note is uttered only by the male. A mistake of this kind has been made in the case of the nightjar-both sexes of which I have heard "churr" together on the nest-and no doubt in many other instances, including, very possibly, the cuckoo. In a vast number of cases, however, the cries of the two sexes during the love-season are known to be the same. They may not always, when this is the case, be either very wonderful or very beautiful, but to suppose that the nuptial actions and notes of male birds are intended to attract and charm

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the female only when they are of a very pronounced and extraordinary character, or very musical, would not be logical. They must be always directed to this end, if at all, and if the females indulge in the same gestures and utter the same sounds, their motive in doing so, and the effect produced by their doing it, should be the same, but directed towards, and acting upon, the male.

Why, then, should the male not exercise some choice, especially should there be, in addition, jealousy and competition amongst the females? As to this, it is not easy to imagine a desire on the part of one sex to please the other, unattended with jealousy, nor can jealousy exist without competition. We are not, however, confined to likelihood, for it is certain that the hen bird does sometimes court the cock and fight for him with rival hens, even in those cases where the cock alone is beautiful. In support of this I will quote some cases long ago brought forward by Darwin, though not as pointing in the direction in which they seem to me to point. Darwin, then, in his magnificent work, The Descent of Man-now, as it appears to me, little read and much required to be-writes as follows : "Mr. Hewitt states that a wild duck, reared in captivity, after breeding a couple of seasons with her own mallard, at once shook him off on my placing a male pintail on the water. It was evidently a case of love at first sight, for she swam about the new-comer caressingly, though he appeared evidently alarmed and averse to her overtures of affection. From that

hour she forgot her old partner. Winter passed by, and the next spring the pintail seemed to have become a convert to her blandishments, for they nested and produced seven or eight young ones" (p. 415). (Here, then, we have a male as coy as a female, who is wooed and ultimately won.) Again : "With one of the vultures (Cathartes aura) of the United States, parties of eight, ten, or more males and females assemble on fallen logs, exhibiting the strongest desire to please mutually" (p. 418). (Audubon, I think, is here quoted.) Again : "On the other hand, Mr. Harrison Weir has himself observed, and has heard from several breeders, that a female pigeon will occasionally take a strong fancy for a particular male, and will desert her own mate for him. Some females, according to another experienced observer, Riedel, are of a profligate disposition, and prefer almost any stranger to their own mate" (pp. 418-419). I myself had once a pigeon of this feather, and so marked was her personality, and really and strangely profligate her acts, that I have never forgotten her. Again we have : "Sir R. Heron states that the hens have frequently great preference to a particular peacock. They were all so fond of an old pied cock that one year, when he was confined, though still in view, they were constantly assembled close to the trellis-walls of his prison, and would not suffer a japaned peacock to touch them. On his being let out in the autumn, the oldest of the hens instantly courted him, and was successful in her courtship. The next year he was shut up in a stable, т

and then the hens all courted his rival.' Female birds not only exert a choice, but in some few cases they court the male and even fight together for his possession. (I, however, would demur to the word "few" and ask how much we really know about it.) Sir R. Heron states that with pea-fowl the first advances are always made by the female; something of the same kind takes place, according to Audubon, with the older females of the wild turkey. With the capercailzie the females flit round the male whilst he is parading at one of the places of assemblage, and solicit his attention" (pp. 418-419). What is this if not a double courtship? And the male capercailzie, if I remember rightly, is capricious in his selection of the hens. Again : "Mr. Bartlett believes that the lophophorus, like many other gallinaceous birds, is naturally polygamous, but two females cannot be placed in the same cage with a male, as they fight so much together" (p. 420). Finally we have this : "The following instance of rivalry is more surprising as it relates to bullfinches, which usually pair for life. Mr. Jenner Weir introduced a dull-coloured and ugly female into his aviary, and she immediately attacked another mated female so unmercifully that the latter had to be separated. The new female did all the courtship, and was at last successful, for she paired with the male; but after a time she met with a just retribution, for, ceasing to be pugnacious, she was replaced by the old female, and the male then deserted his new and returned to his old love" (p. 420).

How ill do such facts as the above accord with the theory that the male bird is too eager to exercise choice in regard to the female. Darwin also (p. 420) adduces evidence to show that the domestic cock prefers the younger to the older hens; that the male pheasant, when hybridised with the fowl, has the opposite taste, "is most capricious in his attachments, and, from some inexplicable cause, shows the most determined aversion to certain hens"; that some hens are quite unattractive, even to the males of their own species; and that, with the long-tailed duck, certain females are much more courted than the rest, of which last state of things I have, if I mistake not, seen a hint with the eider-duck. Again, then, what becomes of the supposed indiscriminate eagerness of the male? Has not this theory been accepted too unreservedly, and on a too slender foundation of evidence?

It is significant that most of the above-quoted observations were made on birds in confinement, or under domestication, in which states, of course, they are very much easier to watch. Of the intimate domestic habits of birds—that is to say, of most birds —in a wild state, we know, I believe, very little, and have assumed very much. I might give here two cases—I have elsewhere given some instances—of what appeared to me to be violent rivalry on the part of hen blackbirds; but I refer again to what I have noticed in regard to the nuptial habits of those seabirds, the bright interior colouring of whose mouths

I have drawn attention to, and endeavoured to account for.

To recapitulate. As the theory of sexual selection supposes that the one sex has been adorned and made beautiful in accordance with the taste and choice of the opposite one during the love season, we might expect that amongst those birds where the males are beautiful and the females plain, the more active part in courtship would be taken by the former; for this is the very road along which such beauty must have been gained. On the other hand, if the females had been equally ardent they would have arrived, by the same road, at the same, or a similar, goal. Therefore, in the above cases we ought to be prepared to find what we do find. But when the sexes, whether beautiful or not, resemble one another, there is not the same reason for supposing that the male alone actively courts, and since, in such cases, it is very difficult to tell by actual observation whether this is so, or not, we really know very little about the matter. Instead of knowing, we assume, and of two birds, either of which may be, as far as outward appearance goes, either the male or the female, that one which we see pursuing or paying court to the other is always the male in our eyes. Yet even amongst those species where the male alone is adorned, courting on the part of the female is by no means unknown, and rival hens sometimes fight for the cock. How much more, therefore, is this likely to be the case where the sexes are alike, and where, consequently,

as already explained, there is not the same *primâ facie* probability of one only (the male) having been selected!

The fact that both the male and female of various birds of this class utter the same cries, and indulge in the same antics, during the nuptial season, is some evidence that either sex tries to please—*i.e.* courts the other; for similar actions and utterances must be taken as implying a similar psychology—they are not like colours or markings—and we cannot, therefore, conceive of them as being merely transmitted, by the laws of inheritance, through the male to the female, and having a mental significance only in the case of the former, or conversely. A bad constitution the result of intemperance—might descend through the father to the temperate daughter; but if the habit of drinking be also inherited, so must the flaw in the character, of which it is the outcome.

If we admit that certain antics (or cries) common to both sexes of certain birds, have had a like origin in the case of either, then, if by such common actions some common beauty is displayed, it is unreasonable to think that this has been acquired through the action of sexual selection in the case of the one sex (the male) and not in the case of the other (the female), for where the psychology and actions are the same, the laws governing them must be the same, and their effects the same.

The above considerations, enforced as they have been by much that I have myself observed, make me doubt whether the view that where any species of bird has come under the influence of sexual selection, it is the one sex only-almost always the male-that has been modified by its action, is a correct one. It seems to me more probable that where the sexes are alike, or where they differ markedly, and are both handsome, each of them has acquired such beauty as it possesses in accordance with the taste and choice of the opposite Darwin, though he did not consider this probone. able, yet recognised its possibility, as the following passage will show: "It may be suggested that in some cases a double process of selection has been carried on : that the males have selected the more attractive females, and the latter the more attractive This process, however, though it might lead males. to the modification of both sexes, would not make the one sex different from the other, unless, indeed, their tastes for the beautiful differed ; but this is a supposition too improbable to be worth considering in the case of any animal excepting man. There are, however, many animals in which the sexes resemble each other, both being furnished with the same ornaments, which analogy would lead us to attribute to the agency of sexual selection. In such cases it may be suggested with more plausibility that there has been a double or mutual process of sexual selection, the more vigorous and precocious females selecting the more attractive and vigorous males, the latter rejecting all except the more attractive females. But from what we know of the habits of animals this view is hardly probable, for the male is generally eager to pair with

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any female. It is more probable that the ornaments common to both sexes were acquired by one sex, generally the male, and then transmitted to the offspring of both sexes."¹

I have given my reasons for doubting whether this last hypothesis really is more probable than the other one of a double process of sexual selection-at any rate as far as birds are concerned : and I suggest that, in their case, the whole question of the relations of the sexes to one another should be reconsidered after much more careful observation, especially in regard to those species where the male and female are alike, or where they differ markedly, and are both handsome. As to the possibility of the taste for the beautiful differing in the two sexes of any bird or animal, I cannot see why this should not sometimes be the case. One sex is attracted only by the beauty of the opposite one, so that if, owing to slight constitutional differences between them, the variations which occurred in the one were somewhat different to those which occurred in the other (which hardly seems very unlikely), these might be selected and "added up"-to use Darwin's expression-along two gradually diverging lines, and this would lead, insensibly and necessarily, to divergence of taste as between the male and the female. The law is for the one sex to admire what it gets in the other. Therefore, supposing individual differences in both, and a choice in regard to them on the opposite side, taste, in each case, must be

¹ Descent of Man, pp. 225-226.

guided by the variations offered for it to work upon ; and though the final result of this, if such variations were affected by sex, might appear very surprising, there would be nothing remarkable in the process by which it had been arrived at. Must not, in fact, a difference of taste as between the two sexes—and that often a very decided one—in any case exist? For the male bird of paradise, let us say, is attracted by the dull hen, whilst she, presumably, admires only the resplendent cock. Beauty is only a relative term, and even the plainest bird possesses a good deal of it. We may, of course, say that it is only the hen bird, in such cases, which can be said to admire, but it would be difficult, I think, to defend this view. Both are sexually excited, and the eye is a channel for both.

These, then, are my arguments in favour of a process of *intersexual* selection in nature, and I think that those men, at any rate, who grant taste and choice to female animals, should be prepared to grant it, also, to their own sex, though the thinking woman, perhaps, may be expected to take another view. But, of course, I know that there are still numbers of people who do not accept the theory—or, as I would prefer to call it, the fact—of sexual selection at all, even in its narrower scope. I believe, however, that the chariness and hesitation which has been shown in adopting the latter of Darwin's two great principles, is a survival of that attitude of mind which caused such opposition to his whole teaching. Man's body is one thing, but his mind—especially all those supposed high things in it

which we call, together, spirituality-is quite another. It offends our human pride to think that animals should woo and marry very much as we-when the better part of our nature is not in a strait-jacket-do ourselves. Therefore, there must be no preferences, no love-matches here, all must be in obedience to a blind sexual instinct-something very animal-about which we, of course, with our rings and our ceremonies, our novels, sonnets, spiritual affinities, and prudential considerations, know nothing. Unlike ourselves, the female brute must be ready to mate with any male brute that chance may throw in her way, and if it throw several, she must be absolutely impartial between them, there being neither looks, soul, nor money for her to found a choice on. Therefore she will go to the strongest, and ask no better, for love she knows not, nor can parental authority and filial obedience combine here to give the preference to riches or title, coupled with age or disease. Only by her complete passivity could the female brute be properly differentiated from the human female, and this she must be, or man (the worst brute that the world has yet seen or is ever likely to see) would lose his pre-eminence.

But do no difficulties attend this theory of entire impartiality on the part of the hen bird (for we will keep now to birds) in respect to the cock, during the pairing season? That she is sexually excited by him —as a male, at least, if not as an individual male—we would surely have to conclude, even in the absence of direct evidence, for how otherwise could the breeding be accomplished? Then what a most extraordinary thing it would be if she were excited in precisely the same degree-not one jot or tittle more or less-by any one male as by any other ! Whatever the nature of that sexual appeal may be which every cock makes to every hen, and by virtue of which she feels that he is a cock, and not a hen like herself, why should we suppose that any two individuals should be more exactly alike in it than they are in anything else? But if there is not this absolute unity, then there is difference, and such difference in the degree of the sexual charm flung out by each male, *must* produce preference and choice in the female. The whole theory of evolution is based upon the undisputed and indisputable fact of individual variability; nor is there any one thing or quality, bodily or mental-amongst the higher animals at least-that does not vary largely in the different individuals possessing it. As it appears to me, therefore, choice in the one sex with regard to the other is what might have been, on a priori considerations, expected; though I can well understand that, as amongst ourselves, it would often be held in abeyance, or nullified, by the operation of higher-that is to say, more inexorable-laws, and also that its manifestations would often be too subtle and hidden for us to follow them. But we first, in deference to our human prejudices, assume something which is improbable in itself, and then obstinately resist a mass of the

most striking evidence which shows our assumption to be wrong. In all intellectual and spiritual qualities, man, by the laws of evolution, may have greatly outdistanced his fellow animals; but it should never be forgotten that in judging of how far this has been the case, we—and there is no other court are the most partial and prejudiced judges—dishonest, blinded, full of assumptions, delighting to deceive ourselves, and miserably vain.

If female birds are really so apathetic and male ones so equally satisfied with any partner they can get, it seems difficult to see on what principle the two, when paired, remain constant to one another during the nesting season, and still more, perhaps, why numbers of birds pair for life. Such a state of things ought, one would think, to lead to promiscuous intercourse. But if birds mate by preference and elective affinity, such constancy is what one might expect. What we want, however, to settle this and all other questions relating to the habits of animals is long, close, hard, exhaustive observationreal observation as distinct from mere writing, and even from good literature. There is wofully little of this, in my opinion, and none the less so because an impression exists that there is a great deal.

CHAPTER XXXI

AN ALL-DAY SITTING

A NOTHER all-day sitting with the seals. From the edge of the cliffs in the morning, and in the same pool by which I had sat all yesterday, I saw a creature which I at first thought was a seal of the common kind, then-for it began to look larger-that it was the bottle-nosed one, but which soon proved to be neither the one nor the other. In size it looked equal to Bottle-nose, if not even larger, but it had a magnificent skin, the whole of the undersurface, as well as the sides, being blotched and spotted black and white, like a leopard's or jaguar's, except that the markings are larger. In heaven's name, now, what creature is this? Can it be the sea-leopard that I have often read about, but of whose habitat, etc., I know nothing till I can look it up again ?- the state of many a naturalist in regard to many a species, sometimes, perhaps, but shortly before he writes a treatise upon it. Upon coming down, now, and watching it closely, I see that in shape and general appearance-except for its wonderful skin-it is very like the bottle-nosed seal. Its body, however, is not so cylindrical, but bulges out into a greater roundness below the neck and shoulders, so that its weight may be somewhat greater. Its nose looks broader, and nearly, if not quite, as long.

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I think, indeed, it is the larger animal of the two. I can make these comparisons, for both are here together now, and they continue for hour after hour to haunt the pool; but whilst he of the bottle-nose rises always at his long intervals and soon goes down, the knight of the leopard comes up at as short, or even shorter ones than the common seal does, and sometimes stays for a longer time, as witness these twelve successive appearances, with their corresponding disappearances, which I timed, partly to know, and partly to feel scientific : from 11.44 to 11.48; from 11.50 $\frac{1}{4}$ to 11.53 $\frac{3}{4}$; from 11.55 to 12; from 12.1 $\frac{1}{4}$ to 12.5 $\frac{1}{2}$; from 12.7 $\frac{3}{4}$ to 12.11; from 12.14 to 12.17 $\frac{3}{4}$; from 12.20 to 12.24; from 12.25 $\frac{3}{4}$ to 12-30 $\frac{1}{4}$; from 12.32 to 12.37 $\frac{1}{2}$; from 12.44 to 12.49; from 12.50 $\frac{3}{4}$ to 12.55.

Also, though he often pegtops it, he has never yet pointed his nose straight up into the sky, which my bottle-nosed seal invariably does. Generally he soon adopts the horizontal attitude, and continues in it for the rest of the time he is up. When he goes down, he rolls round, as well as over—by which I mean both like a porpoise and like a barrel—and then his spotted, or rather blotched, belly makes a splendid mosaic under the water, for it is not only itself, which were enough of beauty, but the most lovely glaucous green is flung upon it, through which, all glorified, the pattern appears. A magnificent sight! "The very phenix !" Poor Bottle-nose is quite eclipsed.

This great beauty of the skin-which, strange to

say, instead of being invisible was most conspicuously apparent-can only, I think, have been gained through sexual selection, and its being confined to the belly and sides may bear some relation to the habits of the animal. Suppose that this one is the male, then does his leopardess look up at him as he rolls in blubberly grace and barrel-like symmetry above her, or, since he swims with equal ease upon his back or belly, has the fair, portly expanse of the latter made it the principal area of decoration? Does he offer it as a carpet to her when she goes abroad, saying "Swim upon me," or display it over her as a banner, crying "Be these thy colours !" or, in swift circumvolution, does he enmesh and entwine her with it, playing about her like a stout coruscation, as the two swim together through grots, and caves, and pebbled halls, and cool groves of golden-brown seaweed? All this is the secret of the deep; but there is the belly, and it fires the imagination.

I am now sure that it was this great and glorious sea-leopard, and not the other large seal, that I first saw lying on the seaweed, and I had hoped it might have done so again as the tide went out. But I was again disappointed. As before, little of this deep-growing seaweed was exposed by the tide, nor did either of the two lie on the rock itself, or on any other one. Neither did the common seal come this time, whereas, in the adjoining cove, there was the accustomed complement. This one seems the haunt *par excellence* of these two superior creatures, but,

very unlike the common seal, they are always in the water.

I have now satisfied myself that the young guillemot is petted, sometimes, by birds that are not its parents. The facts are as follows : having watched the seals till past five, I determined to explore a little, and walked out along the promontory which forms the opposite side of this little Shetland fiord, and the end of which, except for the outlying stacks, must be about the most northern point of that portion of the British Empire which imperialists care least about-I mean the British Isles. Here I found some more guillemot and kittiwake ledges, and on one of these were some half a dozen of the former birds, one being a young one. The latter was with its parents, on a place which, though it seemed to project but a hair's breadth, was yet the safest part of the ledge, which was very narrow and dangerous-looking. Here I left him for a very short time, to get further down the rocks, but on my return I found he had left this comparatively secure place and was now right away, on what, but for a very slight slanting slope, with a giddy projection here and there, looked like the sheer face of the precipice. No bird was with it: the chick was evidently in distress, and now, for the first time, I heard a little sharp note proceeding from it, which really did sound something like the word "guill," or "guilly." Some feet above where the chick was, but separated from it by a fearfully steep and dangerous face of rock, another guillemot sat on

a ridge, which it almost covered. The chick made several efforts to scale this mauvais pas, failed as many times, but at last, with manifest danger to its poor little life, got up it, and stood by this bird, on the tiny ridge. The latter immediately stood up also, and bent over it, jodel-ing, and cossetting it with its beak. Here, then, it seemed evident, was one of the parents. But now there appeared, pressing forward amongst others, on that part of the cliff where the chick had been, an eye-marked bird who seemed to be much excited. She made her way along to near the place from which the chick had scrambled up, and, as one may say, called it down to her, though I heard no cry, for it followed her back along that fearfully steep and dangerous place, having now always to climb down instead of up, until, at last, it was back on the ledge where it had, at first, been sitting, and which, compared to where it had strayed to, looked almost safe.

Could I give all the details of this fearful journey, it would make interesting reading, but I sat in rain and wind, and my hands were so numbed with cold that I found it difficult to use the glasses, and quite impossible to take notes. All that I can say now this same evening—is that once, in getting down to its mother, who waited for it at different stages, it did actually fall and roll head over heels down the rock. I thought all was over, but it recovered itself on a tiny projection, seeming none the worse, and, shortly after, arrived with its mother on the ledge. Here there were some three or four more birds, and the



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chick, as I noticed, now, and several times afterwards, seemed glad to go to any of them. One it ran up to, and this bird behaved exactly as the first one had done, jodel-ing over it, and caressing it with its bill. Now, if this last bird was the chick's parent, the one that had a little before done the same thing, and still sat in the same place on another part of the rock, could not also be, for that the eved bird who had fetched it away must have been either its father or mother, is a thing indubitable, not only by reason of that one act, but also on account of its general conduct both before and afterwards. One, therefore, of the two birds that caressed the chick must have been a stranger to it, but the fact is that both were. for whilst the last that had done so was still on the ledge, and but shortly afterwards, in flew a bird from the sea with a fish in his bill, and fed the chick. Now, I cannot, as far as eyesight goes, affirm that this bird was not the one that the chick had first gone to, and by whom it had been kindly received; but that one of a pair of guillemots should sit for a long time, not only by itself, but far removed from the chick and the other one, and that afterwards, when the chick had gone to it, this other one, its own mate, should excitedly fetch it away, is a thing quite out of accordance with all I have yet seen of the domestic relations of these birds. It is true that, in this case, a motive can be imagined for the chick's excursion, but whilst my later observations have shown me that, as the chick gets older, it does move about, I have never

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known it trouble about an absent parent whilst it had one by it. I have never, that I remember, seen the chick seek to be fed before one or other of its dams had flown in with a fish, and I attribute the anxiety which this one showed to reach the bird in question, to its distress at finding itself in so precarious a situation. In this, however, I may be wrong, but since it is beyond doubt that one stranger bird caressed the chick, it is not very essential to prove that another did. The likelihood is that one would be as willing to as another, and I did, indeed, notice that all the birds on the ledge to which the chick was brought back, seemed to take a kindly interest in it, especially another white-eyed one, which the mother several times drove away from it-being jealous, as I suppose. The state of affairs appeared to me to be this, that all the birds had a tender feeling towards the chick, that the chick, if left to itself, was inclined to go to any one of them, and that whatever one it did go to was ready to jodel over it, and caress it. Not having been able to note down every little thing at the time, I cannot now give the general evidence on which this impression was founded, but I have recounted the special incidents.

An interesting question arises here—at least it seems interesting to me. Is the conduct that we have been considering the result of mistake or confusion on the part of either the grown birds or the chick—or of both of them—or does it spring from an extension of sympathy in the one, and of *Kinderliebe*,

or cupboard-love, in the other ? Personally, I believe that both of these two latter brain-processes have to do in producing the result in question, but that the first-a tenderness, namely, on the part of the old birds-is the preponderating influence. We must remember that all these childless birds upon the ledges -and when I first came the ledges were crowdedmust have had children with them only a short time ago. When, therefore, a chick runs suddenly up to them, just as their own chick used to, I can understand a train of recent memories being so strongly revived as to cause them to act as they do. I did, in fact, to my own senses, notice something in the manner of these non-parent birds thus acting parentally ----in a certain degree, that is to say----which was differ-ent to that of the true parents. A certain surprise, I thought, was exhibited at first, and then the bird seemed to fall into the old train of things. If, indeed, as I am much inclined to believe, the mere bringing of a fish to the ledge may raise, for a time, in the mind of the bird that brings it, the hallucinatory image or impression of a chick that is not there, it is not wonderful that the actual running up to it of a chick not its own, should cause it to feel and act as though it were the true parent.

What, then, has been the origin of sympathy? Even amongst ourselves, to feel with a person $(\sigma \partial \nu \pi \dot{\alpha} \theta o s)$ is to feel very much as though one were that person, and the effort of reason which assures us to the contrary might well be beyond the power of an animal. Indeed, when we think of what all children can pretend, and what many grown-up people believe, we should not expect too much of birds. The guillemot, we will say, upon seeing a young bird which, by calling up memories, takes the place of its own, becomes, in imagination, its parent --- so that the sympathy it shows for it is not wider than that between parent and child. In other cases the feelings aroused in an animal when it sees, let us say, one of its fellows subjected to suffering or danger which it has been accustomed, itself, to fear and shun, may relate to itself only, so that any apparently sympathetic actions arising out of them would be due to that failure to distinguish between what is in the mind and what is outside of it (subjective and objective) that has often been remarked in savages-or, if not remarked, is at least attributed to them. Of this hypothesis I have given one illustration, and others may be easily imagined.

Do we become more, or less, sympathetic as we get more civilised? Two people who think and feel alike are said to be in sympathy, and the more primitive and uniform the conditions of life are, the more must those who live together under them think and feel alike. The process of advance may be a process of the more complete separation and realisation of one's own distinctive personality, and though reason and self-interest produce a higher power and degree of combination amongst civilised men than the state of animals, or the savage state of man, permits of, yet

we must ask ourselves if, where it can and does exist amongst the latter, it is not of a more spontaneous and vigorous character, and if there is not more real sympathy attached to it. Where, for instance, can such perfect combination be found as amongst social insects-bees, wasps, ants, etc.-the conditions of whose existence are far simpler and more uniform than ours? And in what deep feelings of sympathy -or, as we may say, oneness-must blood-feuds have had their origin? If it is true that the sympathies of some civilised men have become widened so as to embrace humanity at large, and even the lower animals, is it not equally true that all civilised men stand more cut off from their immediate neighbours than do savages, because, owing to an increased diversity of individual character, consequent upon more diverse and complex conditions, they less resemble them? If so, though in one sense man may be said to sympathise more and more as he advances in culture, in another sense, and perhaps the truer one, he does so less and less; for as the river has widened it has become less deep, and the current less strong. Heine makes this same comparison in some interesting remarks upon the inhabitants of the Isle of Nordeney, which, as they exactly and felicitously express my meaning, I will here quote, albeit in a clumsy translation : "What links these men so fastly and inwardly together is not so much a mystic bond of love, as habit, the daily necessary living in each other's life, a common shared simplicity.

The same spiritual width, or rather narrowness, issues in the same strivings and longings, whilst unity of ideas and experience makes mutual sympathy an easy matter. So they sit cosily by the fire in their little cabins, drawn close together against the cold, and, as they turn to speak, see their own thoughts in each other's eyes, read their own words, before they speak them, on each other's lips. Every life-memory, every life-experience, is a common possession, and with a tone, a look, a gesture, a silent motion, as much of joy, sorrow, or reflection is aroused in their bosoms as we can bring about through long expositions and spluttering declamations. For we live, in great part, mentally alone. Owing to different lines of education, to a different choice of reading-often accidentally stumbled on-difference, rather than sameness, of character has been developed amongst us. Each one of us, with masked spirit, thinks, feels, and strives in a lonely atmosphere of his own, and miscomprehensions are so many, and at-oneness, even in one household, is so rare, and we are everywhere cramped, everywhere repulsed, and everywhere strangers to each other."

This is just my idea, and though I had read Heine before I watched guillemots, I yet believe that my watching them has suggested it to me quite independently, for the passage quoted never came into my head till afterwards. Let us not, therefore, be too proud, for though there may, here and there among us, be a philosopher who feels himself able to sym-

pathise with, say the Chinese—or a Chinese one with us—yet neither such philosophers, nor any of us, have that pleasant feeling of almost *being* one another which these islanders of Nordeney, or any tribe of simple-lived savages, or even, perhaps, some social animals, enjoy. So far from civilisation being altruistic in its tendencies, it appears to me (just at this moment) that by making the units more and more unlike each other, it fosters egotism and makes real sympathy harder.

I have as yet only speculated upon the feelings of the grown guillemots when they *fête* a chick that is not their own. Those of the chick are, I think, easier to understand. Its love for its parents is cupboard love; it is equally ready to be looked after by any other bird, and, if hungry and not fed, it will apply elsewhere. With what degree of accuracy it distinguishes its parents from the other birds on the ledge, I have not yet made up my mind; but I think it much depends upon the efforts of the parents themselves.

Besides the incidents which I have related, I noticed some other interesting points. Both the chick and the parents seemed ill at ease. The former did not seek to go to sleep, nor did the latter offer the wing. Often it struck me that one of the parents was on the point of doing something in regard to the chick, and, what was more curious, it also struck me that the other birds were restless, too, and that they, too, had designs upon, or, at least, felt an unusual interest in, the chick. In especial, a second white-eyed bird came several times up to it with an important air, but also with a curious, hesitating action, and an expression as though in doubt what to do. The other white-eyed one would then bustle up in much the same way, causing the first to retreat; but after a little while, the two being exactly alike, I became quite bewildered, and could not possibly say which was and which was not the parent-a good evidence, I think, of the similarity of their behaviour. All this, and many other little things which struck me at the time, but which I could not then note down, and have now forgotten, convinced me that the flight from the ledge would not be long delayed. Though miserably uncomfortable, therefore, I waited and waited, in hopes to see it; but it grew late, the sun had sunk, and as I had a steep ascent to make, with some amount of climbing even before I came to it, it would not do to stay longer. Cliffs like these are not to be ascended in the dark-at least, not by me. To-morrow I feel quite certain that the birds will be gone.

CHAPTER XXXII

THREE MURDERERS

GONE they are. The ledges are quite bare-not a bird to be seen there-nothing but the spray and the wild winds to love them now. It was what I had expected, had been sure of; but again I felt bitter disappointment. It is more than disappointment-a sadness and emptiness of heart at finding these accustomed tenants, that have for days given life and beauty and domestic happiness to the desolate frowning precipice, gone, and their known places void. How I miss them! I retract now what I said before about wild creatures giving no relief to the sense of solitude. These guillemots did, I believe, and I feel lonelier now without them. And so, whilst I lay warm under the bedclothes, were you, you little mite of a guillemot-but stay, I have apostrophised you once already, and am not going to do it again.

There was rain, mist, and wind extraordinary today, but the sea dashed finely over the rocks. The pool, though a haven, was often seething, yet I saw Bottle-nose, and, later, a common seal, in it. The latter was the only one I watched. He came up at intervals of a few minutes only, and, as on former occasions, always rose perpendicularly in the water, with his nose pointed to the sky. In this position he

remained all the while he was up-which was never more than a minute-and then sank without altering it, differing in this last respect from the two larger seals, which always went down with a porpoise-like roll. His eyes were shut all the while, even when he went down, but still I supposed that, once beneath the surface, he was accustomed to swim away and enter upon some active employment "under the glassy, cool, translucent wave": the line, indeed -which, by the way, with its exquisite context, is not to be found in that overpraised pert piece of ex cathedra dictation, The Golden Treasury-for the gold non olet, but out on its many omissions and at least one vile, prudish mutilation !---hardly suits such a pot-boil as this haven now is; but it is always untroubled in the deeps. But I was deceived in this supposition, for once he came sufficiently near to the great bulk of rock where I was lying for me to see him for some time before he rose; and, to my surprise, I saw that he was floating in just the same attitude, and just as quiescently. As he came up his eyes were fast closed, so that I think he must have been dozing, or sleeping, like this, under the water, all the while, yet rising-perhaps automatically-at the requisite intervals. The common seal, if it be not as nocturnal as the cat tribe, from which it may have descended, is certainly a very great sleeper.

The eye of the puffin is, by virtue of its setting, almost as marked a feature as the beak itself. First it is surrounded by a ring of naked skin, much

resembling the feet in colour-of an orange-red, that is to say-and just within this ring there is a dot at one point of the iris, and a straight line at the other, both of which are really of a bluish or slaty hue, but have the appearance of being black. This line and dot form the base and apex respectively of a sort of little triangle, the sides of which are formed by a deep depression in the skin, and within it the eye is framed like a little miniature, and, as is sometimes the case with pictures, partly encroached upon by the frame, so that its circular shape is interfered with. The effect of the whole-for all these details blend together, and can only be distinguished with the glasses-is that the bird seems to have a triangular eye, and this bizarre appearance is heightened by another, and much deeper, line, or fold, in the feathers, which runs back from the base of the triangle till it meets, or tries to meet, the black feathers of the head and neck, in a little delta between the two. Hardly less wonderful than the eye are the cheeksif one may call them so-those two sharply defined oval surfaces of light, shining grey, so smooth and polished that they do not suggest feathers at all, but look much more like little veneered panels of fancy woodwork, let into a framework of ebony. To all this the beak has been added, to give full and crowning effect to the idea that governed at the puffin's making, which was that it should be "as remarkable a figure of a bird as any in our country," or elsewhere.

I have sometimes wondered if the fish which the puffin catches so deftly, and then carries home, a dozen at a time, are paralysed at the sight of it. If a shoal of sand-eels fainted, and lay strewed about the bottom of the sea, it would then be easy for their enemy to pick them up one after the other, pack them securely, and get a firm grip on all of them before they began to revive and wriggle. At least, it ought to be easier; but how the bird chases and catches each in succession, without losing those it has already caught, and which lie in a row across its beak, it is not so easy to see. I have sometimes, I believe, made out a dozen, at the least-all sand-eelsclosely wedged together along the cleft of the mandibles, their heads and tails hanging down on either side of the lower one. Perhaps, however, the difficulty is not so great as it seems to be-of understanding it, of course, I mean; it is no doubt easy enough for the bird to do. My theory, at any rate, of its modus operandi is this. The first sand-eel is, no doubt, passed to the base of the mandibles, and being firmly wedged against the membrane that unites them, I suppose that they are finally closed upon it. Were they opened again, at all widely, to catch the next and subsequent ones, there would be a danger of as many as were already there either escaping by their own efforts, or being floated out owing to the pressure of the water. But the beak of the puffin, though broad and leaf-like in its shape, is sharply tipped, and by opening it but a little, and pressing the fish against

the bottom, the bird could no doubt pinch up the skin so as to get a secure hold of it. The various little tactile movements of the mandibles upon the fish, by which the latter would be first grasped between, and then passed carefully down them, to lie against the one last caught, can be pretty well imagined, and they could be very effectively aided by the rubbing or pressing of it, on either side, against the sand, rocks, stones, etc., of the bottom. It must be remembered, too, that the mandibles open like a scissors, so as to be wider apart at the tips than at the base, which would diminish the difficulty; and moreover, each fish is so deeply indented by the sharp, cutting blades-which, however, do not seem to pierce the skin-that, although alive-reflecting possibly on the beauty of maternal affection-they would be likely to "cleave to their mould" like putty, for a little while after the pressure were relaxed.

I think that the broad, blade-like bill of the puffin has to do with this power that the bird possesses of holding many fish at a time, and that the razorbill, whose beak is of the same type, and who bites the fish across in just the same way, is in the habit of doing so also. Be this as it may, the guillemot, whose bill is quite differently shaped, holds the fish, as a rule, in a different manner, longitudinally, namely, with the head towards the throat, and the tail drooping over to one side. This is not invariable; but I have never myself seen a bird bring in more than one fish at a time. It is the same, I think, with the black guillemot, at least in this latter respect, but I have seen much less of it than the other. Unless, however, it be supposed more difficult to catch and hold many fish than many insects, there is no reason why the puffin should be singled out for wonder in this respect. The water wagtail, when feeding its young, fills its bill with insects, which it catches, not only on the ground, but flying also—a great feat, surely and the lesser spotted woodpecker brings a similar assortment to the nesting-tree. I believe myself that most insect-eating birds do the same whilst feeding their family, unless when they catch an insect sufficiently large to be a host in itself.

What a whirr of pinions, and fine wild chase beneath the beetling precipice, and out to sea! It was the Arctic skua, pursuing, this time, a black guillemot, no doubt en route for its young. They went so fastthe skua with the swoop of a peregrine falcon-that I could only just follow the smaller bird, but I caught its white wing-patches, so am sure it was not a puffin. Half-way out of the cove the guillemot must have dropped its fish, for its pursuer descended, and hung hovering over the water, seemingly embarrassed, and without alighting upon it. This, at first sight, seems evidence in favour of the theory that the skua, unless it succeeds in catching the spoil before it touches the sea, will have nothing to do with it; but as a herringgull now flew up, and behaved in the same way, the more legitimate inference is that both birds were looking for what neither of them could see, and that

IN THE SHETLANDS

the fish, being alive, as it probably would be, had, by a remarkable conjunction of two lucky accidents, escaped. But, on the other hand, would the herringgull have dared to interfere with the skua ?---which it would have been doing, were the latter in the habit of picking up the fish from the water. On other occasions I have seen the skua fly off as soon as he had missed his swoop, and I have once seen a herring-gull following the chase, with a view, as seemed obvious, to such a contingency. This happened on the island, so that I remember it quite plainly, though, what with one thing and another, it got crowded out of my notes. I was, however, much interested at the time, for it pointed to a possibility of a further and more complex development of these curious parasitic relations; for why should not gulls become, in time, the constant attendants of such chases as these, on the off-chance merely of the skua failing to get the fish that he had forced the bird he was chasing to drop? Here would be a secondary act of piracy grown out of the first and more direct one.

Herring-gulls—they are much the commonest species here—seem now to feed a good deal on the floating carcases of young kittiwakes, so I think it likely that the bird I twice saw doing this before, and took each time for a grown kittiwake, was really a herring-gull. It was at some distance, and I jumped to a conclusion without taking the trouble to verify it. But are these young kittiwakes first killed by the gulls, or found dead by them merely? As to this I

can say nothing, except that I have not yet seen such an attack made—which is not much.

In the last two or three days I have pretty well demonstrated that seals, when they lie on the rocks, in company, do not post sentinels. In descending the cliffs, I have several times alarmed one or more out of the ten or a dozen that have lain on the great, slanting slab where they rendezvous; but their retreat, more or less precipitate, has not induced the others to a like course. Some have looked about a little, but remained where they were, whilst the greater number have lain in fancied—and this time real—security. It may be said that the seals which took to the water need not have been the sentinels, but this is an *argumentum ad absurdum*, since a sentinel that neither saw danger itself, nor gave the signal when it saw others in a state of alarm, would be no good.

For me, therefore, seals do not post sentries, at least not in these seas, but it does not necessarily follow that they may not do so in others where they are more persecuted by man, and preyed on by polarbears. Whether this has been asserted, or not, I do not know, but I dare swear it has been, for sportsmen, besides that they draw very hasty inferences, like to get full credit for their miserable triumphs over brute intelligence. Take this very matter of sentinel-posting. It has been lightly made, and far too lightly credited. If you have a herd, or flock, of animals say some geese browsing—some *must* stand on the outside, which is where *we* would post sentinels.

That is enough for the sportsman. Such individuals are sentinels, and his skill, consequently, in outwitting them, something extraordinary. But let him bring some evidence of this—I mean of the first proposi-tion; as for the other—the corollary—we will take it for granted, sentinels or not. No doubt of the man's capabilities. He can set his wit to a goose's, and shame, or cry quits, with it-but was the goose really so extremely clever? Was it anything more than a wary, vigilant bird, that a man of parts might be expected, sometimes, to get the better of ? I doubt it extremely-at any rate, I doubt the sentry-go. When one comes to think of it, the systematic tailing off of one, or some, particular members of a band of animals. to warn the others in the event of danger, is a very high act of collective intelligence; and nothing short of this amounts to anything. That the first animal who takes alarm should utter a cry, and thus warn the rest, is a very different matter. These seals did not even do this, though the ones who saw me, and took to the water, must have associated my presence with danger. Of this I have now had another example, for in ascending the cliff, one out of two seals lying close together on a small rock saw me and went off. The other had not seen me, but evidently felt uneasy, owing to the haste and abrupt motions of his companion. Nevertheless, he took some time to make up his mind, and was on the rock, I should say, about two minutes after the other had left: whereas, had this latter communicated his alarm to him by any recog-

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nised signal, he would have been in the water almost at the same time. On the great slab itself ten seals were lying as I began to go up, but one went off whilst I sat quiet, without observing me. This left nine, and, of these, two saw me as I scrambled up an exposed ridge, and went off, whilst the other seven slumbered on.

As far as I can see, therefore, there was no communication of intelligence between these seals. Each acted for himself, and without thought of the others. I have noticed the same thing often with birds, and on the whole I cannot help thinking that, in a loose sort of way, wild animals are often credited with acting in a more highly organised manner than they really do, and that a too intelligent interpretation is often put upon their actions. When, for example, a bird, scenting danger, flies off, with a cry that warns all the others (though it frequently does so in silence), it does not follow that it was thinking of those others, nor can the cry be shown to be a special one until it has been heard, over and over again, in the same, or similar, circumstances, but not upon other occasions. Even then it will often be found to be due to excitement, merely, so that instead of expressing any definite idea, it but reflects the emotional state of the individual uttering it-it is the difference between thinking and feeling. The familiar alarm-note, as it is called, of the blackbird, is an example of this, for I have often heard the bird utter it when there has been neither fear nor danger-only excitement. Its

organism reacts in this way to a certain state, which may be caused by a variety of incidents, so that no special, circumstantially limited meaning can attach, in its mind, to the cry.

I do not say that there are no cries, amongst animals, which have a certain definite meaning, and no other. Very possibly there are, and one may, perhaps, perceive the origin of them; for if such cries-at first general -were, in a large majority of cases, consequent upon a particular state of things, such state of things would come to be more and more associated with the cry, though from this to a definite and purposed signal, given by one and received by many, is a very considerable step. But the fact-if it really is oneought to be better made out than it is. A sportsman has only to talk about the leader, a signal, or sentinels, in regard to any bird or beast, and no one pauses upon it. It is accepted as though it had dropped from heaven instead of from the lips of a man whose main interest lies in killing animals, who is generally most hasty in drawing inferences about them, and whose belief in their intelligence pays a compliment to his own.

The minds of some people must be in a strange state about animals, I think. They will not allow that they have reasoning powers, yet find no difficulty in crediting them with all sorts of actions, schemes, plans, and arrangements, that seem to demand a quite human understanding. Perhaps I, who admit the one, make too much difficulty over the other; but I

like evidence (and plenty of it), and do not take conviction as proof. More, perhaps, than any other subject, natural history abounds with statements, the evidence for which there is often no getting at, or, if one does get at it, it amounts to very little.

Oh, thou villain gull ! What have I not just seen thee do? But heroics are out of place with animals, so I will just recount the incident in a staid, sober way. As, in my ascent of the cliff, I came over the crest of a green peak, a herring-gull flew up from the ground with something in its bill, which, as it mounted aloft, I saw to be a young puffin. It hung by the nape of the neck from the very tip of the gull's beak, the legs dangling pitifully down-a pathetic spectaclethough I could not make out any movement in it, indicating that it was alive. The gull made for the sea, and, crossing to one of the great "stacks" that stands frowning a little off the shore, mounted high above it, and then let the puffin fall. Down, down, down, and down it came, a horrible descent; and I seemed to hear the far-off thud, as it struck that cruel rock. Then, in a second or two afterwards, the gull came circling down upon it, and began to feed upon the body, dragging it from this place to that, and seeming to fear a shag, which came up the stack towards it. I can hardly think it coveted the morsel, but I am reminded that I certainly saw another one with its beak at a dead kittiwake. No doubt, therefore, it did, and thus, once again, the fact is driven home to me that there is no such thing as "always"



"ONE MORE UNFORTUNATE"

or "never" in animal life. As Darwin has most truly said, every creature is ready to alter its habits, as the opportunity arises, and the greater number of them are, in some way or another, always in process of doing so.

Was the puffin dead when the gull flew up with it? If it was, then had it found it so, or killed it itself? Did it drop it on purpose, to kill it, or let it fall by accident? These questions I am unable to answer; but in regard to the two last, gulls are credited here with letting crabs fall on the rocks, in order to break their shells. Even if the puffin were dead before, such a fall, by bursting or bruising the body, might make it easier to tear open—an operation which the gull, I believe, had not yet had time to perform.

The whole ground where this gull went up with its victim—for I have little doubt myself as to what had taken place—was honeycombed with puffin-burrows, and troops of puffins stood everywhere about. I sat down where I had halted, and before long two other herring-gulls came and stood in the same locality, close to several of these poor little birds, who, I thought, seemed embarrassed by their presence, but powerless to resent it, and perhaps not sufficiently intelligent to divine its true purport.

The gulls, I thought, had a sort of unpleasant, evilboding look; a sullen, brazen, criminal appearance, like the two murderers in that scene with Clarence, just before the duke awakes—but this may have been partly due to imagination, after what I had just seen, with a late reading of Richard III. I love that play; almost more than ambition, perhaps, the keynote to its hero-villain's character is to be sought in his tremendous energy and intellectual activity. These are so great that they, to a large extent, guard him against the intolerable anguish of remorse -that constant attendant on the undiseased evildoer-so that he fares better than Macbeth, who is inferior to Richard in both these respects, and whose more poetic and sensitive nature is much against him. Not that Macbeth is not an energetic and able man, but he is only normally so, while Richard's working qualities are abnormal. His energy, especially, is more like that of a Napoleon or Julius Cæsar. It is such a mighty and rapidly-moving stream, that, hurried along by it, he has no leisure to repine. It floats his crimes easily, one may say, making little dancing boats of them, whereas those of Macbeth are like huge vessels in a stream that has hardly volume enough to bear them. Is it not, in fact, almost impossible to feel mental depression, so long as the brain is very actively employed? It is in the calms and lulls of this activity that disagreeable reflections force themselves upon us, just as rain that has been kept from falling by a violent wind, falls as soon as it subsides. Accordingly, though Richard's robuster nature goes almost scot free by day-at least, for a considerable time-it becomes the prey of conscience by night, when the huge energy of his disposition is in abeyance; when, in Tennyson's language, "to sleep he gives his

powers away." This we learn first through his wife Anne, who has been constantly "waked by his timorous dreams"—how strangely sounds the word "timorous" used of such a character !—and later—almost at the end—from himself, in that one terrifying outburst which gives the first and only clear view into the mental torments which this strong villain has to suffer, as soon as that daytime energy, which is to him as an armour, is laid aside. Is it not very striking—is it not the character-touch of this scene, how—when Richard is once fairly awake again, when the things of waking life have returned, with Ratcliff at the tentdoor—how quickly this great load of suffering is shifted off?

A fortiori Macbeth suffers at night, too, but his life is all suffering. We never get the idea of his enjoying life, which, with Richard, we really do; for he is humorous-jocular even-in fact, in tiptop spirits often, but all by day, during the bustle and action of an energetic career. Later, the wound of guilt begins to show itself, and here, too, we may make an instructive comparison between these two practitioners in crime, so alike in their motive and careers, so different in their fibre and temperament, and yet yielding to the same law. Macbeth, indeed, suffers so much that his mind becomes, at last, almost unhinged, and, in the very end, conscience, perhaps, ceases to afflict him. The machine, too delicate for such rough work, has been broken by repeated blows -the nerve has throbbed itself out. Shakespearean

parallels are, I think, very interesting and instructive, but they are seldom dwelt upon.

Thus far out of the path of what I am pledged to deal in, a fanciful comparison has led me; but I will go no further. Ne ultra crepidam sutor, etc., though, to be sure, I am no more altogether naturalist than King Lear's fool was "altogether fool." So as, from king or emperor downwards, I have no respect for titles, it is not much wonder if I forget now and again to be subservient to that of my own book.1 Yet to do so is fiddle-de-dee, for books and people both, in this world, are judged of as they are labelled -often getting labelled by accident-and though, in this little excursion into other realms. I have talked no more nonsense than any literary critic may, without at all committing himself-except to nonsense, which doesn't at all matter-yet I talk it where it will not be thought sense. To return then-for your reviewer bites the thumb at a digression-I noticed many other herring-gulls hovering over these puffinhaunted slopes, and that they live largely upon the young of these birds, as well as on young kittiwakes, I do not now doubt. I can see no reason why they should not lie in wait, and drag the former from their holes. I must watch for this. This reminds me of how often I have found the newly-picked remains of puffins on the cliffs and shore; but these were all of full-grown birds. What bird, in especial,

¹ But I needn't have forgotten my own afterthought "----and Digressions." Hurrah ! That frees me.

is responsible for this? Surely not gulls! And never having seen a peregrine falcon here, I have got to not much believe in him. I have seen no sign of such a thing on the part of the great skuas. The others, I think, are only robbers, or at least could hardly kill a puffin, whose beak should be more powerful than their own. It is somewhat of a mystery to me.

One more word upon the puffin. He is strongly ritualistic, if not actually a papist. I find it, as is so often the case, difficult to be sure which. See the whole series of pretty little genuflexions that he makes after coming down upon a rock, and then consider his vestments, his surplice-if that is the proper thing-" his rich dalmatic and maniple fine," his "rochet and pall," and so on-they are all there, I feel certain, for not otherwise could he look so extraordinary. His beak, too, if he only open it the least little bit in the world, is a bishop's mitre, and, for the ring, he wears it round his eye. "Pope." indeed, is one of his local names, but, on the whole, I class him as a ritualist, for he "out-herods Herod." Whether he secedes to Rome ever, or as near there as the mouth of the Tiber, I don't quite know; but if he does 'tis no matter, for he is sure to come back again.

CHAPTER XXXIII

GULLS AND GIBBON

A LL doubt as to the real nature of these horrid feastings of the herring-gulls on floating carcases of kittiwakes is now at an end. I had been watching the seals in one pool, when, turning to the other, I saw, as I thought, two gulls fighting together on one of the great rocks in the midst of it-a smaller "stack" one might almost call it. Raising the glasses, the truth was revealed. It was a herringgull murdering a young kittiwake, and very soon it would have been "got done"-as Carlyle says with such a gusto-if I had not, in rising to follow it more closely, alarmed the murderer, who at once flew away. The poor little kittiwake got up-for it had been thrown on its back-and stood without moving on the rock, presenting a sick and sorry appearance, though there was as yet no blood about it, and it did not appear to have been seriously hurt. Its only chance now was to have flown away, but it stayed and stayed, seeming to doze after a while-the certain victim of the returning gull, as soon as the latter should have watched me off.

Turning my eyes from this disquieting spectacle one brick in God's architecture—I looked over the water, and there, in this quiet little bay, which seems such a haven of rest and peace—*il mio retiro*, one

would think, to every creature in it-I saw another kittiwake being savagely murdered by another herring-gull. This was a repulsive sight, and through the glasses I could watch it closely, not a detail escaping. The gull, with the hook of its bill fixed in the kittiwake's throat, pressed it down on the water, shook it with violence, paused, got a better purchase, shook it again, then, opening and gobbling up with the mandibles, seemed to be trying to crush the head, or compress the throat, between them. Bv this the young bird's struggles, which had been of an innocent and quite ineffectual kind, had almost ceased, but its legs still kicked in the air as it lay on its back in the water-just as the other had lain on the rock. The gull now, having managed the preliminaries, ceased to be so rough and violent, but, backing a little out from the body, so as to get the proper swing, began, in a cold, deliberate manner, to pickaxe down into the exposed breast, each blow ending in a bite and tear. A crimson spot, becoming gradually larger and larger till it represented almost the whole upper surface, as the body cavity was laid open, responded to this treatment; and now the gull, seizing upon entrail and organ, helped each backward pull with a flap or two of the wings, feasting redly and royally.

So it goes on, and, in time, both the part-players in this little sample fragment of an infinitely great whole are drifted by the waves to that same towering "stack" which has lately been the scene of the puffin tragedy. On it the gull lands, and, having dragged the carcase some way up, flings his head into the air, and exults with a wild, vociferous cry, in which his mate, who has now joined him, takes part. Then there is more feasting; but in spite of the community of feeling which this duet implies, the second gull is not allowed to partake of the good cheer, but must wait till the provider of it has finished. Should she approach too near, such intrusion is vigorously repelled. Well, thank God for the touch of poetry, whenever it appears! There is something picturesquely wild, as well as savage, in the latter part of this sea-scene-the gull's te deum, flung out to sea and sky; but anything more horrid, more ignobly, sordidly vile than what has preceded it, it would be hard to imagine. A kittiwake in its first full plumage, which differs much from the parents', is a very pretty bird, dove-like and innocent-looking. To see it savagely shaken and flung about, a huge hooked implement fastened in its slender throat, and that soft little head towzled, bitten on, mumbled, the wings all the while flapping in helpless and quite futile efforts to escape, is sickening. It is not the worst scene in nature certainly-serious deliberation amongst enlightened statesmen can produce things a good deal more horrible-but it is bad enough, bad enough. It looks like the negation of God, but a much better case can be made out for its being the affirmation, so here is the consolatory reflection for which optimists are never at a loss. "There's comfort yet," as Macbeth says.



"NATURE RED IN TOOTH AND CLAW"

I suppose it sounds like a truism to say that the actual witnessing of nature's ruthlessness-of her "red tooth and claw"-has a very different effect upon one than is produced by the mere reading of it, however powerful the description may be. Judging by my own sensations, however, the difference is not merely of degree, but of kind, for such accounts, with the reflections made upon them, have in them a certain tone and tinting of the mind through which they pass, so that we get, not nature, but man softening her. "Why softening ?" it may be asked. I am here speaking only of civilised man-who alone, perhaps, reflects about such matters-and it is my firm conviction that civilised man, in unconscious deference to his own peace of mind, does soften everything of a disagreeable nature, or if he cannot soften the thing itself-and it is difficult sometimes ----yet, at least, his hopes and faith and longings fling a balm upon it, which, rather than the sore, is what we receive. So, too, in all general reference. Man, not nature, is what we get. Thus, when Tennyson speaks of "nature red in tooth and claw," it is not only-or so much-this stern and horrid truth, that the line calls up. Tennyson himself, if we recognise it as his, immediately comes into our mind, and with him the idea of one who, though he can admit so much, yet sees comfort and hope through it all, who believes, or at least trusts-

> That somehow good Will be the final goal of ill.

Other nobly optimistic lines slide into the memory, sunlight passes over the desolate landscape, and the discomforting words, almost as they are uttered, are atoned for by the comforting personality of the poet who penned them. Thus nature, passing through the lips of man, is tempered and dulcified in the passage.

But supposing that such lines as the ones quoted, because their source is unknown to the hearer, can have no such comfort annexed to them, or supposing that the poet does not trust, but is a gloomy pessimist, or, which is more to the point, that instead of lines, with their music and generalisation, we have an actual horrid description, merely, of an actual horrid thing, all in the plainest prose, from some one whose personality we neither know, nor is worth the knowing-I have supplied an example-what softening influence is there here? Is not this but one degree better, in the sense I mean, than seeing the horror itself? I believe that here, too, the difference is of kind, and that a consolation is extracted which we cannot extract when brought face to face with nature herself, because the truth, then, is too overwhelming. The comfort, in such cases, comes not through the mind of the individual who is telling us, but through the general mind of which his is but a part, through the human ocean, rather than the human drop in it. For their own comfort, as I believe-in self-defence, to exclude misery-the great mass of mankind are optimistic, nor can any unit of the mass impart, or suggest, to

us, ideas which are in opposition to this view, without suggesting, by association, the more popular and disseminated one, which we instantly lay hold of for our relief. If A can see no bright side to the thing he has witnessed, and can extract no comforting reflections out of it, yet B, C, D, etc., who have not witnessed it, can, and to the general alphabet, as against some exceptional letters of it, we immediately turn, and, enrolling ourselves amongst "les gros bataillons," feel that we are "in tune with the infinite," and of course that the infinite is in tune. But when, alone and amidst gloomy and stern scenery, we see a disagreeable little piece of this infinite, suggesting the whole, in actual manufacture before us, it is wonderful how little of music we find, either in it or ourselves. All seems "jangled, out of tune and harsh"; but for the "sweet bells," where are they ? and were they ever there ? We hear them not, even as a something behind, an undersong of hope. No, for there are no faces about us now, no comfortable looks and smiles, no good dinner or snug little circle round the fireside; no volumes of the poets either, and not a line of them, not one "smooth comfort false," comes to assist us. Man and his distortions are gone, and we have only nature-hard, stern, cold, uncompromising, truth-telling nature-before us. We look one way, and there are the huge cliffs and the iron rocks : another, and there is the great, wide, desolate sea : upwards, and there is the cold, grey sky-stern and cheerless as either. Nothing

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else but the birds in their thousands; and there, on the insensate waves or rocks, amidst spectators as indifferent as they, one of them is slowly, methodically, almost fastidiously, hacking, hewing, and picking another to death. You see the struggles, the flights of escape, the horrid, remorseless re-catchings; you see it proceeding and proceeding, see the wound growing larger and larger, the blood running redder and redder, and reason, with an impetuous inrush, says to you, suddenly, and as though for the first time, "This is nature—*this* is your God of Love—*His* scheme, *His* plan !"

And it is for the first time if you have not seen the same thing, or something like it, before, and even then, if there has been anything of an interval. You have got a fact at first hand, from nature herself, instead of through the falsifying medium of humanity -truth strained through benevolent minds-and the difference is so great that it is, I maintain, one of kind, and not merely of degree. You cannot, whilst actually seeing these things, get that sort of comfort that you can and do get when only hearing or reading about them. It is nature that is speaking to you, not a man, whose voice, be it ever so harsh, is mild and puny in comparison, and which, moreover, calls up, by association, the extenuating voices of a host of other men, that sea of human comfort on whose waves you float off and escape. No, but you are, and you feel, alone. You forget, almost, for the time, your own personality, and no thoughts of other personalities come to relieve you. Afterwards, perhaps, as you walk away, they may; but for some time they have a strangely hollow ring about them. One quotation indeed, not of comfort, but as descriptive of the kind of impression made upon me by such sights as these, has often since come into my mind. It is not. however, from the poets, but out of the pages of a great historian-of Gibbon-that I get it, and it is this : "The son of Arcadius, who was accustomed only to the voice of flattery, heard with astonishment the severe language of truth; he blushed and trembled." This, I think, describes more nearly the sort of effect which getting away from man and his optimistic chirruppings, and seeing gulls kill kittiwakes, by myself, has had upon me. I have heard, all at once, the severe language of truth, and I have blushed and trembled-trembled at what I saw-blushed for what I had tried to believe. Afterwards, as I reflect upon it, there come to me with sterner meaning, even, than they had before, those words of Shakespeare-pointed by your friends, through life-

From Rumour's tongues

They bring smooth comforts false, worse than true wrongs.

Well, there are pleasanter sights than the one that has called forth this rigmarole, and I have just seen a seal playing with the long brown seaweed growing at the bottom of the sea, in a very delicious manner. He seized it in his mouth, and, rolling over and over, wrapped himself all round with it. Having thus put

himself into mock fetters, his delight was to break out of them, which he did with consummate ease, and the grace of a merman. He did not keep hold of the seaweed all the while, but grasped it now and again, often opening his mouth and making pretence to bite. He acted like a very playful dog, but had a distinct idea of thus entangling himself with the seaweed. No one could have mistaken this. The design was perfectly evident. Two other seals, on a rock, played together most humorously, or rather one kept playing with the other, teasing him, but in a kindly way, by which it differed from most teasing. He would scratch him softly on the chest with one of his fore-flippers, and when this was parried, with a protest in look and action, he got farther down and scratched, or, as I think one may say, tickled him on the belly, beyond the reach of his guard. This caused the poor animal to flounce about in a very absurd way, and, at last, to half rise, and put on that funny, expostulatory look, half appealing, half resenting, and wholly humorous, which I have noted before. Most playful and humorously playful animals these are.

Could we see something of the inner life—the domestics—of many animals, the record of it might be very interesting. This is what is really wanted. But who has done so? Who has cared to do so? Instead, we have a few bald, jejune facts—habitat, diet, time of bringing forth young, period of gestation (on which latter point a good deal of prurient curiosity is manifested), etc. But the heart of a wild

animal is seldom explored, for it needs a heart to explore it. She bears and tigresses have been robbed of their cubs, but who has waited by their cubs to see them return and fondle them? To do so might be both dangerous and difficult; but what danger is not undergone, what difficulty is not overcome, when merely to kill is the object? The zoologist of the future should be a different kind of man altogether : the present one is not worthy of the name. He should go out with glasses and notebook, prepared to see and to think. He should stalk the gorilla, follow up the track of the elephant, steal on the bear, get to windward of the moose or antelope, and lie in wait for the tiger returning to his kill; but it should be to biographise these animals, not to shoot them. The real naturalist should be a Boswell, and every creature should be, for him, a Dr. Johnson. He should think of nothing but his hero's doings; he should love a beast and hate a gun. That is the naturalist that I believe in, or that I would believe in if ever he appeared on earth; and I would rather found a school of such than establish a triumphant religion, or make the bloodiest war that ever delighted a people or rolled a statesman into Westminster Abbey. Every man has his ambition. To make a naturalist who shall use neither a gun nor a cabinet, is mine.

> Some men have strange ambitions. I have one : To make a naturalist without a gun.

"Pretty, i' faith."

The great seal is again asleep upon his rock (it seems to belong to him and the common one in turn), and looking down upon him, now, from the tops of the cliffs, through the glasses, there does not appear to be any admixture of brown whatever in the shade of his fur. Wherever the light falls upon it, it is an absolute silver, and, where in shadow, tends to shade a little into the colouring of a very light-skinned mole. But this last is merely an effect : the real colouring is, I believe, a uniform silver-very pretty indeed, where the light catches it. The fur seems close and thick-very mole-like in texture-the general appearance, indeed, is very much that of a gigantic mole, if only the head, the character of which is different, be not well seen. In the water, however, when more or less immersed, even the head partakes of this resemblance, or lends itself to it, and the whole animal becomes "perfect mole" (" mine eye hath well examined his parts, and finds him perfect Richard"). In itself, however, the head is not molelike-as may well be believed-but, when held in some positions, looks remarkably like that of a polar-beara resemblance much more à la Richard. He seems extremely fat-Falstaff's "three fingers on the ribs," I should say, at the very least.

A common seal has now, once or twice, swum close round him, and looks a mere pigmy by comparison. This latter may not be a large seal—I do not think he is—still, the juxtaposition of the two gives me a better idea of Falstaff's proportions than I had before. He

must be more than twice the weight, I think, of the very largest *phoca*—*phoca Antiquarius*, as I would call the latter : lovers of Scott will take me. It is the great barrel of the body that is so immense. The build and general appearance is much more that of a walrus than of an ordinary seal. The fore-feet seem more modified, are more fin-like in appearance, than those of the latter, which are rounded—soft, round, fat pads—muffin-shaped, more like little cushions than fins; but here there is an approach to the true fin, an elongation and narrowing, and the toes all point inwards and tailwards.

As the water steals imperceptibly upon him, Falstaff-as I shall now always call him-stretches himself enjoyably, and makes some leviathan-like movements of his hinder, or tail, parts, looking somnolently up, from time to time, seeming to say, "O ocean, let me rest." How consummately happy he looks ! lazily, sleepily happy-a god-like condition. Heroics for those who enjoy them-they are generally all in falsetto. The "cycle of Cathay" for me, and the untroubled sea-sleep of this grand old Proteus here! A good deal of his lower surface, and the whole of the rock he lies on, is now quite hidden by the sea, but still he sleeps or dozes on-immense, immovable-as though he were life-anchored there. At length, with a mighty yawn and stretch, he turns full upon his vasty stomach, and immediately, by virtue of the different appearance which his fur has when wet or dry, becomes a much smaller seal that

has climbed up upon a buoy-the lower, wet part of him looks like that; the upper, alone, is himself. Then gradually he soaks all over, till he is, again, huge and indivisible, a great, naked, blue, greasy, oiled bladder,-yet firm still, as though he grew to the rock. But the end is now near. Sparkling and gleaming, the waves come tumbling in; they dance about him like fairies, like little familiar elves; they slap him and pat him, lap up to-then over-his back, sway him this way and that, speak to him, call him by his familiar pet name, tell him it is time to go, until, at last, with a great somnolent heave, he floats, and they float him-it is done together-right off the now sunken rock : his body sinks down, his head, with the fur yet dry, remains, for a time, straight up in the water, then follows-his nose, to the last, still pointing, like the "stern finger" of "his duty" -not so stern as with us, though-" heavenwards." As he goes down, you see that his eyes are still shuthe continues to sleep.

CHAPTER XXXIV

ALL ABOUT SEALS

ON coming to the cliffs, to-day, I saw, lying on the rock in the little pool where I have watched the sea-leopard, as I call it, and that other which I have hitherto called the bottle-nosed seal, or Bottlenose-because that seems to be a local name for it, and its nose, I thought, bore it out-a mighty creature, the same, I at once saw, as had lain there on the seaweed, that first morning. It presented, as before, an extraordinary appearance, seeming to be particoloured, light above and dark below. The tide was coming in, and, wishing to see it go off with the wash, I descended rapidly-indeed, a little too rapidly. My knee, which is sometimes, in a rheumatic sort of way, painful to bend, has lately become very much so in descending the cliffs. To ease it, therefore, I sat, and began to slide down the steep, green incline, and, in doing this, my foot missed, or slid over, the little depression that I had destined for it, which produced such an acceleration of speed that, with several great bumps and a change of position from the perpendicular to the horizontal, I had nearly still further abridged the distance, and eased, perhaps, more than my knee. However, I managed to stop myself some way before a sheer edge, which, though not much in the way of height, would, no doubt, have been as good as

Mercutio's wound for me—"'tis enough, 'twill serve." Continuing with more caution, I got down, and was on the promontory behind the "chevaux de frise" I had lately erected, before the tide was yet much over the rock. It would have floated off an ordinary seal perhaps, but this vast creature lay there, swayed to and fro by the waves, like a buoy, but still firmly anchored—"built," as one might say, "upon the rock."

At once, upon getting down, I saw that this was my bottle-nosed animal, and, also, that I had been entirely mistaken about his skin. On the lower side, where it was wet, this looked the same that it had ever done, as naked as that of the hippopotamus; but the other side, which was quite dry, showed a fur which seemed to be rather thick than otherwise, and of a brownish colour, but so light that it looked almost silvery. The head, whenever the creature looked round-for his burly back was turned to me-with the nose and muzzle, seemed much more elongated than in the common seal; it much resembled, in fact, that of the polar bear-quite remarkably so, I thought, when turned profile. Now, however, I could see nothing very peculiar about the nose, nothing to justify the allusion to it contained in the local name-which, however, I have only heard once. The bottle-nosed seal-for there is such a species-of course he is not, though, at first, in my want of all learned equipment, I thought he might be. What seal he is, scientifically, I know not,

but he is certainly not the common one, for besides the pronounced difference in the shape of the head and face, colour and appearance of the fur, etc., he is much larger, the great barrel of the body being, perhaps, twice the size. The figure, too, though less human, is more buoy-like, increasing more rapidly, though very smoothly, from behind the head and below the chin, and tapering more abruptly towards the tail. The fur may have some markings upon it, but, if so, they are so faint as to give it the appearance of being of one uniform colour-a light, browny silver. When wet it becomes bluish, and how smooth it then lies may be judged by my having mistaken it, up to the present, for the naked skin. True, I know of no seal that has a naked skin; but when in the open, with my notebook, I like to forget what I know, and make my own discoveries.

I watched this great seal for some ten minutes or so, as he lay in indolent repose, throwing his head, every now and again, over his great, swelling shoulder, till at length the elevatory power of the sea became too much, even for his proportions, and after rolling lazily about for a little, half moved by, half helping the waves to move him, he at length heaved himself around, and with a vasty, whaleresembling motion, plunged and disappeared beneath the deeply submerged edge of the rock-mass on which he had been lying.

In the adjoining little twin cove, or pool, the usual complement of seals lay on the great slanting slab

with two or three upon the rocks around. Another was in the water, and I was much interested in watching the persistent but ineffectual efforts which this one made to get out upon a certain large rock, on which he had evidently set his fancy in a very unremovable manner. To look at this rock, no one would ever have thought of it as one on which a seal, or anything else, could lie. Its top was a sharp ridge, whilst its sides presented, every way, so steep a slope as to be quite unscalable. But there was a little projecting point, or chin-as sharp as Alice's Duchesse's chin-in which the central ridge ended, and behind which the mass was cleft, for some way, longitudinally, making a narrow ledge just large enough for one seal to lie on. This little spike of rock was a foot or so above the water, even when the sea swelled up towards it-it being not yet high tide-and as it projected out like a bowsprit, there was nothing underneath it for the seal's hind feet to get a hold on, so that everything had to be done by a first leap up from the sea. This leap the seal made over and over again, shooting up sometimes almost like a salmon-his hind feet alone remaining in the water-and grasping the hard little triangle between his fore-arms, or flippers, so as to assist the impetus by hoisting himself upon it. But he always had to fall back again, after clinging convulsively, and pressing tightly with his chin against the rough surface of the rock, which, just at this one little point only, had shell-fish upon it. He tried to time his efforts with the swell of the wave, but in this he

was not always successful; that is to say, he did not always hit the exact moment. Having tried and failed several times, he would fall into a sort of rage or pet. He bit at the rock, cuffed the water, as he fell back into it, with one of his flippers, and then, as though this were an insufficient outlet for his irritated feelings, flung about with tremendous brio, revolving, contorting, curving his body to a bent bow, and then violently unbending it, diving and flashing up again, almost together, making a foam of the water, lashing it in all directions. Then, for a little, he would disappear, but always he would return and renew his efforts, always to be again frustrated in them. This lasted for half an hour, or longer. Once, after the first ten minutes or so, I thought he had given it up, for he swam to the great central slab, and began to make his way up towards the other seals. But when he had gone but a little way, he turned, and, flapping down again, swam back to that coveted rock, where it all commenced over again. This extremely human touch interested me greatly—as who would it not have done? How strong the desire must have been, and what an individual liking this seal must have taken for that particular rock, to make him leave a comfortable place amongst his companions, and go back to try, again, where he had so often failed before! How strong, too, must have been his memory of what he liked so much !---for it does not seem likely that any seal would so have tried to achieve a special practicable spot on an otherwise impracticable rock, unless he had lain there before. If so, I can only account for his inability to get on to it on this occasion by supposing that it was not a sufficiently high tide, though, at the last, the waves, when they washed up to their highest point, were quite on a level with the point of rock. It certainly seems curious that he could not manage it, even then; but such great longing and striving must, I think, have been for a pleasure known and tasted.

I have ascribed this seal's biting of the rock to irritation, as those other actions which so well became him, and which I have very inadequately described, certainly were due to this. But another explanation is possible here. I have several times seen seals, when on the rocks, take the long brown seaweed, growing upon them, into their mouths, in such a manner as to make me think it might have been to pull themselves along by, as one would use a rope fixed at one end. However, I could never be sure whether it was for this or any other practical purpose, or only sportively, that it was laid hold of. But now, if seaweed is ever really used by seals in this way---to pull themselves along the rocks, that is to say, or to hoist themselves up on to them, then a strong growth of it here would have been most useful to this much-striving one, so that it may have been with an idea of this sort, though not amounting to more than a regret-an "Oh if there were only !" sort of feeling-that he bit upon the rock. If so, he showed another human touch, for the nakedness of this particular rock, and especially of this point of it that he had been so often nearly up

on, must have been well known to him. Perhaps, however, he thought to get some purchase on it with his teeth; and there remains my first theory of petulance. I ought to add that in all these little outbursts of pique and disappointment which I have recorded, something of a frolicsome nature also entered; there was nothing morose or gloomy in them. At the worst, the creature was a disappointed seal only, and "in the very torrent, tempest, and, as I may say, whirlwind of his passion" there was a touch of humour, a something of make-believe, a dash of most lovable playfulness.

Lovable and delightful creatures these seals are, indeed, for which reason the great idea is to shoot them, and they have been almost driven from our seas. The hunting instinct is an extremely strong, and a quite natural one, for it is lineally descended from our savage ancestors, who hunted and were demidevils, of necessity. Therefore, perhaps, it may be said to be a healthy instinct, and therefore it seems right. Nevertheless, reason and humanity alike rebel against it, and there is no valid answer that I can see against their protest, except, indeed, that one I have already mentioned, viz. that it is in strict accordance with the scheme of the universe. I confess I hardly know how to get over this, except by admitting what I call an appeal against God; but putting this difficulty aside, then once let a man think (I mean, of course, a man who can think), and, if he be a sportsman, "farewell the quiet mind, farewell content." Though

"Othello's occupation" be not yet "gone," yet from that moment he can no longer "go to 't" with that entire lightheartedness, that " in unreproved pleasures free" feeling, which hitherto he has done. A little leaven of uneasiness will mingle with what was once an unalloyed delight, it will grow and grow, until, at last, with some men, first the pleasure in the thing, and then the thing itself will cease. With others the instinct will remain too strong, but, even with them, something will have been done, since no thought, if only we could trace it out, is ever thought in vain. It occurred, no doubt, one day, to some Roman sitting in the colosseum, that what he was witnessing was not quite a right state of things. He continued all his life to witness it; but if the whole progress of that age could be laid before us, that thought would have its place.

I have said that both reason and humanity rebel at the unnecessary killing of wild animals. For the humanity, that is self-evident—to torture is not humane : and for the reason, when one comes to think of it a little, how absolutely silly it is ! It is destruction, the child's pleasure, the unmaking of what one could not possibly make, smashing, breaking up, dashing to pieces, vandalism applied to the living works of nature, leading to their eternal perishing, with a hideous void in their stead. Something was alive, interesting, beautiful : you make it dead, uninteresting, ugly—at least, by comparison. And yet the hunting instinct—the heritage from countless

generations in whom it was a virtue—is so strong that those—and there are many—in whom it is not developed, should not judge those in whom it is, too harshly—indeed, not at all; for how should one judge what one cannot feel? One can only hope that that dreadful way of being interested in animals which leads to their killing, and, ultimately, to their extinction, will one day cease in man. Nor is the hope vain. It will cease. I know it will, and should be happy in the knowledge did I not also know that the animals will have ceased first. As it is, my only comfort is that I will have ceased before either.

It is beautiful to see seals thus active under natural conditions. In spite of what they are and what one might expect them to do, one has to be surprised. Everything is increased beyond expectation; they make a greater splashing, a greater noise in the water, produce more foam, give more elastic leaps, make swifter progress, than your imagination had supposed them capable of. They are creatures of the waves, you know, modified, adapted, made like unto fishes, and strong, as all animals are. Therefore, though you may have hitherto seen them only in their languid moods-and till now, in fact, there has been nothing very violent-yet you might have imagined, and you have tried to imagine, what they could be when moved, roused, excited, "perplexed in the extreme." Yes, you have tried-but ineffectually. Nature, you find, as ever, emporter's it sur vous. Sur moi, I should rather say, perhaps, since there are certain lofty spirits to

whom everything—the grandest sights of nature come as disappointments, so much superior to them have been their own before-imaginings of what they were going to be. Well, I am not one of these. With Miranda, I can say, "my desires are, then, most humble." The sea, the Alps, the Himalayas, the Vale of Cashmere, the Falls of the Zambesi, the Zambesi itself, have all been good enough for me, as now these seals are, even. It is a humiliating reflection, but it is better to admit inferiority than affect the other thing—so I admit it freely.

Returning, now, to these seals, I have spoken of their great activity in the water, and yet I find myself wondering whether, on the principles of evolution, it ought not to be greater still. This craves a short disquisition. Give heed, then, ye puffins, ringing me round like a vast and attentive audience. "Lend me your ears." You shall know my thoughts on the matter; a lecture for nothing-for with you I am not shy-so "perpend." Is it not a somewhat curious thing, mark me, that, throughout nature, we find beings that are but partially adapted to some particular mode of existence, excelling others in it that, both by habit and structure, one might think would be altogether their superiors? Thus the seal, otter, penguin, cormorant, etc., creatures which, in comparison with fish, may be said to be but clumsily fitted for the water, are yet able to make the latter their prey. The reason, however-at least, I suppose so-lies in their greater size, since even the fleetest fishes cannot be expected

to go eight or nine times their own length in the same time that seals or penguins take to double theirs, only. In the case of the otter, however, there is often no such great discrepancy in size, and here we must suppose the victory of the mammal to be due to its superior intelligence, or its power-as, perhaps, a result of it-of taking the fish by surprise.¹ But it is not only in such cases as the above, that this curious law of the superiority of the apparently less fit may be made out, or imagined. It obtains also amongst animals differing but slightly from one another, and whose habits are identical, or nearly so. Look, for instance, at the seals themselves. The common one of our northern coasts has much more lost the typical mammalian form, and become much more like a fish, to look at, than several species that are moving in the same direction, amongst them the furbearing seal that is skinned alive to keep ladies here warm, whilst the Japanese in Manchuria wear sheepskins. In these, all four limbs are still used for their original purpose of terrestrial locomotion, so that instead of jerking themselves painfully forward on their bellies, as the common seal and others have to do, they go upright, and even fairly fast, though with a peculiar swing and shuffle. Inasmuch, therefore, as they have become far less unfitted for the land, one might imagine that they would be less fitted for the water, and that the common seal, from having been

¹ It is stated, however, in *The Watcher of the Trails*, that an otter can actually outswim a large and powerful trout.

more modified in relation to an aquatic life, would here have considerably the advantage of them. But the reverse is the case, at least if one can at all judge from a comparison of the swimming powers of the two kinds as exhibited in captivity. Never have I seen anything more wonderful than the way in which these otariidæ tore through the water, when pieces of fish were thrown to them, in that wretched concrete basin which disgraces both our humanity and common sense at that beast-Bastille of our Gardens. The speed seemed really-I do not say it did-to approach to that of a galloping horse, and, in comparison to it, that of the seal, which could get nothing, and had to be fed afterwards, might almost be called slow. Yet whilst the latter swam with the motions of a fish, and looked like one, the other had more the appearance of a quadruped gone mad in the water. The great fore-flippers were largely usedindeed, they seemed to do the principal part of the work-whilst the much smaller ones of the common seal were pressed, as here, against the sides, and progress was almost wholly due to the fish-like motions of the posterior part of the body, and the hind feet or paddles, making, together, the tail. This was many years ago, when the common seals at the Gardens used to occupy the larger, or, to speak more properly, the less minute of the two concrete basins provided for oceanic animals. It was not till after the arrival of their more showy relatives that these poor creatures-the homely dwellers about our own coasts

—were relegated to one that, though an ordinary man might find it rather large for such a purpose, would be of a convenient size enough for Chang, or some other giant, to wash his hands in. In neither, naturally, could a pinnipede do himself justice, and perhaps these ones felt it more than the other kind. Now, however, I have seen them far more active in their native ocean, yet they fell short of those others, in captivity, to a degree which makes me think they would never be able to compete with them.

It may be thought that the larger size of the seabear's, or sea-lion's flippers, and the greater use which they make of the anterior pair, simply and easily explains their greater speed in the water. But why, then, should the true seals-the phocida, which must once have been in the same sort of transition stage between ordinary walking and their own gait, that the otariidæ are now-why should they have passed forward into their present more fish-like condition, since both the advantage of walking has been thereby lost, and that of swift swimming seems to have been lessened ? Of two creatures, each of whom has, from once being a land-animal, become a water-animal, why should the one whose structure has been least modified in relation to the change, be more active in the water than the other? The phocidæ and otariidæ, it is true, though belonging to the same sub-order, may be the descendants of species that differed considerably from one another, and thus they may have undergone a different course of modification. The

fore limb of the former, we may perhaps surmise, was of so small a size that, even after it had become fin-like, only those variations in the direction of smallness were of benefit to it, whereas, for a contrary reason, the reverse was the case with the otherthough I should think this far more likely if the true seals, like the beaver and otter, had a large and welldeveloped tail. As they have none, I rather suppose that their fore-feet were, for some period, enlarged and broadened out, and only ceased to be so owing to the gradual tail-like development of the hind feet and posterior part of the body. This, the evolved tail, began then to play the chief part in natation, as it does in fishes, and, for similar reasons, I believe that the otariidæ are advancing along the same lines, and that their mode of progression in the water will, one day, be more truly seal-like-that is to say, fish-likethan it is at present.

But let the ancestry and process of modification, as between the two families, have been as different as we can, with any likelihood, suppose it to have been, yet still it is not quite easy to understand why one marine animal should, whilst retaining the power of quadrupedal progression, possess also greater aquatic powers than another one, which, travelling by the same evolutionary road, has gone farther on it, has lost the terrestrial gait, become less a quadruped, and approached considerably nearer to the true aquatic, or fish, type. Should not the fish form excel all other forms in the water ? and, if so, should not the quad-

ruped that is more like a fish excel the one that is less so? But, instead of this, we see here the more generalised form excelling the more specialised one, not only in doing two things well, or fairly well, instead of only one, but also in the better doing of the one thing wherein the other ought, theoretically, to surpass it, as though it were at once more generalised and more specialised. This seems une étrange affaire. No doubt it is to be explained without controverting evolutionary doctrines. Indeed, I think I might hammer out some explanation, if it were not my cue, just now, to be very much astonished. The true seal, or phoca-phoca vitulina, as it is called, phoca Antiquarius as I would call it-ought, in my now mood, to be quicker and more agile in the water than the otaria-the sea-bear, or lion. But it is not; it is beaten-at least, if I may trust my memory-by its less specialised brother. This is what-just for the present-I am determined, oh ye puffins, not to be able to understand.

CHAPTER XXXV

THE DEVIL'S ADVOCATE

ONCE more in Eastcheap with Falstaff-and this I think will be the last time. I thought that by getting there before the first tide was down, I might see him come rolling up to his old haunts, to "take his ease in his inn," nor in this, I think, shall I be disappointed. His rock will soon be ready for him. Already he has come to it, swum about it, lain upon it -though it is still under the waves-and then, gliding slowly and smoothly away, has dived almost perpendicularly down, following its seaweed-clad sides, till lost to sight. Now, this last time, he seems come to it to stay. The way he expatiates upon it is delightful to see. Such great yawns, such stretchings, heavings, and throwings back of the head, with supple curvings of the neck! such luxurious anticipations of repose to come, and oh, such sleekness, such glistening ! How intensely he enjoys this rest of his, his long intertidal sleep! He was not asleep when he came (it would not have surprised me if he had been), but now, as he lies at length, rolling, a little, with the waves that ripple about him, the eyes begin to close, and even when he throws back his head and opens his jaws, as he does often, they are shut, I think, or almost shut. Often he scratches his chin with one of his flippers, or passes it, indolently, all over his face.

I was right, I think, about the fore-feet. They are certainly more elongated and fin-like than in the common seal, but, which is curious, neither they nor his hind ones seem to me so large, in proportion to his size, as they are in the latter species. The tail, if not lengthened, looks broadened, and it is fringed with hair round the edges. Though the shape is oval, it reminds me of the last joint of a lobster's tail. Perhaps, therefore, it may be an aid to the feet in swimming. In the fold of skin between the two hind feet, there is something which I, at first, thought was a mussel, but am now not so sure about. In colour and sheen it answers perfectly, but now looks more like something membranous, hanging down on There is something peculiar in two of the one side. toes of the left front flipper-which is the one I see. Three out of the five claws are black, but the second and third—counting from the marginal one which lies towards the chest, are, if it is really the clawswhite or whitish, and visible only to about half the length of the others, the rest of them being hidden by hair or fur. These claws have a peculiar rough, irregular appearance, different from the others, which seem smooth and shapely. The whiskers, which are white, are both long and thick. They are often shot out, so as to project almost straight forwards, and then brought back to their usual position, where they droop parallel with the line of the head and throat. The great blubbery lips from which they spring are thick and swollen, and have a soft, cushiony appear-

ance. Here, no doubt, we have a very sensitive apparatus, of great use to the animal. The eyebrows seem represented either by three, or four, projecting hairs, like those of the whiskers, but shorter. One, however, is greatly longer than the other two—or three.

I have now noted all I can about this creature, which, I think, must be a female. Can it be the unmarked spouse of the great sea-leopard which was here once, but which I have never seen again ? Both were in the pool together, and often quite near to one another, and, with the exception of their very different skins, looked very much the same animal. Though they did not converse, or frolic, with one another, yet I thought their very indifference had something conjugal about it-but this may have been imagination. But if they are really male and female of the same species, it seems curious that there should have been so much difference in the time that each remained under water. Of this, alone, I can be sure, that on one occasion, only, I saw at close quarters, and for a long time, a seal twice as large as the common one, and with a most magnificent skin, for which, and no other, reason I have called it the sea-leopard, not at all knowing its proper name.

The substance on the large seal's tail, which puzzled me, is, I think, connected with the parts adjoining, and this makes me conclude it to be a female, and that it may lately have had a young one, which, however, I have never seen with it. I can make

out no very special development of the nose-longer and larger than that of the common seal, but I mean as a nose—so that if the name bottle-nosed is really applied to the creature-and one Shetlander certainly used it-it must be, I think, for the reason I have conjectured, the very round apertures of the nostrils, which look as if they would just hold a cork. I could never have imagined that an animal having fur-and pretty thick fur, I think-all over it, would look so absolutely naked in the water as this seal does. I noted down that it was, without the smallest suspicion of a doubt having occurred to me, and I remained in entire ignorance of the real fact till I saw it with the fur partly dry. Once, indeed, I noticed something-the least hint of a roughness on the shoulders-as it bent its neck; but I never really doubted, so naked did it everywhere appear. There is really some interest in letting one's errors stand; besides that it does not seem quite fair to suppress them.

Seals have strong preferences, not only for particular rocks, but for particular places upon them. A large one of the common kind but just now came out on a rock where five others were lying, and advanced through them, in a straight line, displacing four of them. One only of these seemed inclined to dispute his passage, and here there was some scratching, with a good deal of hoarse snarling, almost barking—an ugly guttural note. The large seal seemed not to wish to bring things "à de fâcheuses extrémités." He would pause, with a deprecating look, but without giving way one inch, and, very shortly, press forward again, the other snarling and scratching as before, but gradually retiring, till at last he gave "passage free." The fifth seal lay at right the end of the rock, where it narrowed very much, so that there was no retreat for it, as the large one came up-for that was just the place he wanted-except into the sea. And there, after many snarls, and growls, and faint shows of resistance, as, also, most melancholy looks, it had to go, the intruder, all the while, continuing to use that deprecating, almost apologetic, manner which he had done throughout. It was disagreeable to him to be at feud with any of his kind, but, still more so, not to have the place he liked; that was the idea quite transparently expressed. There was that in his manner which seemed to say, "With the sole exception of myself, madam, there is no one for whose rights I have a more profound respect than for yours"; for, this ousted seal being a small one, I put her down as a lady. Perhaps, indeed, that is why he was so forbearing.

Several seals are now playing a good deal in the water, flouncing and bouncing about, making little white cauldrons, in the midst of which their round, black heads, bobbing up and down, look like pipkins, or crabs a-roasting. Two are sporting together in this way, which is a very pretty sight to see. They spin and shoot about, slap each other with their fins or tails, and, every now and again, one hears a curious



POLITE BUT INSISTENT



burst of sound, like subaqueous thunder; whether caused by the swirl, as they go down, or being a growl, half-choked under the water, I do not know. Seals seem to lead a most happy life. I have mentioned one leaping out of the water, as it went along, in pure enjoyment—for what else could it have been ? But how different is all this to the lonely sleep of that great thing yonder !—Falstaff—Proteus —Bottle-nose—but that last is a calumny on a very respectable feature. There is no real contrast, however. The common kind often sleep their leesome lane. With the play it may be different. I have not seen the great seal sportive.

A phoca has just come up with something white in its mouth, which it is eating-a fish, no doubt. This, too, it does in a playful manner, flinging open its jaws, and seeming to disport with it, in them. Full of the enjoyment of life they are; and the way up, through evolution, is to leave all this, and to acquire a multitude of cares, with gluttony, diseases, vices, cant-with a pat on the back from a poet, or so, now and again, making us out to be gods, and telling us to go to war. A queer scheme, "a miserable world," as Jacques says-but not for seals. Except through us, that is to say. We do skin them alive, which raises another point. Not only is man-highly civilised man-the most miserable being that exists, or has ever existed, upon this planet, but it is through him, for the most part, that the robe of misery has been

flung down upon every other being that shares it with him. He plays, in fact, the part of a devil in nature, but because his fellow-beings are below himself in intelligence, he is not ashamed of this. Were he, however, to be treated in a similar way by some species as superior, mentally, to himself, as he is to animals, he might see the matter differently.

Does right exist at all, then, as apart from might? That which does not rest upon some active principle in the scheme of nature, does not, really, exist. We only fancy it, and thereby are only the more shocked at the continual negation of what we fancy. In nature there is no law of right, only of might, but, as man develops, he becomes, gradually, aware that the cruel exercise of this might does not always lead to the best results. Therefore, he exercises it more mercifully, and, in doing so, thinks that he acts according to the law of right, as against that of might, whereas what he really does is to carry out the law of might in a more judicious manner. The idea that animals have rights, in regard to us, has, for me, no meaning. How can they have what they cannot conceive of having? If they have, so must vegetables. Whenever they enforce something against us, it is through might that they do it, and this might we have, in a greater degree, over them. The whole question is how, in the highest sense, it is best to exercise it. For the idea of right, therefore, I would substitute that of might, judiciously exercised, as the highest ideal that is in accordance with the scheme

of nature. All improvement, I believe, in the history of mankind—with the case against vivisection, now can be reduced to that principle; the other is a delusion. The only right that nature knows anything about is the right which she has conferred on every creature, to do whatever it is strong enough to do and that is might. But when might is well guided, all is well.

There is a puffin, now, within a few feet of me, with the largest fish I have yet seen one carrying; as large as a Cornish sardine, and that is as large as can possibly pass for one. And yet it has several smaller ones in its bill, besides. How is this done? For, to catch the big fish, it must have opened the beak a good deal. That one, however, is right at the base of the bill, as though it had been caught first. This. I think, supports my ideas as to the modus operandi. I do not see how so large a fish could be caught, without letting out any little ones that had gone before it. But if it were caught first, the beak, which can cut into the body, to the bird's convenience, need not be opened more widely, on the next occasion, than it would be if it held only a small fish. Did the big fish occupy any other position in the bill than that which it does, it would be against my theory; situated as it is, it is for it. Pray heaven, then, I don't see another puffin with a big fish !---for it may be held differently.

I have now seen, more *in extenso*, another young kittiwake killed by a herring-gull. Herring-gulls are

much more numerous here than even the lesser blackbacked, which is the reason, I suppose, why they seem to stand out in this character. I do not mean to brand them specially, or, indeed, at all. (Why cannot it be recognised that to blame any one, for anything, is to blame the Deity ?) It is gull nature, and that is not the worst kind, after all. Though I did not see the actual commencement of this affair, I must have all but seen it, as a party of young kittiwakes that had been bathing near the ledges flew up all at once, and this I have no doubt was when the attack was made. Immediately afterwards, I saw the gull mauling and throttling one of them, in the way I have before described. I feel sure that if it had swooped to the attack, like a hawk, I must have seen it, and therefore I have no doubt it had been swimming amongst the troop, at the time, for only yesterday I had noticed two herring-gulls within a few feet of some young kittiwakes on the water, without the latter seeming to be in the least alarmed. Probably these gulls-whose plumage, by the way, a good deal resembles that of the adult kittiwake-swim quietly amongst them, and, all at once, seize on one. This poor little thing struggled, as well as it could, with its destroyer, and, several times, got loose and began to fly away; but the gull was after it, and caught it, again, before it had risen above a foot from the water. As before (or nearly) it seized it by the throat, near the head, and then kept compressing the part between its strong mandibles. It was some minutes-perhaps

five, perhaps longer-before the kittiwake was floating, breast upwards, on the water, and being disembowelled-a horrid sight. Yet this gull could not have been very hungry, for he allowed another oneno doubt his partner-to approach and eat with him. A young gull was vigorously chased away, not by him, but by this other bird, who never let it come near. Neither was the favoured gull really hungry, for, very soon, the body was abandoned by both the birds, and then fell to two others, a young and an old one. Here, too, the old bird would no doubt have driven the young one away if its appetite had been at all keen. Probably they had all been kittiwaking in the earlier morning, and were now fairly sated. But all animals that live by killing-taking life in a chasing way-are sportsmen; they enjoy the killing, that is to say, for its own sake. I can see no difference, here, between the animal sportsman and the human one. Manifestly there is none, for no one, I suppose, with a brain in his head, can be led astray by all that irrelevant insistence on unessential distinctions, with which sportsmen seek to disguise the real nature of their ignoble pleasure-law, grace, close-time, and all the rest of it-differentiating themselves, to their own satisfaction, not only from their fellow beasts of prey, but from poachers, with whom they are essentially one, but for whom a far better case can be made out than for themselves.

What makes, or helps to make, these scenes so very unpleasant, is the prosaic and unimposing manner in which the gull goes to work. We have, here, no swoop and rush of wings, from giddy heights, as in the falcon tribe; there is no dilating of the plumage, no eloquent expression of the fiercer emotions; no fine embodiment of speed, power, rage, combined, is presented to us, nor does the victim lie, in an instant, prostrate and bleeding beneath the claws of its destroyer. Such sights make fine pictures. They personify, in a grand and striking way, our ideas of the inevitable and irresistible-of fate, clothed in terror. There is something in them of the old Greek drama, nay, of our real conceptions-drawn from nature and the Old Testament-of the Deity. But here there is nothing of all this-no impetuosity, and not enough strength or mastery to give a sense of power, at least not of mighty power. Structurally the gull is not specially fitted, nor, in general appearance, does he look fitted, for the part he is acting, and this, as is usual, gives something of a bungling appearance to his handiwork. Above all, he lacks fire, and this makes one doubly alive to the cruelty, which is not so disagreeably felt in witnessing the fierce thunderbolts of a true bird or beast of prey. There it is masked, so to speak, under "the power and the glory," but here we see only a sordid and cold-blooded murder, unrelieved by any feature of special interest even, much less by any apparently ennobling element. As a spectacle, it compares very unfavourably with that of snakes killing their prey, and equally, or even more so, from the intellectual point of view. For

with snakes we have a special, and very marvellous, adaptation to a certain end, which arouses admiration in a high degree in one direction, even though it may excite disgust in another. On the whole-to me, at least, who am a naturalist, with the curiosity proper to one strongly developed-there is far more of wonder and instruction, than of horror, in the scene, unless, indeed, the sufferings of the victim are prolonged, which is by no means always the case. Some of the smaller constrictors, for instance, will dart upon, and twist one or two of the first neck-coils round a rat, or other small mammal, with such lightning-like speed and dexterity, and with such tremendous strength, that death-as shown by the relaxation of the muscles, and hanging down of the limbs-is almost instantaneous, and the effect upon the mind comparable to that which would be produced by the stoop of an eagle, or the spring of a tiger. We are impressed by the speed and power, and have to admire the amazing ingenuity-one may even say the beauty-of the structural adaptation; for, after all, one should have an intellect, as well as a heart. This would soon pass into more distressing sensations, were the rat long a-killing; but in the cases to which I refer it is very soon over. The bowstring in a Turkish harem must be a lengthy process in com-Thus the balance of our emotions proparison. duces, or should produce, the exclamation, "How wonderful!" rather than the one, "How horrible!" but with the gull and kittiwake, only the latter is

2 A

possible. Do I, then, defend the feeding of snakes with their ordinary living prey, in captivity? Yes, I do, so long as the conditions of nature are properly preserved. I would make that the test. If it is not permissible to study the living habits of the living animal, to stand as a spectator and see how nature works, then there is no such thing as natural history, and no place for a naturalist. What naturalist is there who would not esteem himself favoured of heaven, were he to see an anaconda seize and strangle its prey, in the forests of South America, or a cobra secure his, amidst the ruins of some jungle temple in India? Now, when the same naturalist keeps either these or any other snakes in captivity, what is the object with which he does, and which alone can justify his doing, so? There is-there can be-but one, which is, of course, to study its natural habits-for all others are puerile and contemptible. Is he, then, to shrink, like one who cannot read a tragedy, however great, from that very nature which for years, perhaps, as a part of his daily life, he has wooed and sought after ? What, then, justifies him in doing that? Why should he look on whilst a gull, slowly and painfully, does a poor young kittiwake to death ? Yet, had I shot that gull, to save that kittiwake, I should have done, in my opinion, an execrable act. I should not have stopped the ways of nature, in this respect, nor could they be stopped, except by a worse slaughter than the one which we would prohibit. I should have officiously saved the life of one kittiwake, and taken a gull's in

exchange. But if we are justified in watching a certain act of nature's drama, in the field or the forest, why should we not, also, watch it under conditions which may, alone, make it possible for us to do so? The thing is not the worse because it is thus transported to another spot on earth; and the same snake that in captivity eats but once in a month or so, were it at liberty, would have a much better appetite. Therefore, when we keep snakes, and let them eat in the way that is natural to them, and which, not to the naturalist merely, but to every thinking man, should be full of interest, we do not increase the sum of misery which this earth contains, but, rather, take away from it. What we see, under these conditions, we do not create, any more than if we came upon it by chance, during a walk. We are spectators merely; and spectators of nature I hold that we have a right to be. If not, the very breath of his life is stifled in the naturalist's nostrils. He is strangled. He ceases to exist.

But there is a test and guiding path of reason and morality, here as in other matters. Whether it is right or wrong that a snake should feed in captivity, as it does when at large, depends, in my opinion, on the similarity, or otherwise, of the essential conditions in each case. In nature the victim is at some point taken unawares by the snake, and it is only after that, if at all, that it suffers any pain of apprehension.¹

¹ But this is begging the question of the so-called power of fascination said to be possessed by some snakes, and for which, I think, there is some evidence.

If, therefore, we put a rat, or a guinea-pig, into a cage so small, or so bare, that its reptile occupant is conspicuously visible, then, if the sight is fraught with any meaning, or disagreeable sensation, for it, we do not treat the creature fairly. We are modifying nature, to the great increase, possibly, of its sufferings, for it may be some time before the snake acts, and if it were not seen, or noticed, till it did, its action might be so sudden as to leave little or no room for previous disquietude. In some way or another, therefore, either by the spaciousness of the cage, or the cover which it provides, or by giving it something to eat, the prey should always be made happy and comfortable during the interim between its being put inside, and the attack, or first offensive movements, of the snake. It should never be allowed to sit shivering, as it were, in the expectation of some dreadful thing-not, that is to say, before the snake obliges it to do so. Another most important point is this. Under nature, and in their own homes, snakes are in possession of their full muscular and vital energies during the time of year at which they are abroad, and take their meals. If they are not so, also, in captivity, then we do a grave wrong to an animal in exposing it to a death which, for this reason, is both more painful and more protracted. As to the poisonous snakes, their poison, I suppose, retains its strength in captivity, and if so-but not otherwise-I can see nothing more dreadful in the death, by this means, of a rat, or guinea-pig, in a cage, than in that of a marmot

on the prairies, or of a cavy in the swamps of a Brazilian forest. With the constrictors, however, it is different. The smaller ones, indeed, seem to retain their full vigour, or, if not that, something very like it, for they are capable-as I have myself seen-of killing a rat almost instantaneously. It is different with the huge pythons, or anacondas, which lose their force, together with their appetite, in confinement, so that their languid and clumsy efforts-lasting for a long period-to take the life of their victims, may be compared to those of a drunken headsman with a blunt axe. Manifestly, therefore, to give them such a creature as a goat to mumble, and in such a sort of fern-case as they occupy, is a revolting thing; but I cannot see that a flagrant abuse like this condemns the principle. Were a combined rockery and shrubbery, as large as a good-sized garden, accorded the python, say, and were it in some hot country, the sun of which acted upon its system like Falstaff's "excellent sherris sack "--- its own, for instance, at the Cape, or in Durban-then I should recognise no wrong done in introducing a goat or pig (preferably, however, a wild animal) into its sanctum. The conditions would, in that case, be the same, or closely similar, to those which govern under nature, nor can I see that it matters much, in ethics, whether a snake eats its dinner inside, or outside, a paling. If it is wrong to see it do so in the one case, it is wrong in the other, and the contention that it is wrong in either sanctions the principle of an officious interference in the ways of the animal

world, which, upon the whole, are better than our ways.

There is a very fine line, as it seems to me, between thinking it wrong that a snake in confinement should eat in the way that nature has instructed it to, and wishing to exterminate snakes and various other wild animals, because of the way they have of dining. T may well think so, for the line, to my knowledge, has been overstepped, and here, in these remote islands, there are alarming indications of a campaign to be waged-with no other reason than this-against various poor birds, who are under the same necessity as was Caliban, of eating their dinners.¹ Some, for instance-and they advocate their views in the local papers-wish the gulls to be shot down, on account of the kittiwakes, whilst others would seek vengeance on the skuas for the way in which they persecute the gulls. It seems wonderful that such grotesque views should be held by educated people, but they seem to me to be the same in principle with those which would deny to snakes, in captivity, the natural use of their bodily structure. For myself, I only believe in such a Zoological Gardens as I have tried to sketch,² and hope I have foreshadowed. But if the rational study of the habits and life history of the creatures confined there be not the raison d'être of its existence, I, at any rate, can admit no other, and I would as soon think of training spiders not to make webs, as of

² The Old Zoo and the New.

¹ CALIBAN : I must eat my dinner .- Tempest, Act i., Scene 2.

habituating snakes to the eating of dead meat. An interesting, an instructive thing, truly, to see a creature, formed, by a long process of evolution, to kill in the most marvellous and admirable way, tamely eat something that has already been killed! What wretched vapidity! Like performing dogs, or monkeys, dressed in men's clothes. Where, then, is the soul of the naturalist?

These views I would apply to every beast of prey in the Gardens, each one of which, in my opinion, has a gross wrong done it in not being allowed to do that which both its soul and body expressly commission it to do-as though a sentient musical instrument, throbbing to play, should never, in all its faded life, be given the opportunity of emitting a note. The misery of such privation is far beyond that which would attend the energy now so cruelly restrained. It is out of all proportion to it, in my Not only snakes, then, but the lion and opinion. tiger, too, should, by my will, kill their prey; or, if this were too costly a proceeding-though I see not why it should be-then out with them to the wilds they belong to ! I would have those only stay, that could stay, and be themselves. No neuters in my Gardens !

If animals have really rights—as to which, and our own, I have expressed my views—then snakes must necessarily have their share of them. They have a right, I maintain, upon that assumption, to eat their victuals according to the laws of their being, and I, on

my part, shall always be pleased and interested to see them do so. I am greatly interested in snakes, and in reptiles generally. Their structure is wonderful, their powers are extraordinary, their ways and their habits, their whole life history, everything about them, is fascinating. They are not stupid, as they are erroneously supposed to be, and those who have been brought into intimate relations with them have found them capable of great and enduring affection.¹ For the sort of crusade, therefore, that has been got up against these maligned creatures, I altogether repudiate it, and I dissociate myself entirely from the many harsh, rude, unsympathetic and unappreciative things that have been said about them. Things, of course, are thus, or thus, according as we ourselves are, and snakes must be uninteresting indeed to some people, since-infandum !--- in a place devoted, or that should be devoted, to the study of the living habits of the living animal, it is proposed, with a shout of "Eureka!", to substitute for the grace of motion and lithe sinuosity of the living serpent, its motionless, stuffed, dusty, dirty, faded, black, hard, cracky skin. A stuffed snake !--- that awful production, from which all softness and smoothness is gone, out of which every intimate character is driven, from the very beginning, whilst the mere superficial resemblance fades slowly, day by day, till we have, at last, something like a vast

¹ See the uniquely interesting letter of Mr. Severn to the *Times* of July 25th, 1872, as quoted by Romanes in his *Animal Intelligence* (International Scientific Series), pp. 260-2.

IN THE SHETLANDS

sausage, or interminable gouty black-pudding, set hard in a bolster-like attitude, with a crack, or repulsive sharp angle, at every one of the stiff, graceless bendings, supposed to represent those marvellous flexures of the real creature, which, when we see them in their living beauty, set the mind in a glow of admiration, and are a rest, as well as a feast, for the eye to dwell upon. This-this monstrosity-we are to have, and to be thankful for having it, instead of the gracious glidings and foldings, the sweet wave-like coilings and uncoilings, the subtle entanglements, labyrinthine complexities, that, going hand in hand with the greatest simplicity of design, and with the perfect, deft power of unravelment, make the living body of a snake both a joy to the æsthetic, and a wonder to the intellectual mind : instead, too, of the radiance, lustre, sheen-the glory, both of pattern and hue-which sometimes sits upon its glistening scales, crowning them with a beauty hardly, if at all, inferior to that which decks the feathers of a bird, or waves on the wings of a butterfly. All this we are to fling away for worse than "dusty nothing," for a set of sorry deformitiesworthy only of some wretched taxidermist's shopwindow-which every real naturalist ought to be ashamed to look upon, but every one of which must cost some poor serpent its life. The worst plaster cast, substituted for the original marble of a Greek statue, were artistic luxury compared to this; and those, indeed, who have no taste for art can enjoy the one, as much—or as little—as the other. It is easy to be

satisfied with stuffed snakes, when snakes are of no interest to one; and that, I think, is the position here. Those who would stand and look at the pavement, as soon as they would at a python or rattlesnake, say to those who have the life-loving instincts of the naturalist, "Oh, get rid of your live snakes, and have stuffed ones instead. They're just as interesting-in fact, more so, because you can set them up as you like." Exactly. I understand, quite, what is meant ----only to me a live snake is much more interesting than a live man or woman, and a stuffed one almost more repugnant than a stuffed man or woman would That is the little difference-the little thing that be. makes all the difference. One is either a naturalist. or one is not.

No, these are not my plans of reform for the Gardens, and though I entirely condemn certain abuses in the feeding of snakes, for the disappearance of which I am thankful, yet I cannot sympathise with a movement which, though it has incidentally brought this about, is founded upon a principle which I think is a false one, and calculated to produce unhappy results in regard to the animal kingdom at large. Except where it cannot be helped, I do not believe in altering or modifying the laws of nature, as enforced upon animals, by one jot or one tittle. Nature, nature, nature—that is the beginning and end of my ideas about a collection of living wild animals. It is simpler even than Hamlet's view—long since become obsolete—as to the office and function of the stage—

"to hold as 'twere, the mirror up to nature"-for here, instead of the mirror, there should be nature herself. I would keep no animal in respect to which proper and adequate arrangements could not be made for it to live its own life, and, where practicable, to die its own death. And in regard to suffering inflicted by one animal on another, I would ask only this one question, and be governed by the answer : "Is such suffering in accordance with the laws of nature, and the conditions of things in the world at large, or is it not? In proportion as the power of exercising its natural functions and aptitudes is taken from it, I pity an animal, and that is why I hate-with an intellectual quite as much as with a humanitarian hatred -the miserable cellular confinement inflicted upon wild creatures in a Gardens like ours. But I would never curtail the activities of one animal in order to preserve the life or diminish the sufferings of another, though I would rigidly guard against those sufferings being unduly, i.e. artificially, increased. In my snake-house, by the way, the question as to the propriety of presenting the inmates with domestic animals, could hardly arise, since it would be co-extensive with a rabbit-warren, and my gardens indeed, could I have my real wish, would be quite as large as Rutlandshire (Yorkshire for choice).

In the principle of interference, as between one animal and another, I have no belief. It does not appear to me to be sound or healthy in itself, and its effect must be to check the growth of knowledge. Not,

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of course, that I would wish to curtail the liberty of personal action in this respect, any more than I would wish mine to be curtailed. He who, in his private capacity, keeps a snake, and feeds it on fruit or meat, has my hearty approval; but if a naturalist, seeking instruction, were to keep it in this way, he would be largely wasting his time. That he should be obliged, or considered morally bound, to do so, is intolerable. I lift up my voice, and protest against such an idea. I go very far—very far indeed, I think—in my humanitarian views in regard to animals, but as a naturalist I must draw the line somewhere, and I draw it at officious intermeddling, at any attempt to stop the course of nature in the animal world; in which term, however, I do not include domestic animals.

CHAPTER XXXVI

COMPARING NOTES

 \mathbf{W}^{HO} would have thought that this same gull the herring-gull-which kills and devours the young kittiwakes and puffins, besides living, habitually, on fish, crustaceans, molluscs, and any garbage it can find, is also a fruit-eater ? It is, though, since the black berries of the stunted heather, here, are certainly its fruit, and these it eats, not as an occasional variation of diet merely, but systematically and with avidity. Indeed, these berries, now that they are ripe, seem to me to be the bird's favourite food. I will now give the evidence on which this statement is founded, and which I think will be admitted to be conclusive. During the last week of my stay here, I began to notice, more and more, as I walked over the ness, droppings of some bird, which were of a dark blue, or purple, colour-in fact, a very rich and beautiful dye. These droppings were full of the small seeds of some plant, and upon comparing these with the seeds of the heather-berries, I found them to be the same. They were too large and too numerous to be due to any birds except either gulls or skuas, and as I constantly found them over the domains of the Arctic skua, I thought at first, "Ye are their parents and original." One morning, however, whilst sitting on the rocks, watch-

ing my dear seals, there was a down-dropping on my right trouser (workman's cords at 6s. 6d.), making a great splotch of as fine a colouring, almost, as I have seen, and ineradicable, which makes me think that a splendid dye might be produced from these berries—in fact, it was produced. Looking up, at once, I saw a young gull just passing over me, there being no other bird about-with the exception of puffins, which made the atmosphere. Therefore I felt sure it was the gull, nor do I think that Sherlock Holmes, with a similar clue and a sound knowledge of puffins, would have concluded otherwise. Then, too, side by side with these droppings, I had lately been finding pellets such as birds habitually disgorge, formed generally of a mass of the skins and seeds of these same berries, but sometimes containing a certain number of them intact, or but slightly bruised. Some of these had seemed to me too large for any bird smaller than a herring- or lesser blackbacked-gull, and latterly I had found them mixed with the broken shells of mussels, and other shellfish such as gulls eat, but which skuas, I believe, do not, or, at any rate, not as a rule.

Some of these pellets, by the way, made very curious objects. I have taken a few as specimens, but I regret that others, still more curious, formed of broken pieces of crab-shell, coagulated together into a globular form, which two years ago were very plentiful on the island, I have not this year been able to find. I would here suggest that a collection

of this kind would be both interesting and instructive. It would form a key to the diet of every bird represented in it, but its crowning merit—one quite beyond estimation—would be that it would not increase the rarity or cause the extinction of a single species. For these reasons—more particularly the last one—I do not at all anticipate that such a collection will ever be made.

I had already concluded, therefore, that it was the gulls who ate the heather-berries, before I began to see them walking in flocks over the ness, and most assiduously doing so. First this was of an evening -always herring-gulls-then at all times of the day; but the evening continued to be the great time. Just as the kittiwakes, two years ago, used to feed, ghostlike, about my shepherd's-hut, through the short, light nights of June, so here, from my little sentrybox, I began now to watch these larger ghosts, as I sat at the door both eating and cooking my supper. From the door to the stove was a stretch-and there were many stretches—and after one of them the shadows would be fallen, and the ghosts hid, or fled. Then came other ghosts sometimes-all past scenes are ghosts-" Da hab'ich viel blasse Leichen," etc. Oh, it was sweet, then, in the little bunk, by the candle in its block of ship-wood, with a rivet-hole for the socket, in the fading glow of the peat-fire, to read the poets I had brought with me-Shakespeare, or Molière, or Heine-in those surroundings. That was the time to read-for it's all over now-amongst

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the "thens," the shadows—a dream, and so is everything.

This was my last discovery-for it was one for me. Soon after I made it I left this wild northern promontory, regretting, as I shall ever regret, that there is no comfortable little cottage upon it where I might stay, and be looked after-have my porridge made-for several months at a time. To be able to walk out from as much of civilisation as this would amount to into absolute wildness and solitude, returning into it again at the end of each day—that is the life I appreciate. For society there would be the good old body who cooked for me, and her husband-a fisherman, doubtless, with his tales of the sea. With them I could have a crack when I wished to, nor ever sigh for anything higher, since the homely utterances and out-of-the-heart-comings of simple country folks, especially of "the old folks, time's doting chroniclers," have for long been all I care for in the way of conversation. All other irks me, and my mind soon grows confused in it, so that I seem to have no ideas at all, and indeed, have none for the time, except a panting to be gone. Therefore, for the world of men and women here-those masks, those flesh-enshrouded spirits, never to be properly dug up or pierced into, give me but books, and for my own little circle of daily life, it lives in Miss Austen's novels, nor do I ever want to enlarge it. How many readers are there who can say this-that they have ever had one friend or acquaintance with whose loss they could not better

have put up than with that of a favourite character in a favourite book ? Somebody dies, and you talk him or her over, comfortably, with somebody else; but fancy turning to *Emma*, say, and finding there was no Mr. Woodhouse, or no Miss Bates !

Well, I was soon in a southward-going steamer, and here I read a paper entitled "Observations on the Distinctions, History, and Hunting of Seals in the Shetland Islands," by the late Dr. Laurence Edmondstone, M.D., of Balta Sound, lent me by the present representative of the family, and Laird of Unst, to whom I am indebted for all I have been able to see. either of seals or sea-birds, whilst in that island. Here was something to compare with my own observations, and my first endeavour was to find out the specific identity of the two large seals that I had watched with so much interest. To the best of my ability I have described the exact appearance of each of them, as seen by me, for hours at a time, at close quarters, and often examined through the glasses, and I have speculated on the likelihood of the two representing the male and female of one and the same species. This conjecture is supported by what Dr. Edmondstone says, since he states that the sexes of the great seal (phoca barbata) differ much from one another, nor does he think that, besides the great seal and the common one (phoca vitulina-as a Scotchman he would surely have approved my emendation here), any other species is to be found around the Shetland coasts. Yet his description of the skin-markings of both the male and 2 B

female of the great seal does not altogether accord with the appearance of the two I saw. It is as follows :-- "Male. The general colour of the body is dark leaden, with irregular and largish patches of black; the belly paler; the head and paws darkest." "Irregular and largish"-or rather downright large --- " patches " my sea-leopard, as I have loosely called it, certainly had, but with regard to the rest, I should have said that the colour which alternated with these patches, and, indeed, made counter-patches itself, was a lightish yellow upon the belly, and that the mottled appearance became fainter in ascending the sides, and ceased, or was hardly noticeable, upon the back. There were, thus, two areas of coloration merging into one another, the one very handsome, the other not particularly so; and this was the most salient feature presented. As I saw it, indeed, the belly, turned upwards every time its owner went down, was a magnificent sight, in the effect of which the water, I think, must have played an important part. Therefore, I cannot quite understand any one who has seen it describing the animal other than in terms of admiration, whereas here it is not even termed handsome.

But now, "put case" I had descended the cliff, that day, rifle in hand, intending to get a shot. I should have got one very shortly after the creature had first risen—for it gave ample opportunity—and then, whatever had been the upshot, it would have sunk or gone down without its lazy roll, and consequently without any exhibition of its chief glory. In all

probability I should not have seen it again, and I should, therefore, have had nothing to record about its appearance in the water, as seen under exceptionally favourable conditions—for I was looking down upon it from a moderate height. In the same way, had my intention been to shoot the *phocas*, what should I now know of their play, their fun, their humour, their gambolling with spars, wrapping themselves round with seaweed, polite insistence, petulant makebelieve, and all the rest of it ? Instead, there would have been a shot, *et preterea nihil*—and this, indeed, was just what it was, with me, years ago in the Hebrides. That is what sport does for observation.

Continuing his description of the male of the great seal, Dr. Edmondstone says, "The snout is very elongated; the nose aquiline, very similar in profile to that of a ram; the muzzle very broad and fleshy, and the upper lip and nose extending about three inches beyond the lower jaw, so that in seizing its prey the animal seems obliged, as I have often seen, to make a slight turn, in the manner of a shark." This last is interesting in connection with the roll round on to the back, which my sea-leopard-or rather, great seal-always made, when going down. It shows that it is a familiar motion with this species, and therefore, perhaps, that it might sometimes be indulged in whilst catching fish, even though it were not quite necessary. The common seal also frequently turns on its back in the water, so that I should think the one posture was as familiar to it as the other.

Probably, therefore, it can catch fish in both. In regard to the female of the great seal, Dr. Edmondstone says, "The skin is of a paler colour, more or less patched with darkish blue, and becomes *lighter* with age. In two aged individuals, of different sexes, the one appears a pale grey, and the other black." There were no patches whatever on the skin of my bottle-nosed seal, as I first called it, but a *uniform* "pale grey" describes it pretty well. I have called it a uniform silver, and so, indeed, it looked; but pale grey and silver come pretty close to one another. At first I thought there was a brownish hue, but the more I looked, the more silvery it appeared to become.

According to Dr. Edmondstone, the male and female of the great seal swim in a different way, for he says, "He swims with his nose on a level with the water and the back of his head elevated; the female with the whole head elevated, like the vitulina." This, as far as I can remember, was not my experience. The large seal which I first saw, and which I have now little doubt was the female of the phoca barbata, sometimes raised the head out of the water, and she may have swum with it so, occasionally and for a short time; but her characteristic way of swimming-as distinct from floating upright in the water-was with the whole head and nose just on a level with the surface, and in one line as nearly as possible. In this respect I did not remark any very particular difference between the two. The male,

however, uniformly rolled over as he went down, which was not the case with the female,—and his periods of immersion were, for some reason, during the time I saw him, only half, or less than half, as long as hers, whilst he remained up, generally, for a little longer.

In regard to the common seal, Dr. Edmondstone has, like myself, come to the conclusion that it does not post sentinels. He remarks, "It has been said" (I felt sure it had) "that when several seals are resting on a rock, some one of their number acts as sentinel; but this result of discipline or self-denial I cannot say I have seen-sauve qui peut is, I think, rather the watchword." He goes on to say, however, "The herring-gull is their most vigilant vidette at all seasons, as he is of every other kind of our game. The seal he loves especially to take under his wing, and he is the most vexatious interruption to the sportsman." Long may the herring-gull continue to protect the seal!---if he really does so. For myself, I did not see any hint of it, though there was plenty of opportunity; and as he allowed Mr. Thomas Edmondstone to shoot fifty in one year, I fear he cannot be very efficacious. That he will, sometimes, come flying down upon one, with a great clamour, as though objecting to one's presence, and will continue to do this for a great many times in succession, is certainly true. I have been treated in this way several times, and in one instance the gull's persistency, and apparent dislike, were quite remarkable. Now, if

one were stalking an animal at the time, it would be easy to construe such action into a wish to protect it; but here no other creature was in question besides myself. The gull's method was to fly to a considerable distance away, and then, turning, to come sailing down upon me, uttering a loud clangorous cry as he passed over my head. Had I been creeping or rowing towards a seal, it is very probable that in the course of these numerous flights, to and fro, he would have approached him more or less closely, and each time I might have assumed that he had a special object-viz. solicitude for the seal's safety-in doing so; whereas the times that he did not do so I might have counted as nothing-forgetting them afterwards-or put down to general excitement.

That either a gull or any other bird should take any interest in the fate of a seal, is to me, I confess, almost incredible. I have read of a curlew giving a sleeping one a flap with its wing, so as to wake it up. I doubt the motive, and I doubt it in every other reported case of the kind. I am quite open to conviction, but it is almost always in general terms that one hears of these things, whereas what one wants is a number of detailed descriptions recounting everything that took place. There is nothing strange in birds becoming clamorous and excited at seeing a man. No doubt, they are actuated by much the same feelings as make the smaller ones mob a hawk, or an owl; but from that to the deliberate warning of

another species is a long step, and I have never yet read evidence to convince me it has been made.

Speaking further of the habits of the common seal, Dr. Edmondstone says : "Their time of ascending the rocks is when the tide begins to fall-the water must be smooth and the wind off shore. The favourite seasons are late in spring and early autumn." With so short an experience, perhaps, I should be chary of forming an opinion at variance with that of one who was "for more than twenty years engaged in hunting these animals." But my affirmative evidence is good, as far as it goes, and what a few individuals do for a few days-or even what one does once-is in all probability done habitually by every member of the species. There were two kinds of rocks on which my seals lay, viz. those which were exposed only when the tide was more or less out, and those which were always exposed. They came to the first whilst they were still under water, and established themselves upon them as soon as it was possible to do so, and remained there, as a rule, until they were floated off by the returning tide. The second kind, as represented by one great slanting slab, which was the favourite resort, they ascended and left at all times of the day, without any regard whatever to the state of the tide, the obvious reason being that the tide did not here affect their power of doing so. The rock which one seal made such persistent, though unsuccessful, efforts to get up on to, could only by possibility be scaled when the tide was at the full, and

that, and for a little before, whilst it was still coming in, was precisely the time at which he attempted it. At any time, moreover, and just as the spirit moved them, these seals would leave their rocks, and, after remaining for some time in the water, return to them again. Though I did not take any particular notice of the wind-it seemed always to be blowing everywhere-yet I am pretty sure it was not the same each day, and the seals' movements, even as it affected the sea, seemed to bear no relation to it. On one particular day the sea was rough-nothing excessive for these islands, but rough enough for it to be a fine sight to see it dashing against the stacks and jutting cliffs. I did not stay long on that day, and I was hardly any time by the pool to which the greater number of seals-all of the common kind-resorted. I cannot now recall whether there were any lying on the great slab of rock-probably there were, or I should have been impressed by their absence-but, even whilst I was there, one came up on to one of the smaller rocks, and afterwards went off it again, all in the swirl and foam. In ascending, this seal swam in against the backward flow of the wave, and I was struck by the strength and ease with which it stemmed such a rush and turmoil of water. No doubt there must be seas in which seals dare not approach the rocks, but that they do not require it to be calm-I mean, moderately calm-in order to ascend them, this one case which came under my observation is sufficient to assure me. I imagine, however, that what is not

too rough for seals may be too rough for a boat, and that therefore they are not often seen by sportsmen on the rocks, except during fair weather.

Were the sea always rough seals would hardly ever be interfered with, and so for their sakes I wish it They are absolutely harmless creatureswere. though some, perhaps, would grudge them their dinner-most interesting and lovable, incapable of defence or retaliation, and of little value when slaughtered. The chase of babies, since it would involve the excitement of breaking into houses, and stealing cautiously upstairs, ought to be as interesting to sportsmen, and no doubt it would be were public opinion in that respect to undergo a change. However, though the carcase is, as I have said-for I have been told so here-of little value, I suppose it is of some, so that a poor fisherman has, at least, an understandable motive in putting them to death, nor can he be expected to feel an interest in anything that really is of interest concerning them. But that an educated man should ever wish to kill seals, being not moved to it by gain, but as a pleasure merely, and from a love of glory, seems to me now like a madness, though as it is a madness which I have myself felt,¹ I ought to be able to understand it. Yet I doubt if I can now-so curiously has something gone out of me and something else come into me.

One other remark of Dr. Edmondstone in relation to the rock-seeking habits of seals is at variance with

<sup>Praised be the Lord, however, I have fired but one shot, and that missed.
2 B 2</sup>

what I observed in my two little bays. He says, "The favourite rocks on which they rest are almost always observed to have deep water round them, are comparatively clear from seaweed, and under water at full tide." Now, the favourite rock on which my seals rested rose to, perhaps, a dozen feet above high tide before it became unscalable, and, to that height, it was regularly ascended by some or other of its occupants. In other respects it conformed to the requirements stated, for the water round it was fairly deep, and above the high-water line-where alone the seals lay-it was entirely bare of seaweed. Other rocks, however, which were habitually resorted to, were by no means so, and many of these were right in shore, where the water was anything but deep, though sufficiently so for the seals to swim at once, when they cast themselves off. The rock where the great seal always lay was a mass of seaweed, and I have mentioned having seen the common ones both play with, and help pull themselves up by, the long brown kind. I cannot help thinking, therefore, that seals do not exercise much choice in any of these respects, but are governed more by circumstances, selecting rocks which, on the whole, they find convenient, and which may be now of one kind, and now another. As, however, rocks which are never submerged are, when accessible at all, always so, these ought, one would think, to possess a great advantage, supposing the seals to have no prejudices in this respect. I do not, myself, believe that they have,

and the seal-rocks which I passed in the steamer were such as to support this view.

Putting everything together, I believe that, both in respect to the rocks on which they lie, and the times at which they lie on them, the one and only law by which seals are governed is the law of practicability. It is a very good law, and I wish I had always been governed by it too—I mean beforehand.



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