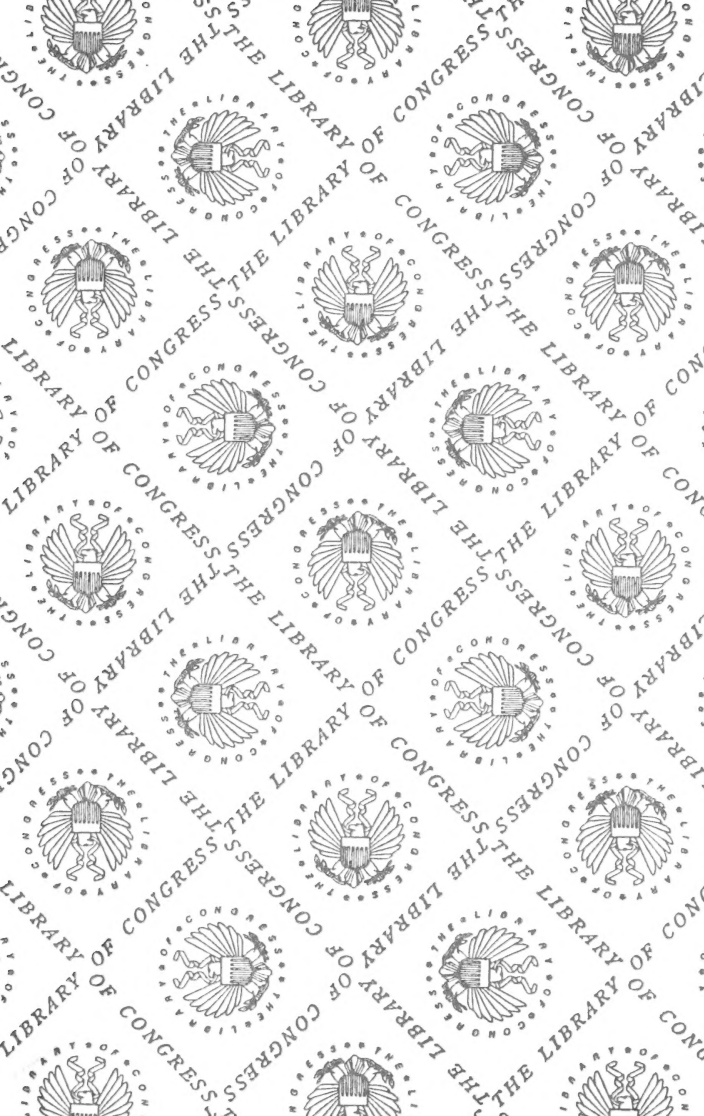
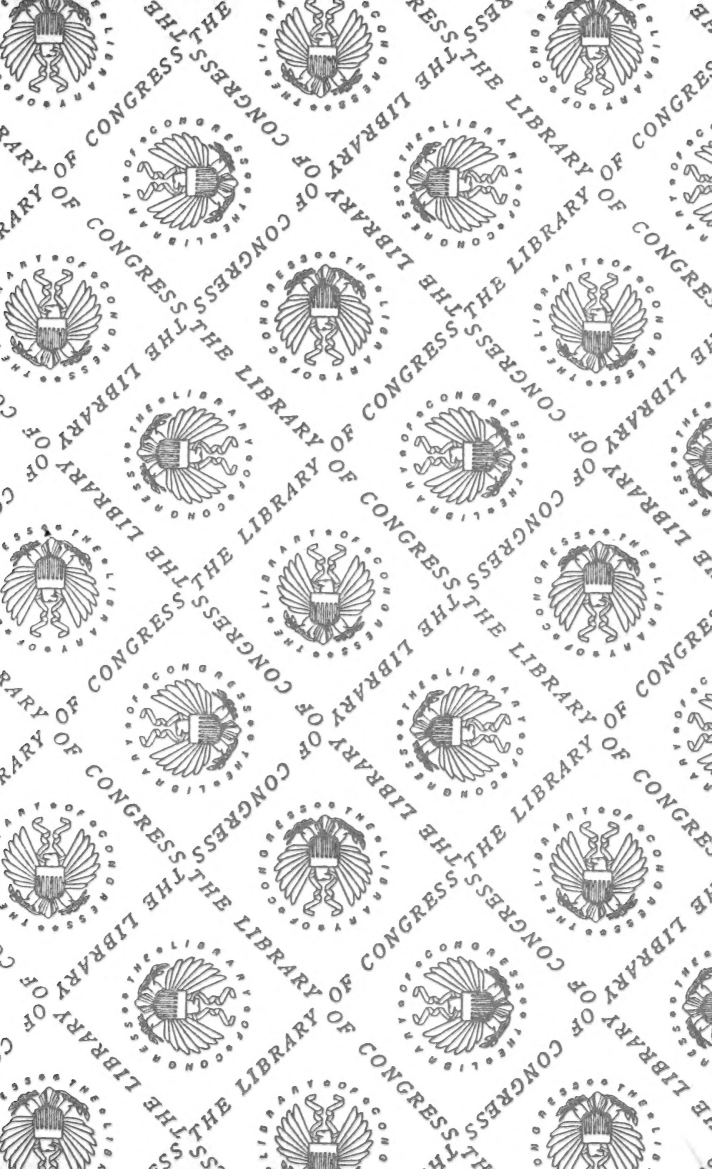


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THE

Oyster Epicure

“An oyster, sir, is one of the elements of social existence, a delicacy of no age, sex, or condition, but patent to the universal family of man. Good in a scallop, better in a stew, best of all in the shell; good in pickle, in curry, in sauce; good at luncheon, before dinner, at supper; good to entertain a friend, good to eat by yourself; good when you are hungry; good, moreover, when you are not.”

— *The Irish Oyster-Eater.*



THE
OYSTER EPICURE

A COLLATION OF AUTHORITIES

ON THE

GASTRONOMY AND DIETETICS

OF THE

OYSTER ✓

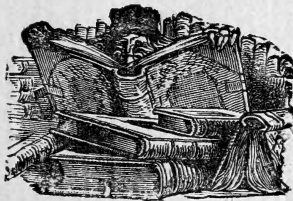
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“Oysters—these things must have been
Made in heaven”

—Richard Bentley

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NEW YORK
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1883

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PREFATORY NOTE.

“Wise people eat oysters and eschew pills” — to corroborate this truth by good testimony is the aim of these pages. The text is taken from a book that, on the subject of oyster-eating, is quoted as a most trustworthy authority.¹ But, to correct popular errors, and to set up rules that will be accepted as “golden,” it is necessary to hear all sides, even those that disagree. The thoughtful reader will quickly discern the undisputed points, and will profit even from the disputed ones. He may also trust more or less familiar names of good standing. On the “Dietetics of the Oyster,” no better summary of evidence could be found than that by the Rev. Samuel Lockwood, Ph.D.,² himself in this country a leading authority. It should be stated that these pages virtually form the introductory part of a general hand-book of the oyster (preparing for the press), treating the subject, also, in its industrial, commercial, and scientific bearings, with references to the best sources. The advance issue of this “introductory” is a bid for the “popular taste,” on the principle of the “half dozen on the deep.” May it serve as the “preprandial whet”!

C.

NEW YORK, Sept. 3, 1883.

¹ Lucullus: or, Palatable Essays, in which are merged “The Oyster,” “The Lobster,” and “Sport and its Pleasures” [by Major H. Byng Hall]. London, 1878.

² From the “Oyster Interests of New Jersey,” in the Fifth Annual Report of the Bureau of Statistics of Labor and Industries of New Jersey. Trenton, 1882.

TABLE OF CONTENTS.

	Page
GASTRONOMY OF THE OYSTER	3
1. When in Season	3
2. How to Eat it	6
3. How to Serve it	9
4. What to Drink with it	14
5. How Many to Eat	16
6. How to Open it	18
7. Roasted in its own Shell	20
7. Which to Choose, and Where	22
<i>a.</i> In the United States	22
<i>b.</i> In New York	26
<i>c.</i> In Boston	28
<i>d.</i> In Philadelphia	29
<i>e.</i> In Europe	29
<i>f.</i> In Great Britain	30
<i>g.</i> In London	30
<i>h.</i> In France	32
<i>i.</i> In Paris	32
DIETETICS OF THE OYSTER	33
FAMOUS OYSTER-EATERS	53
THE HAPPINESS OF THE OYSTER	59

THE OYSTER EPICURE.

GASTRONOMY OF THE OYSTER.

I. When in Season.

“ Now the fishes called oysters
Are in their operative moistures ;
For now the month hath yet an *r* in it,
Astrologers do see so far in't.”

— “ *Poor Robin Almanack*,” 1685.

“ These four sad months, wherein is mute
That one mysterious letter, that has power
To call the oyster from the deep.”

ALBEIT our oysters are generallie forborne in the foure hot moneths of the yeare, that is to saie, Maie, June, Julie, and August, which are void of the letter R. ; yet in some places they be continuallie eaten, when they be kept in pits, as I have knowen by experience. — *Wm. Harrison*.

September : — Just as oysters are to be had, but not in perfection. *November* : — The oyster in perfect order. *March* : — When oysters are at their best and fattest. — “ *The Epicure's Year Book*,” 1868.

Remarking on the old ordinance against oysters, Grimod de la Reynière¹ insisted that, out of regard to their defective condition, they should be excluded from the epicurean table from the beginning of May till the beginning of December. "Nous ne conseillerons à personne d'en manger en Septembre; elles n'y sont ni assez fraîches ni assez grasses pour piquer la sensualité d'un gourmand. Ce n'est guère qu'au commencement de Décembre qu'elles sont vraiment dignes de figurer sur la table."² — *Jeaffreson's "Book about the Table."*

Oysters are in season almost the year through, except when spawning; then they are milky, watery, poor, and considered unfit and unwholesome food. The months of their spawning appear in May, June, and July. It is said that planted oysters, that is, those that have been transplanted from their native beds and placed and fattened on others prepared for them, are never milky; and, no doubt, by their being thus removed or disturbed before they have commenced to spawn, has caused them to stop this process, while in their natural beds they were always subject to this objection. Several years ago oysters were seldom seen for sale in their spawning season; it was not against the law (as it is now), but the people would not buy or have them. — *De Voe's "Market Assistant."*

¹ Author of the *Almanach des Gourmands*, and of the *Manuel des Amphitrions*; as famous for his gourmandise as for his brilliant gastronomical writings. Born 1758; died 1830.

² We advise no one to eat them in September; they are then neither fresh nor fat enough to tempt the palate of the epicure. They are rarely worthy of a place on the table before the beginning of December.

Every one is familiar with the saying that oysters ought only to be eaten in the months which have an *r* in them, it being generally supposed that they are unwholesome as food at other times.

No doubt, as a general rule, oysters are not in perfection between the months of May and August, though the impatience of the public has claimed the last-named month as an oyster month, and the 5th of August begins the season. — *Edinburgh Review*.

The Romans had respect for economy and decency, knowing well that when spawning the bivalve should not be eaten. They recognized as close-time the warm term, our *r*-less months, and it is written by a mediæval bard :

“ Mensibus erratis
Vos ostrea manducatis.”

Which may be rendered thus :

“ Lapsing the *r*-less months 'tis meet
You may oysters freely eat.”

These mollusks, however, may be eaten with safety, even in the *r*-less months, if they are not in a spawning state, for oysters sometimes have an off-year, owing to causes not always apparent. Besides, spawning can sometimes be prevented, as by removing to deeper or colder water. With favoring conditions this bivalve may be in prime flesh even through May, June, July, and August, and the presence of immature eggs may be even an advantage to the epicure. But all this supposes it not to have reached the state when, in oyster-man's phrase, it is “ in milk.” — *Lockwood*.

2. How to Eat It.

See also "How to Serve It."

"Take care that they be eaten off the deep shell."
— *Irish Oyster-Eater.*

"Bathed in their own liquor." — *Sir Henry Thompson.*

GOURMETS¹ and epicures eat the oyster in its natural state, except that the beard is taken away. In England it is eaten with pepper, in Holland with vinegar, in Germany frequently with lemon-juice; but I am of opinion, and am convinced, that when taken with the liquor they still contain, they are more digestible and more tasty. — "*Lucullus.*"

The ancients, our teachers in all arts, but especially in æsthetics, did not bolt the oyster, but masticated it. With true epicurean tact, they always extracted the full enjoyment out of the good things set before them. Not so we; most of us now bolt them; but this is a mistake, for the oyster has a much finer flavor, and is far more nourishing, when well masticated. — "*Lucullus.*"

¹ Gourmet is a good English word in its origin, but it is doubtful whether it will ever pass current among us in the sense which the French have put upon it. — *Kettner's "Book of the Table."*

The difference between a *gourmet* and *gourmand* we take to be this: a gourmet is he who selects, for his nice and learned delectation, the most choice delicacies, prepared in the most scientific manner; whereas, the *gourmand* bears a closer analogy to that class of great eaters ill-naturedly (we dare say) denominated or classed with aldermen. — *Hayward's "Art of Dining."*

Though he relished oyster-sauce, and commended oysters as a flavoring ingredient of beefsteak pudding, Dr. Kitchiner resembled most epicures of his time in valuing the "native" chiefly for its power to revive a jaded appetite, when taken in the freshness of life, before the advent of soup. "Those," he observes, "who wish to enjoy this delicious restorative in its utmost perfection must eat it the moment it is opened, with its own gravy in the under shell; if not eaten *while absolutely alive*, its flavor and spirit are lost. The true lover of an oyster will have some regard for the feelings of his little favorite, and will never abandon it to the mercy of a bungling operator." — *Jeaffreson's "Book about the Table."*

As to such heresies as pepper and vinegar let them be banished from the table whilst oysters are upon it. These charming mollusks should always be taken unmitigated, without losing the delicacy of their flavor by a mixture with any condiment whatever, except their native juice. Alas! there are few who know how to appreciate and make use of these natural advantages. Scarcely one man in a thousand knows how to open an oyster, and still less how to eat it. The ordinary system which is employed at the oyster-shops is radically false, for all the juice is lost [this refers to the English mode], and the oyster is left to become dry and insipid on the flat shell, which effectually answers as a drain to convey off the liquid, which is to the oyster what the milk is to the cocoanut. — *J. G. Wood.*

Eat raw oysters as plain and free from condiments as possible, and always on the deep shell in their own liquor. The average American orders a dozen on the half shell, and then drowns his pets in vinegar, pepper, salt, horse-radish, etc., washing them down with some malt beverage, pays his check and disappears. The next day he goes through the same performance, and the not over-conscientious oysterman, knowing his weakness for condiments, can easily palm off on him a "Rockaway Cull" for a Blue Point or a Green Point; or he may give him a "deep-water native" for almost any particular kind or brand he may want, and he cannot detect the difference in their flavor, owing to his excessive use of condiments. A little lemon-juice is all that is necessary, if you will not eat your saline dainties natural.

The heartless oyster-fiend who opens your oysters by *smashing* the shell should be avoided, for its cruelty, to say the least. We can forgive him for spattering our clothing with shells, mud, and dirty water; but filling our mouths with these things is pure ugliness. Order a quart of bivalves to be sent home, and this oyster butcher endangers the health of your family should any of them swallow a particle of the shell. The true lover of an oyster should have some feeling for his little favorite, and patronize establishments only where they contrive to open them (Boston fashion) so dexterously that the mollusk is hardly conscious he has been removed from his lodging "till he feels the teeth of the piscivorous gourmet tickling him to death." — *Murrey's "Valuable Cooking Receipts."*

3. How to Serve It.

“On the deep.”

American and French Fashion.

It has become quite fashionable to serve raw oysters as one of the preliminaries to a dinner-party; sometimes on small plates, sometimes on the half-shell. They are seasoned by each guest according to his own taste. — *Marion Harland.*

When well washed, open them, detaching the upper shell, then detach them from the under shell, but leave them on it; place on a dish, and leave the upper shell on every oyster,¹ and serve thus. — *Blot.*

Not until just before serving should they be opened. Marketmen often furnish some one to do this. Six large oysters are usually allowed each person. Left in half the shell, they are placed on a dinner-plate, with a thin slice of lemon in the centre of the dish. — *Parloa.*

The English are rather peculiar in their mode of serving oysters after they are opened, for they always leave them on the flat shell from which the liquor drains away. The Scotch and French, on the contrary, lay the fish on the hollow half of the shells, by which means the brine, or “oyster-broth,” as it is sometimes called, is retained. — *Cassell's “Domestic Dictionary.”*

¹French style; also recommended in “*Breviaire du Gastro-
nome.*”

Oysters should be served in their deep shells with their own liquor, and eaten with a fork¹; cayenne pepper, quarters of lemon, brown bread and butter, form their most proper accompaniments. — *Franccatelli*.

Oysters should always be eaten the instant they are opened. They are served often before the soup, in the first course of a dinner, and are arranged usually in as many plates as there are guests at the table.

In England, oysters are served in their flat shells; they are accompanied by brown bread and butter, pepper, and vinegar, or quarters of lemon.

In France they are served in their deep shell in their own liquor. — *Mrs. Henry Reeve*.

The Morris Rivers or the Scotch Coves, the Blue Points and Shrewsburys, are all small and fat, and of good shape to serve in the shell. And with all the devices of China, glass, and ice, to serve raw oysters in, they never have the same taste out of the shell that they have when first opened and sprinkled with the juice from half a lemon. See that the shells are clean before opening the oysters. Put the piece of lemon in the middle. — *Whitehead's "Hotel Meat Cook."*

¹The smallest fork is for the raw oysters, which generally precede a handsome dinner; the next smallest for the fish, and so on. In eating oysters, the shell is steadied on the plate with the fingers of the left hand, and the oysters are not cut, but eaten whole. — *Clara de Vere*.

In Flanders the oysters are never served without a plate of *tartines beurrées* (slices of bread and butter), cut in finger lengths, and piled on the plates cross-wise, like ladies' fingers. On another plate are served lemons cut in halves. There is also mignonette pepper in small pepper-boxes. But the true connoisseur hardly ever uses either pepper or lemon, which affect the natural property of the oyster. Only the *tartine beurré* is tolerated by him. — “*Bréviaire du Gastronomes.*”

The one plate which heralds dinner indigenous to our country is also one of its own best products — the oyster. But this is scarcely a *hors-d'œuvre*. In itself a single service of exquisite quality, served with attendant graces of delicate French vinegar, brown bread and butter, and a glass of light chablis, for those who take it, the half-dozen natives occupying the hollow shells, and bathed in their own liquor, hold rank of a very different kind to that of the miscellaneous assortment of tit-bits alluded to. Oysters are in fact the first dish of dinner, and not the precursor; the first chapter, and not the advertisement. — *Sir H. Thompson's "Food and Feeding."*

When raw oysters are served on a table, at which there are gentlemen only, some shallots, chopped fine and gently bruised in a coarse towel, are served with them, on a separate dish. The taste of the shallot agrees very well with that of the oyster. Tarter-sauce may be served instead of shallots. — *Blot.*

The best way to serve raw oysters is on the half-shell. Wash the outside of the oysters; open them, detaching the flat shell; then detach them from the deep shell, but leave them on it. Serve five or six on a plate with quarter of a lemon in the centre. Eat with salt, pepper, and lemon-juice, or vinegar. In serving them without the shells, the most attractive way is in a dish of ice made by freezing water in a tin form shaped like a salad-bowl. — *Goodholme's "Domestic Cyclop."*

They are commonly served either on the half-shell or in a shallow plate, swimming in their own juice, for an evening collation; or, as one course in the *menu* of a stately dinner, they are served in blocks of ice hollowed out for the purpose, or frozen in the shape of a salad-bowl or other sightly dish, so as to contain them.

For the first method, wash the shells clean, open them with a pointed oyster-knife, detach the oyster from the flat shell and lay that aside; then detach the oyster from the deep shell, but leave it there in its own juice.

Select the roundest shell, put it on the centre of a dinner-plate, and range the others around it like the spokes of a wheel.

Serve with a quarter of a lemon, or a small saucer containing lemon-juice, and pepper, vinegar, horse-radish, or other condiment, to the taste.

A dainty relish is made as follows: Chop as finely as possible one onion, of medium size, and enough parsley to make an equal bulk. Put these into a towel, dip it into cold water, wring it well, so as to remove the rank

juice of the onion; then take it out, add the juice of a lemon, a pinch of cayenne pepper, a little salt, and enough vinegar to make it about as thick as prepared horse radish.

Another delicate dressing for raw oysters is a Mayonnaise sauce, mixed with capers and shallots, or small button onions, chopped very fine or bruised in a mortar. — *Caterer and Household Magazine.*

For a dinner there is no more effective way of serving raw oysters than in a boat of ice. Select a large block of ice of crystal clearness. With a hot flat-iron melt a large enough place in the top to hold the oysters, then chip it from the sides until you have shaped it like a boat. Keep it where it may not melt. The oysters should be well drained, seasoned with pepper and salt, and placed in the ice-boat. Just before dinner is served, arrange a bed of fresh green geranium leaves upon a low platter and place the boat upon it, propping it up, if necessary, with a few small lumps of ice hidden among the leaves. Twine delicate green vines prettily over the boat, and arrange a circle of vivid scarlet geraniums upon the platter around the base of the boat, or use halves or quarters of lemons as a garnish. — *Catherine Stuart.*

Cold Slaw. — Shred tender white cabbage extremely fine, put it into a bowl, sprinkle with salt, mince half a pod of red pepper very small, and add that and vinegar enough to moisten [or some other dressing]. Set on the table in pickle dishes or in individual deep scallops. — *Whitehead.*

4. What to Drink with It.

"A glass of light Chablis."—*Sir Henry Thompson.*

"Une demi-bouteille de Graves."—*Charles Monselet.*

Hock or Sauterne go with the oysters and fish.
 . . . Chablis should be brought in with the oysters.
 — "*The Times' Receipts.*"

With the oysters following salmon or turbot appear the grand rather dry or liquorous white wines of Bordeaux, which we prefer to iced champagne used in the North. — *Malvezin and Fèret, "Médoc et ses vins."*

With raw oysters, Chablis or Chambertin is especially nice, . . . or White Bordeaux (dry), Burgundy, Rhine, Hungarian, or Moselle *chilled* (in colored green or yellow glasses). — *Catherine Stuart.*

Where the means allow, light continental wines, such as Chablis, Sauterne, Mousseux, Marsault, or Medoc, still Champagne, Moselle, or any light Rhenish wine, and failing any of these, Madeira or Sherry, are placed upon the table. In this list are contained the names of such wines only as are best suited to enhance the taste of the oyster, and to assist digestion. Of spirits, only good English gin, genuine Schiedam, or Irish or Scotch whiskey, are admissible, as rum and brandy, taken upon oysters, will almost always be sure to make them indigestible; and *liqueurs* are quite out of place.
 — "*Lucullus.*"

Oysters are capital things with which to begin a [French] breakfast¹ for they serve to "open" your appetite in the most fascinating way. It is almost needless to say that with raw oysters white wine should be drunk in preference to red. Chablis and Graves, both of which are white Bordeaux wines, may be had at moderate prices. Those who like bottled beer may find it in all Paris restaurants; but French cookery and French wines have so long run together in harmony that it may be best not to divide them. — *Dickens'* "*Dictionary of Paris.*"

Chablis, Arbois, or some other good brand of white wine, even Graves or Rhinewine, should always be served with oysters; but after these we cannot go back to the wines ordinarily served after soup. As it is necessary to continue with a fine quality, oysters at dinner lead to great expense. Besides, the oyster, having nourishing qualities, takes the edge off that appetite which is essential to do justice to an elaborate dinner. At breakfast the mollusk may act as an appetizer, when followed by cold dishes, and then the same white wine can be served throughout the meal. We can sanction the oyster only at breakfast, when ladies are not *en grande toilette*. It is only at a cosey and intimate repast that it should appear *en deshabillé*.² — "*Bréviaire du Gastronomes.*"

¹ A French *déjeuner à la fourchette* is almost a "set" dinner minus the soup. The Frenchman lunches at twelve; he has had nothing save his morning *café au lait*, with a modicum of bread and butter.

² Or, as the San Francisco artists technically expressed it — in a recent menu — "semi-nude."

5. How Many to Eat.

“‘Appetite comes with eating,’ says Angeston.”—*Rabelais*.

“Surfeiting,
The appetite may sicken and so die.”—*Twelfth Night*.

Oysters are the usual opening to a winter breakfast; indeed, they are almost indispensable.¹ But this is often a dear introduction through the indiscretion of guests, who generally pride themselves on packing them by the hundred in their vainglorious stomachs. Insipid pleasure, which brings no real enjoyment, and often embarrasses an estimable host. — “*Almanach des Gourmands*,” 1803.

Four, five, or six of these small oysters make a plate to serve preliminary to the dinner; fashion, it is said, ever interfering in this small matter, and making the proper number at present four. — *Whitehead’s “Hotel Meat Cooking*,” 1880.

Authorities differ as to the right number of oysters for a pre-prandial whet. Six oysters are enough to rouse the appetite of ordinary feeders; but gourmands have been known to prelude a heavy dinner with many dozens. Baron Graham, the placid judge, of whom Jekyll said, “No one but his sempstress could ruffle him,” on learning the special virtue of uncooked “natives” inquired how many he should take for an appetite. “Eat away at them till you are hungry,” was the re-

¹“Oysters are the indispensable companions of a choice breakfast.”—*Charles Monselet*. “*Lettres Gastronomiques*,” 1877.

ply. The baron, who could never see a joke or a barrister's argument, acted on his instructions. After disposing of ten dozen, he remarked with mild plaintiveness to an observer of his proceedings, "Something must be wrong in me; I have eaten one hundred and twenty oysters, and 'pon my word and honor, I don't think I am quite as hungry as when I began."

Brillat-Savarin's¹ pre-prandial whet seldom exceeded three or four dozen oysters; but when he entertained the Lieutenant Laperte at a *tête-à-tête* dinner, he ate a thirteenth dozen in deference to his guest's special gastronomic passion. Laperte, who had vowed to eat his *soil* [fill] of oysters, disposed of thirty-two dozen without fully accomplishing his purpose, and then turned his attention to dinner with powers neither weakened nor embarrassed by the prelude.

The reader needs no reminder of the Vicomte de Vieil-Castel's whet of twenty-four dozen "*d'huitres d'Ostende*." It was over the grave of such an one that a friendly hand put this inscription:—

"Tom, whom to-day no noise stirs,
Lies buried in these cloisters,
If, at the last trump,
He does not quickly jump,
Only cry 'Oysters!'"

Jeaffreson's "Book about the Table."

¹ One of the most celebrated French gourmands (in the best sense of the word), and author of the classic, "*Physiologie du goût*." Born 1755, died 1826. At his famous luncheon to his two old friends of the Rue du Bac, "they smiled with delight on seeing the table laid for three, and at each plate two dozen oysters, with a bright golden lemon. At each end of the table stood a bottle of Sauterne, carefully wiped, all except the cork."

6. How to Open it.

“Take off the beard — as quick as thought
 The pointed knife divides the flesh;
 What plates are laden! Loads are brought;
 Are eaten raw, and cold, and fresh.”

Hone's "Every-day Book."

People, generally, are somewhat indifferent about the manner of opening oysters, and the time of eating them after they are opened, yet nothing deserves more consideration at the hands of your true oyster-eater. The oyster should be eaten the moment it is opened, if eaten raw, with its own liquor in the under shell, on the very highest of all gastronomical authorities. — “*Lucullus.*”

Those who wish to eat oysters as they should be eaten must act as follows: Hold the mollusk firmly in a cloth, insert the point of the knife neatly just before the edge of the upper shell, give a quick decided pressure until the point is felt to glide along the polished inner surface of the under shell. Force it sharply to the hinge, give a smart wrench rather toward the right hand, and off comes the shell. Then pass the knife quickly under the oyster, separate it from its attachment, let it fall into the lower shell, floating in its juice, lift it quickly to the lips, and eat it before the delicate aroma has been dissipated into the atmosphere. There is as much difference between an oyster thus opened and eaten as between champagne, frothing and leaping out of the silver-necked bottle, and the same wine after it has been allowed to stand for six hours with the cork removed. — *J. G. Wood.*

It is well worth a little practice to learn to open the oyster one's self, for a bungling operator injures our little favorite, and balks the expectant appetite by his unsightly incisions. I learned the art years ago in one of the Midland counties, where Christmas eve would scarce be Christmas eve without an oyster supper. Let me sketch the scene. In the centre of the table, covered with a clean white cloth up to the top hoop, stands the barrel of oysters, a kindly remembrance from a friend, and the more kind because oysters are not found in fresh-water streams. Each gentleman at table finds an oyster-knife and a clean coarse towel by the side of his plate, and he is expected to open oysters for himself and the lady seated by his side, unless she is wise enough to open them for herself. By the side of every plate is the *panis ostrearius*, the oyster-loaf, made and baked purposely for the occasion, and all down the centre of the table, interspersed with vases of bright holly and evergreens, are plates filled with pats of butter, or lemons cut in half, and as many vinegar and pepper casters as the establishment can furnish.¹ — “*Lucullus*.”

“The expert who catches the oyster in his left hand, taps it with the butt-end of the knife to make it insensible, and shatters its strong lips to take its life, knows as soon as he lifts it from the pile where it came from, how old it is, whether it is a Delaware, Prince's Bay, City Islander, or has grown under the dashing waves of Rockaway.” — *Simmonds*.

¹ For the wines, etc., see “*Lucullus*,” p. 14.

7. Roasted in its Own Shell.

“There is another method of eating oysters, wherein no knife is required, and not the least skill in opening is needed, the only instrument being a pair of tongs, and the only requisite being a bright fire.” — *F. G. Wood.*

Wash and wipe the oysters (in the shell); lay them in a quick oven, on the top of the stove, or in the coals; when they open they are done. Pile in a dish, or in a pan, and send to table; or take them out and lay them on toast, pouring over all the liquor that accumulates while opening them, with a little butter melted in it, and seasoned to taste. — *Goodholme's "Domestic Encyclopædia."*

Wash the shells in cold water; put the oysters on a wire gridiron, over a clear, hot fire, or in a brisk oven, the round shell downwards. As fast as they open, take them off the fire and serve immediately. Each guest removes the upper shell himself. A savory condiment is a little melted butter, lemon-juice, salt, and a pinch of red or white pepper to the taste.

Another dainty mode of serving is to spread them, when taken out of their shells, all hot, on toast of stale baker's bread, lightly dipped in hot cream, the juice poured over it, and a little of the condiment dropped on each oyster at the moment of serving. Garnish with sprigs of parsley, or water-cress, and stuffed olives, — “olives farcies,” the French call them, — a delicious and appetizing companion to this the best and purest style of cooking an oyster. — *Caterer and Household Magazine.*

You pick out a glowing spot in the fire where there are no flames, and no black pieces of coal to dart jets of smoke exactly in the place where they are not wanted. You then insert a row of oysters into the glowing coals, taking care to keep their mouths outward and within an easy grasp of the tongs, and their convexity downwards. Presently a spitting and hissing sound is heard, which gradually increases until the shells begin to open and the juice is seen boiling merrily within; the mollusk itself becomes whiter and more opaque as the operation continues. There is no rule for ascertaining the precise point at which the cooking is completed, for every one has his own taste, and must learn by personal experience. A little practice soon makes perfect, and the expert operator will be able to keep up a continual supply as fast as he can manage to eat them. When they are thoroughly cooked they should be taken from the fire, a second batch inserted, and the still spluttering and hissing mollusks be eaten "scorching" hot.

. . . No one who has not eaten oysters dressed in this primitive mode has the least idea of the piquant flavor of which they are capable. Stewed in their own juice, the action of fire only brings out the full flavor, and as the juice is consumed as well as the oyster, there is no waste, and no dissipation of the indescribable but potent aroma. — *J. G. Wood.*

8. Which to Choose, and Where.

“When I but see the oyster’s shell,
I look and recognize the river, marsh or mud,
Where it was raised.”

— *Ascribed to Lucilius.*

a. *In the United States.*

The largest oysters are not always the best, especially for eating raw and for stewing; those of medium size are generally preferred by epicures. — *Goodholme.*

I have always found the best and finest flavored oysters were those of a middling or even a smaller size to eat out of the shell, either raw or roasted. The clusters are seldom found as good as single oysters, and especially those of unnatural length are usually found poor and watery. — *De Voe.*

For all purposes, except for eating raw, choose large, plump, firm-fleshed, *fresh* oysters, which remain solid, and do not shrivel or shrink and toughen in the cooking, as the small ones or “cullings,” and the salt ones, always do.

What are called *fresh* oysters are not the product of fresh-water, as the oyster cannot develop and live except in salt-water, but they are planted as soon as full-grown, in beds where they are exposed to the action of a current of fresh-water for two or three days, between

tides, and are greatly improved thereby in fatness, tenderness, and flavor. There is no economy in buying small or inferior shell-fish.— *Caterer and Household Magazine*.

The Blue Point, a small, round oyster from Long Island, is considered the finest in the market, and it costs about twice as much as the common oyster. Next comes the Wareham,¹ thought by many equal to the Blue Point. It is a salt-water oyster, and is, therefore, particularly good for serving raw. The Providence river oyster is large and well flavored, yet costs only about half as much as a Blue Point. The very large ones, however, sell at the same price.

Oysters taken from the cool northern waters are the best. The common-sized oysters are good for all purposes of cooking, except broiling and frying, when the large are preferable. The very large ones are not served as frequently on the half shell as in former years, the Blue Point or the small Wareham having supplanted them.— *Parloa's "New Cook Book."*

It is doubtful whether the three species which naturalists have distinguished among the oysters of our Atlantic coast have more than a nominal existence. The oyster is so affected by the conditions of its life that the progeny of a single parent may represent at maturity the most widely variant forms of oyster-growth. The nature of the substance on which an oyster is fixed, the

¹ But see below, under *Boston*.

consistency of the bed in which it rests, the depth, temperature, and saltness of the water it lives in; every circumstance of its environment, in fact, is reflected in its shape and size, in the character of its shell, and in the flavor of its meat. An oyster which begins its settled existence on a scallop-shell will carry through life the impress of its first resting-place; and the general form of the oyster is as subject to the accidents of place and surroundings as are the markings of its shell. Left to crowd one another on an irregular surface, oysters grow crooked and unshapely. Planted on soft mud, into which they sink with increasing weight, they build their shells almost entirely on the forward edge, becoming thin-shelled and narrow; and if left long enough to struggle against impending suffocation, their length will be five or six times their breadth, and their meat a mere ribbon of fringed integument. On a gravelly bottom in a swift current, the same stock grow deep and broad and massive; and, with abundant growing space, develop the oval form, the large and solid meat, characteristic of the typical northern oyster. On one ground the shells will be soft and heavy, on another thin, fine, and as hard and translucent as porcelain. Thus oysters differing enormously in form and character may be not only of the same species, but offspring of the same parent, the duration of the infant oyster's free existence being sufficient to allow the members of the same brood to be distributed over every variety of sea-bottom suitable for oyster-life.

It is true that the Southern oysters are markedly different from those prevailing between New York Bay

and Cape Cod, and these from the still more Northern variety; but the variations would seem to be easily accounted for by differences in temperature and other external conditions. Northern oysters transplanted into Virginia waters speedily assume the form and other nominally "specific" features of the natives of that region. In like manner, the Southern oysters when brought to the North become (when they can endure the climate) the rivals of the Northern natives in firmness of flesh and depth of body. As a rule, however, they do not maintain themselves more than a single season in the colder Northern waters; nor do they bear transportation to Europe or to California so well as the oysters of the North.

As for comparative merit, that is a matter which rivals the oyster itself in delicacy. In Washington or Baltimore the oyster-dealer will generously admit that it is quite possible to find good oysters outside of Chesapeake Bay; but, for a "perfect" oyster, he will tell you that it is useless to look to any other locality. The Philadelphian is equally sure that the estuary of the Delaware is the perfect oyster's only home, — a local prejudice which the oyster-eater of New York attributes to a deplorable ignorance of what a first-rate oyster really is. Doctors differ; and the unprejudiced can only rejoice that anywhere between the parallels of 36° and 40° north one may find oysters worthy of any human palate. Here in New York the favorites are, first and foremost, the Saddle Rocks, — a variety which Jersey men insist has been exterminated these many years. They still remain, however, not only as direct

descendants from the colony about the original Saddle Rock, but in many other localities in Long Island Sound; for it was not a distinct variety that gave the name its fame, but only an exceptionally thrifty chance-sown bed of the common natives, — a grade of oyster that artificial culture easily and constantly rivals. Next in rank may be mentioned the Blue Points, coming chiefly from Great South Bay, Long Island; the same as the former in stock, but bred under different conditions, and so differing somewhat in flavor. The products of Shrewsbury River, N.J., probably come next; these were formerly transplanted natives of Newark Bay, improved by development in the favorable waters of the Shrewsbury; but more recently, we are informed, the seed is commonly brought from Long Island Sound. — *J. Richardson, in Scribner, Dec., 1877.*

*b. In New York.*¹

Mr. Buckland does not tell us anything about American oysters, but, according to Charles Mackay, the oysters of New York are the finest in the world. Fine in flavor, and of a size unparalleled in the oyster-beds of Whitstable, Ostend, or the Rocher de Cancale. — *North British Review, March, 1867.*

The best oysters that Long Island now produces come from the North Shore, in the vicinity of Cold Spring. The New York market is, however, mainly

¹ See also, above, under *United States.*

dependent on Virginia and Chesapeake Bay for its supply of oysters, particularly the cheaper grades. Maryland sends large quantities of opened oysters, which are packed in half-barrels, for sale by the gallon. The Maryland oysters, while not possessing that delicacy of flavor which characterize those of Long Island, are large, fat, and, in consequence, very nutritious. — *Hour*, April 29, 1882.

But two principal varieties appear here : these are the *Northern* and *Southern*, although the oyster men have many names to distinguish the particular place where from, such as East Rivers, York Bays, Saddle Rocks, Mill Ponds, Shrewsburys, City Islanders, Cow Bays, Blue Points, Chingaroras, Virginias, Delawares, etc.

The *Northern* oyster has a broad, thin, tough shell, with a pleasant smell, savoring of the odor of marine plants, while the *Southern* oyster has a thick, spongy, soft shell, and of less flavor. There is no doubt the oysters taken on our coast, in our bays, inlets, and especially the East River, attain their most luscious flavor. — *De Voc's "Market Assistant,"* 1866.

In general it may be said that, in the cooking of oysters, the Southern kinds are used, because these are cheapest, a special price being charged for a "stew" of Northern oysters. For fried oysters, on the other hand, which require to be of larger size to make a show, the "box" size is used, and these are generally "Sound" or East River oysters. Oysters sold to be eaten raw may be anything and everything of respectable size ;

but the old brand names, "Saddle Rock," "Shrewsbury," "Sound," "Blue Point," "Keyport," etc., the popularity of which was won long ago, are still attached. I suppose, for example, that twenty times as many "Shrewsbury" oysters are sold every season in New York as are raised each year in that river.

The largest oyster saloons have always been in Fulton market, and have a world-wide reputation. Now they are so well rivalled by up-town establishments that much of their prestige has disappeared. — *Ingersoll*.

c. *In Boston.*

A large variety of oysters are to be found on sale in Boston from widely different points. Those from the shore of Connecticut used to be highly esteemed, but they have gone out of the Boston market. The "Cape" and "Providence" oysters are better of late, and the expense of bringing them on is much less than from Connecticut. About five years ago the very choicest brand eaten came from Wareham, at the northern extremity of Buzzard's Bay. Now these are poor, and better ones come from Cotuit, on the "heel" of Cape Cod, and the best of all (in my judgment) are from the Sandwich Shore, particularly Monument River. The size, fine appearance, and saltness of the "Cape" or "native" oysters recommend them for "bench" stock, to be eaten raw. You see advertised, also, the Blue Point, Saddle Rock, Stamford, and Norwalk oysters, more familiar to New Yorkers; but they are kept for a special, small custom, as "fancy." — *Ingersoll*.

d. In Philadelphia.

Philadelphia takes so prominent a position as an oyster centre that, although the Southern varieties from the Delaware and the Chesapeake Bays are prevailing in its markets, it supplies all the Northern favorites.

One of the most popular oysters of former days was the Manokum from the waters of Virginia. But the glory of the Manokums has departed, with that of the Chincoteague, Saddle Rock, and many another favorite of the day. At present the autocrats of the market are, for eating raw, the Blue Point from off the Connecticut shore, near Norwalk, and for cooking, Cove Plants, from the mouth of the Morris River, New Jersey, which empties into Delaware Bay. — *Caterer and Household Magazine.*

e. In Europe.

In England the Colchester, Pyfleet, and Chilford, are generally esteemed superior to all others, being white and flat, yet the others may be made to possess their qualities, in some degree, by being properly fed. The best oysters in Ireland are the Burren and Poldoody, the Carlingford being now extinct. In France the best are found at Cancale, Etretat, and Marennes. In Belgium the best are fished at Ostend. There is a fine-flavored, delicate small oyster much in vogue at Genoa, and a green-finned oyster at Venice, both of which are good. The Irish and foreign oysters possess a fresh,

natural, sea-water flavor, generally wanting in the English oyster, which is frequently spoiled by too much feeding and washing. — *Kirwan's "Host and Guest."*

f. In Great Britain.

If you have eaten an oyster at Colchester or Faversham, in August, fresh from the sea; or a melting native at Milton, the best oyster in the world, in October; a Helford native in Cornwall; Whispered Pandores and Aberdours at Edinburgh, or the "Feast of Shells," one hundred for a shilling, dripping in Prestonpans sea-water; Carlingfords and Powldoodies of Burran at Dublin; or even a Jersey oyster at St. Helier's, you need no teaching of mine, you know what an oyster should be; and the best instruction I can give, if you have not, is to take a return-ticket from London Bridge to Whitstable, have some opened in the lower shell, without wasting one drop of the precious liquid it contains, eat the oyster the moment it is opened, masticating your food, as a sensible man should, and be sure you will enjoy the trip and the treat, and thank me to boot for having given you the hint. — "*Lucullus.*"

g. In London.

The small, ovate, deep shelled oyster, called Natives, which are here most esteemed, are all brought from artificial beds at Whitstable, Rochester, Milton, Colchester, Burnham, etc., those from Burnham being reckoned the best. — *McCulloch's "Dictionary of Commerce."*

The common Colchester and Faversham oysters are brought to market on the 5th of August. They are called *common oysters*, and are picked up on the French coast, and then transferred to those beds; the Milton, or, as they are commonly called, the *melting natives*, the true Rutupians do not come in till the beginning of October, continue in season till the 12th May, and approach the meridian of their perfection about Christmas. The denizens from France are not to be compared to British *native* oysters, which are so called because they are born, bred, and fed in this country. These do not come to perfection till they are four years old. — “*Lucullus*.”

The best places for oysters¹ are Rule's in Maiden-lane, at the back of the Adelphi and Vaudeville; Lynn's, about the middle of the south side of Fleet street; Smith's, in the Strand, near the Lyceum; Wilton's, in Great Ryder street, St. James's; Pimm's, in the Poultry; Sweeting's, Cheapside; and on a more modest and primitive scale, the “Whistling Oyster” in Vinegar-yard, Drurylane. There is a good-looking oyster now being largely sold about London as a “Blue Point.” Unwary Americans, if such there be, may as well understand beforehand that this is strictly a *nom de fantaisie*. — *Dickens*' “*Dictionary of London*.”

¹ A fuller account is given in “*Lucullus*,” in chapter 11, which is specially devoted to “Oyster-seeking in the Great Metropolis.”

h. In France.

The French oysters are chiefly taken from beds in the bays of Cancale [*Rocher de Cancale*] and St. Brioux, from Marennes, from Havre, and Dieppe, from Dunkirk, and from the Bay of Biscay. The three first are very fine, but the distance to Paris is too great; they are, therefore, dear in that capital. Those from Dunkirk are similar to those of Ostend, but not quite so fine; and those from the Bay of Biscay are quite green, and highly esteemed in the south of France, especially at Bordeaux. — “*Lucullus.*”

i. In Paris.

Oysters in France are not yet so fearfully dear as in England. In a restaurant they may be had at from 2 f. to 3 f. a dozen. Quite moderate prices as compared with London charges. Oyster bars are not common in Paris as in London, for it is not customary so to eat them. The stand-up lunch is often forced upon us in London; but it is nevertheless supremely uncomfortable. The Frenchman rarely so eats his food. If he wishes for a dozen oysters he will order them at the beginning of his breakfast or of his dinner. They are always given at the top of the *menu* or bill of fare; the names of the different kind of oysters are stated, and the prices of each kind are sometimes given. — *Dickens' "Dictionary of Paris."*

DIETETICS OF THE OYSTER.

I. BY SAMUEL LOCKWOOD, PH. D.

ARE oysters good to eat? Said Montaigne: "To be subject to colic, or deny one's self oysters, presents two evils to choose from." This is very fine for Montaigne, but it is a libel for all that. Besides, he was a sickly man at best of times. Says Reveille-Paris: "There is no alimentary substance, not even excepting bread, which does not produce indigestion under given circumstances, but oysters never. We may eat them to-day, to-morrow, eat them always, and in profusion, without fear of indigestion." It is said that the first Napoleon always ate oysters on the eve of his great battles, if they could be got. Says Figuier: "The oyster may thus be said to be the palm and glory of the table. It is considered the very perfection of digestive aliment. . . . It is 'nothing more than water slightly gelatinized.'" But Figuier does not put it well. The oyster, even when solid and plump, has very little fat; real adipose is hardly in it at all. The so-called fat is nutritious living gelatine. It is actual protoplasm, barely differentiated into tissue. But this brilliant French writer is sometimes too careless to be correct. It is better to trust the food specialist in such matters than the general naturalist, and here we have authority, recent and trustworthy, in that little book, "Foods," by Edward Smith, M.D. Here is the dictum of the physiologist: "The oyster is not a food of

high nutritive value, but is nevertheless useful to the sick, while its delicacy of flavor leads to its selection when other foods are rejected. The more usual mode is to eat it when uncooked; and it is very doubtful whether cooking increases its digestibility. It is, however, possible that the flavor of scalloped may be preferred to that of the raw oysters, or that the vinegar which is usually eaten with the latter may be disliked, or may disagree with the stomach; but, with such exceptions, the usual method of eating them raw is to be preferred. [When oysters are to be cooked, it is needless to obtain those of the finest quality, for the flavor is in great part damaged by the cooking, and a larger and coarser oyster is equally good]."

The writer, in *Lippincott's Magazine*, states the following:— "Dr. Leroy d'Etiolles, the famous French surgeon, was accustomed to attribute the foundation of his great physical strength to the two dozen raw he always ate before breakfast. Dr. Lenac has pronounced them the most nourishing food in existence. . . . Dr. Pasquier says they may be given with great advantage to persons of intemperate habits, who by inefficacious medical treatment have fallen into debility and lowness of spirits."

Fortunately, the nutritive value of the oyster, as well as the relative worth of the New Jersey oyster compared to the Southern, has lately been determined by the chemist, Prof. W. O. Atwater. The results, in advance of the report of the U. S. Fish Commission, for which they were obtained, appeared in *Proceedings of American Association for the Advancement of Science*,

1881. Analyses were made of oysters, clams, scallops, lobsters, and cray-fish: —

“The samples of oysters showed much wider variation than might have been anticipated, both in the proportions of the shell contents, solid and liquid, and in the amounts of actually nutritive material contained in them. In general, the oysters from the coasts of New England, [New Jersey] and New York were much richer, both in total shell contents, and in actual nutrients, than those from Southern localities, Norfolk and the Potomac, James and Rappahannock rivers. Thus the samples from East River, N.Y., and Buzzard’s Bay had respectively 20 and 20.3 per cent. of shell contents, while those from the James and the Potomac had 13.8 and 12.1 per cent., and one from Norwalk only 11.2 per cent. That is, of the whole weight of the East River and Buzzard’s Bay samples, four-fifths were shell, and one fifth “meat and juice,” while in the Southern samples the shell contents, *i.e.*, meat and juice, made only one-eighth of the whole weight.

“The ratio of solids to liquids in the shell contents was still more variable. A sample of Blue Points had 13.4 per cent. solids and 5.3 per cent. liquids. The percentages of solids ranged from 13.4 per cent. in the Blue Points to 4.7 per cent. in the Norfolks; those of liquids, from 11.8 in Stony Creeks to 4.9 in Shrewsburys.

“The actual nutrients, however, are to be found in the dry (water-free) substance of the shell contents. Here again we find wide variations. Thus in the flesh (solids) the percentages of dry substance run from 23.7

in the Blue Points to 15.5 in the Staten Islands, while the liquids contain from 6.0 per cent of actual solid matter in the Fair Havens to 2.8 per cent. in the Rappahannocks. Taking the total contents, flesh and liquids together, we have in the Blue Points 19.2, and in the Norfolks only 8.6 per cent. of nutritive substances, the rest being water.

“As regards the constituents of the flesh, that of oysters is found to be quite watery, as would be expected, and to contain but little fat. On the average, the flesh (solid) of oysters, like that of fish, contains a little more water and less dry substance than ordinary meats. The oysters seldom have much fat, while some fishes have a great deal.

“Clams are similar in composition to oysters, though rather richer in nutritive materials. Scallops (the abductor muscle, the portion commonly eaten), are still richer, both in total nutrients and in fats. The amount of nutritive matter in lobsters and cray-fish is very small.”

Dr. Edward Smith makes a distinction between the flesh of mollusks and that of the crustaceans, such as crabs and lobsters. He calls the flesh of the former gelatinous, and that of the latter fibrinous.

Speaking by the rule of thumb, it has been stated that the oyster, as a muscle-making food, is not much below lean beef, and is equal to eggs. Such a claim is, at best, extravagant. However, in such matters we can depend only on the analyst, and in this direction the above work of Prof. Atwater is the most recent, as it is the most valuable contribution to the subject yet

made, and is only in keeping with the usual solid work on fish foods which the United States Fish Commission is producing.

The careful reader will have noticed that these analyses are eminently favorable to the oysters of our own State [New Jersey].

The haste of the producer to get his crop into market is an American vice. Immature vegetables and unripe fruit, in violation of all hygiene, are put openly on sale. The oyster is forced to market at an average age below three years, though, as a rule, it is not at its best until it is five or six years old.

Says Louis Figuier: "The small proportions of nutritive matter explains the extreme digestibility of the oyster." But the oyster contains a much larger amount of nutrition than this writer supposed, and there are chemical considerations which he did not know. It is opportune to light upon the following item in *Scientific American*, Dec. 16, 1882:—

"Why oysters should be eaten raw is explained by Dr. William Roberts in his lecture on "Digestion." He says that the general practice of eating the oyster raw is evidence that the popular judgment upon matters of diet is usually trustworthy. The fawn-colored mass, which is the delicious portion of the fish, is its liver, and is simply a mass of glycogen. Associated with the glycogen, but withheld from actual contact with it during life, is its appropriate digestive ferment—the hepatic diastase. The mere crushing of the oyster between the teeth brings these two bodies together, and the glycogen is at once digested without any other help

than the diastase. The raw, or merely warmed oyster, is self-digestive. But the advantage of this provision is wholly lost by cooking; for the heat immediately destroys the associated ferment, and a cooked oyster has to be digested, like any other food, by the eater's own digestive powers. 'My dear sir, do you want to ruin your digestion?' asked Prof. Houghton, of Trinity College, one day of a friend who had ordered brandy and water with his oysters in a Dublin restaurant. Then he sent for a glass of brandy and a glass of Guinness's XX, and put an oyster in each. In a very short time there lay in the bottom of the glass of brandy a tough, leathery substance, resembling the finger of a kid glove, while in the porter there was hardly a trace of the oyster to be found."¹

The above sets the oyster in a strong light. It seems, then, that a very important factor in favor of the oyster, when compared with other foods, lies in the small amount of energy expended in its elaboration by the digestive tract, which is a clear nutrient gain. Even

¹ As to Dr. Houghton's brandy and ale experiments with oysters, Dr. Charles L. Dana, of New York, in a recent number of the *Medical and Surgical Reporter*, controverts them. He asserts that "American oysters grow hard in ale or beer, instead of dissolving." He disbelieves Dr. Win. Roberts' idea that the oyster digests itself by the ferment of its own diastase. He says: "The oyster does not, and cannot digest itself." He also denies that raw oysters are always more digestible than the cooked. "Oysters roasted in the shell, or simply boiled a short time, will be digested nearly, if not quite as rapidly as the same number of raw." This last statement is simply his opinion, hence is not worthy the consideration due the first and the second averments, which seem based on experiments. (See also, Dr. Fothergill's remarks on page 52.)

an egg requires from three to four hours for digestion, or the same time as mutton.

Yet it seems to me that the brandy and XX experiments were one-sided, and not conclusive, however correct the dyspeptic theory. Alcohol will act very differently upon the oyster, as the condition of the mollusk itself varies. I will try to abbreviate some interesting statements of Dr. Ryder: "With animals, generally, there is a periodic development of the generative organs. The productive mass in the oyster — it scarcely deserves to be called organs — is wasted away at the end of the spawning season. It is not only spawn-spent, but all evidence of its sex is gone. In its stupendous feat of giving off so many millions of eggs, it has converted an immense amount of tissue into 'generative products,' and now a large part of the animal is composed of exhausted tissue, strands of spongy, emaciated tissue cells. A marvellous change in the solidity and consistence of the animal takes place. The shrinkage of a spawn-spent oyster in alcohol, or chromic acid solution, is excessive, and will, when complete, reduce the animal to one-tenth of its bulk while alive. This shrinkage is due to abstraction of the water with which the loose, spongy tissue of the exhausted animal is distended. A so-called 'fat' oyster, on the other hand, will suffer no such excessive diminution in bulk when placed in alcohol or other hardening fluid."

It is enough for the dietetic and dyspeptic argument to know that in its effect on food the mischief of alcohol consists in its hardening effects. It displaces the water

which is a solvent in the solid, and, occupying its place, it is itself, so far as it goes, a neutralizer of solvency.

Sometime a microscopist thought he had discovered an entozoan in the oyster. But his find, so far as I can learn, has not been confirmed. Naturalists well know how badly fishes are afflicted with true internal parasites. From these pests the oyster is quite free, and I think it is the only food animal of which so much can be said, and which for this reason can be safely eaten without cooking.

The notion implied in the common expression "coppery oysters," if meaning that these mollusks get their flavor or color from an oxide of copper, is quite untenable. It surely must be to the absence of that coppery tang, which European epicures so much extol, that P. De Broca alludes in his report on the oyster-ies of the United States, when he declares our oysters "insipid."¹ For he emphatically pronounces ours "a mollusk thicker, more tender, richer in nutritive elements." "The American oyster, when cooked, is certainly superior to ours, and as it preserves its properties better during the process, it is highly regarded by physicians as an article of food for convalescent patients." "I should therefore consider it a national blessing if we can obtain their reproduction in France, a consummation which we have every reason to hope

¹ De Broca's statement in effect, that though more nutritious than that of Europe, "the American oyster is insipid," appears to smack a little of conceit, like the sentiment of that writer in the early Colonial days, that they had great store of large oysters, which with a pinch of "copper-filings," would be quite as savory as those at home. Probably then, as now, conceit went a good way.

will take place next spring, since the oysters deposited by M. Coste in the basin of Arcachon have developed as rapidly as in the best American plantations." This from the edition of the report of 1865, translated for the report of the United States Fish Commission of 1876. What success this attempt at acclimation met with I cannot say.

Professor Joseph Leidy thinks that the green color comes from feeding on the spores of the green sea-lettuce, *Ulva latissima*. In *Forest and Stream*, June, 1882, and *American Naturalist*, January, 1883, Dr. Ryder has, for the first time, established the cause of this phenomenon. It is primarily due to the food, next to a consequent change in the blood-cells, which are distended with a greenish substance due to change of color in the secretions of the liver. That is, "it is a tincture of the blood-cells, sometimes even found packing behind the heart-valves so as to impede their action." Though "abnormal accumulations, they are not parasitic, nor do they necessarily render the mollusk unwholesome."

"If the classical writers are to be trusted, to the green, yellow, and white-fleshed sorts we must add, red, tawny, and black-fleshed ones. Pliny tells us of red oysters found in Spain, of others of a tawny hue in Illyricum, and of black ones at Circeii, the latter being, he says, black both in meat and shell. Horace and other writers awarded these the palm of excellence." To these might be added certain violet-colored oysters in France

As a rule, the American oyster when black is in bad

condition, and it will be found that the tissues of the flesh are permeated with black mud. It may occur that an oyster-bed is constantly receiving a deposit of dark, impalpable slime, so that the ooze will settle upon the mollusk, and in time bury it. But for awhile the animal struggles against its misfortune, still getting worse and worse, until at last it succumbs. If taken before this happens, it will be found to be in a bad state. "Shifting" to better ground will save them, for they will rapidly recover, and become clean and fine.

But food should not only be a muscle-maker. It should in some instances have prophylactic elements, or offsets of disease. An egg contains albumen, oils, and sulphur, and this mineral "is a constituent of the proteine compounds of animals, in the taurine of bile, and the cystine of urine." And similarly there are health-giving properties in an oyster. Says *Nature*, December 21, 1882: "The French *Official Journal* publishes a report on oyster culture, which is in favor of the Portuguese oyster. It appears that one hundred grammes of the flesh of this mollusk contain about one and one-tenth grammes of iodine, bromine, and chlorine, just twice as much as the common oysters." This must be due to the abundance of alga food, and has very important dietetic relations, as I think.

But food should be for enjoyment as well as nutriment. The freshening of the oyster, unless the animal be really dirty, in which case it will be ill-flavored too, is a discount upon its quality, since it takes from it the saline tang so gustatory to the epicure. In Philadelphia they are catering to this refined taste, hence the

distinction between freshened and salt oysters. It is noteworthy, too, that, by reason of this artificial bloating which the mollusk gets, it does not keep long. It soon collapses, and having lost its artificial gain, it has also lost its natural quality. But it seems they must be got into market fat, or seemingly so. An old oyster-man told me that, in the former days, when he was selling oysters up the North River, "at one time the weather was muggy, and the wind was hardly enough to carry a feather. The oysters shrank right up, and would not sell, and it seemed as if I should lose the whole jag, pretty much. I took water up on to the sloop, and gave them a drink again, as many at a time as I could. They fattened right up, and I got them all off my hands safe."

I cannot say what the merits of the practice were, or whether it is still in vogue — but I know that, formerly, in England, oysters were subjected to a domestic fattening. The process simply consisted in putting them in tubs of fresh-water in which oatmeal had been stirred. But this was not done by the dealer. It was a common practice of the purchaser, who received a hamper at a time. Whether a real fattening, or more correctly, fleshening, was the result, I am quite unable to say. By those who practised it there was implicit faith in the process. I also know an instance in which the owner of a little bed of "Cove oysters," in New Jersey, fed them with Indian meal. Generally the intelligent regard it as a whim. It should be settled by experiment.

After writing the above I was surprised to find the

following in De Broca's Report: "There is a very prevalent opinion in the United States, and in England, that oysters may be fattened by pouring Indian meal into the water which covers them. It is said that certain planters in New Jersey adopt this method in small ponds; but it is very probable the meal has no effect whatever upon the oysters, their stomachs being too delicate to digest such nourishment. Many persons reject this opinion as a mere prejudice without foundation."—*U. S. F. Com. Rep.*, 1876, p. 299.

May it not be doubted whether so many good things can be said of any other article of animal food? Hence our *Ostrea* well deserves the epithet, "The festive oyster." So long as obtainable it will ever command a prominent place at the social board. Though the belief has prevailed in some quarters that this bivalve possessed aphrodisiac properties, the idea may be dismissed as a silly delusion unworthy of discussion. But in the sick-room the oyster is often a precious boon. As a wholesome luxury it is deservedly esteemed; and may the day never come at home, as it has abroad, when it shall cease to be an item in the common dietry of the people. Hence for the enlarging of the supply by judicious preservation, and much greater increase by wiser methods of propagation, it deserves the best consideration of the statesman, the scientist, and the oyster planter himself.

2. FROM "LUCULLUS."

The oyster, when eaten moderately, is, without contradiction, a wholesome, and one of the greatest delicacies in the world. It contains much nutritive substance, which is very digestive, and produces a peculiar charm and an inexplicable pleasure. After having eaten oysters we feel joyous, light, and agreeable — yes, one might say, fabulously well. He who has eaten for the first time oysters is best enabled to judge of this; for, soon after having eaten them, he will experience a sensation he never felt before, and never had an idea of. This sensation scarcely remains with people who eat oysters every day; it is more practically felt when oysters are eaten for breakfast or before dinner, although they are also very wholesome in the evening, when taken moderately.

“The oyster,” says a practical writer, “is a species of food combining the most alimentary qualities. Its meat is soft, firm, and delicate. It has sufficient flavor to please the taste, but not enough to excite to surfeit. Through a quality peculiar to itself, it flavors the intestinal and gastric absorption, mixing easily with other food; and, assimilating with the juices of the stomach, it aids and flavors the digestive functions. There is no other alimentary substance, not even excepting bread, which does not produce indigestion under certain given circumstances; but oysters never. This is a homage due to them. They may be eaten to-day, to-morrow, forever, in profusion; indigestion is not to be feared, and we may be certain that no doctor was ever called

in through their fault. Of course we except cooked oysters. Besides their valuable digestive qualities, oysters supply a recipe not to be despised in the liquor they contain. It is produced by the sea-water they have swallowed, but which, having been digested, has lost the peculiar bitterness of salt-water. The oyster-water is limpid and slightly saline in taste. Far from being purgative, like sea-water, it promotes digestion. It keeps the oysters themselves fresh, prolongs their life for some time until it is destroyed in our stomachs or until the oyster has been transformed into a portion of ourselves."

When suffering from almost incurable indigestion, by taking oysters daily they very soon find the most agreeable effects on the human kitchen and laboratory; its functions become regular, without the use of strong medicines, always dangerous. Depression of spirits, and other disagreeable feelings consequent on impaired digestion, soon cease to affect them; they become cheerful and happy, and are enabled again to see clearly through the misty atmosphere which has hitherto enclosed them in a kind of living shroud; physical powers return, headaches disappear, and the heretofore dyspeptic, sour, unhappy-tempered man becomes a pleasant and joyous companion, full of life himself and inspiring to those around him.

Physicians of old recommended the oyster as a general remedy, and employed it on all occasions with success. It has been proved beyond dispute that it possesses a remarkable vivifying influence, in all cases where the nervous organs are affected, more than any

other food. Oysters taken before mid-day with a glass of wine produce a most salutary effect. The nerves and muscles regain their strength, and the body its mental and physical powers, bringing cheerfulness and energy to compete with the duties of the day. If not a cure, at all events an oyster diet, under medical supervision, brings unquestionable relief to those who are suffering from pulmonary complaints, indigestion, or nervous affections.

Dr. Leroy was in the habit of swallowing every morning before breakfast two dozen oysters, and used always to say to his friends, presenting them with the shells, "There! behold the fountain of my youthful strength!"

Percy relates having seen a large number of wounded persons, exhausted by the loss of blood and treatment, who were entirely kept up by eating oysters; and Dr. Lenac considered them the most nourishing food in existence.

Oysters are strongly recommended to all persons suffering from weak digestion; and Dr. Pasquier adds, that "they may be given with great advantage to persons of intemperate habits, who, by inefficacious medical treatment, have fallen into debility and lowness of spirits." He also recommends oysters to all who are suffering from the gout. I myself knew a person last winter, who was suffering from influenza, which, from his being an aged man, threatened the most serious consequences, who was entirely cured by eating oysters.

Oysters increase the blood without heating the system, and hence when a wound has caused much loss of

blood the eating of oysters not only prevents fever, but replaces the loss which no other remedy can effect. The great Boerhaave affirms to have known a tall, strong man, who had fallen into a decline, and who, after all other remedies had proved useless, by the use of oysters rapidly recovered, became strong, and died ninety-three years old.

But to ladies particularly do I recommend oysters as the best of all light meals between breakfast and dinner. At the period of a lady's married life, when nausea is prevalent, a few fresh oysters, taken raw in their own liquor, with no addition but a little pepper, and a fair slice of French roll or other light bread, stop the feeling of sickness, and keep up the stamina unimpaired. During the time, too, when a young child most requires maternal care and attention, the mother's diet of oysters will impart strength to the infant, and tend much to alleviate the pains of its first teething.

I am well aware that some persons have a repugnance to the eating of oysters, and that it may be difficult to overcome the dislike. However, as a proof that oysters in general are nice to the taste, let me mention that children under two years of age eat them with great appetite; and it is only after having discontinued eating any for some time that they take a dislike to them.

I have often had the opportunity of overcoming this dislike, and the result was always satisfactory. The method is very simple. Take a piece of French roll (or a piece of milk-bread) thinly buttered, and put on it the oyster, deprived of its beard, squeezing a few

drops of lemon and peppering it. "Well, after all, the taste of the oyster is really fine!" is the usual exclamation, and after that the person has eaten them in their natural state with gusto.

When eaten for health, an oyster is best swallowed in its own liquor the moment the shell is opened; or, if too cold for the stomach, a sprinkling of pepper will remedy the evil. Vinegar counteracts the effect of the oyster enriching the blood; so, when the oyster is eaten medicinally, it must be excluded. Dr. Evans says that when too many oysters or other shell-fish have been taken, the unpleasant sensation excited by such excess may be removed by drinking half a pint of hot milk. Persons of delicate constitutions will do well always to take hot milk after oysters.¹

3. FROM OTHER AUTHORITIES.

Oysters are nutritious and easy of digestion, especially when eaten raw, the process of cooking coagulating and hardening them.

The following shows their composition:—

COMPOSITION OF OYSTERS.

	(Payen.)	Mean of two analyses.
Nitrogeneous matter		14.010
Fatty matter		1.515
Saline		2.695
Non-nitrogeneous matter and loss		1.395
Water		80.385
		100.000

Blyth's "Dictionary of Hygiene and Public Health."

¹ Or a piece of good *fett* (rich?) cheese.—"Universal Lexikon d. Kochkunst."

All shell-fish are very liable to decomposition, and when this takes place they are extremely injurious to health, frequently producing severe bilious derangement, and, in some cases, a most troublesome eruption, similar to nettle rash. — *Goodholme's "Domestic Encyclopædia."*

It is not an unusual circumstance that oysters and other shell-fish, when eaten after having been kept long during the warm season, will produce serious illness resembling cholera; but no such ill effects would be likely to arise when they are received fresh from our waters. — *Dr. James R. Chilton.*

Oysters are very beneficial to persons who suffer from weak digestion, but then they must be eaten raw, and without vinegar or pepper, and I have known an invalid able to eat oysters when quite unable to take any other food; and oysters are also recommended for consumptive patients, as they contain iodine. — *Lovell.*

Respecting the wholesomeness of this well-known shell-fish, much difference of opinion exists among medical men; nutritious, especially when uncooked, they certainly are, but their digestibility, in all probability, depends greatly upon the person by whom they are eaten. Some, whose stomachs generally require much consideration, can eat oysters in moderation with impunity. Dr. Paris, however, condemns them for invalids. — *Dr. Spencer Thompson.*

Oysters differ greatly from lobsters, craw-fish, and crabs, being principally gelatinous and fatty, and when the beard or gill, and the hard muscle by which the fish is attached to the shell, are rejected, they form a digestible and fairly nutritious article of diet, which generally agrees well with weak stomachs, especially when eaten raw,¹ and they would be still more wholesome if minced or masticated, instead of being swallowed in the usual way. — *Dr. H. Dobell.*

And of oysters it should be remembered that they are to be eaten raw, or, at most, barely warmed through; for complete boiling makes the flesh tough, so that it is prudent, if they come from near river-mouths, to keep them alive in a shallow dish of clean brine for a day or two, feeding them with meal, and changing the water so as to leave them bare twice a day, in imitation of the tide. They become peculiarly plump and wholesome under this management. — *Dr. Thomas King Chambers.*

The oyster can be cooked in many ways, but the pure animal is the best of all, and gulping him up in his own juice is the best way to eat him. The oyster, I maintain, may be eaten raw, day by day, every day of the two hundred and fourteen days that it is in season, and never do hurt. It never produces indigestion — never does the flavor pall. The man who ends the day with an oyster in his mouth rises with a clean tongue in the morning, and a clear head as well. — *Bertram.*

¹ The peculiar digestibility of the oyster is destroyed by cooking, but not by warming to a temperature below 100° F.

The graphic description by Dr. Roberts¹ tells us how it is that oysters *au naturel* are so much in vogue for invalids, as they deservedly are. Also why oysters should not be cooked in oyster-sauce, but put into the prepared sauce just as it comes to table. Why, as King Chambers insists, in a beefsteak pudding, the oysters should not be cooked, but a flap of the paste raised, and the oysters popped in, just as the pudding is served. In making oyster pâtés, the paste is cooked in bread crumbs, which is then taken out and the oysters put in; after which, the pâtés are just warmed, and no more, and then brought up to the dinner-table. The idea that long cooking increases the digestibility of food is not always correct. — *Dr. J. M. Fothergill.*

The oyster holds the highest rank in this class of food (molluscous animals). This class of animals differs from the crustacea in this, that while the crustacea have powerful and active muscles, the mollusks have almost no muscles at all, having no motion except the opening and shutting of the bivalves, and a slight contractile power by which they imbibe their food. Of course they have not, as food, the muscle-making elements of the crustacea or other active fish, and although their chemical composition indicates phosphatic salts, they are mostly salts of lime, which go to form the shell and to make bone rather than afford food for the brain and nervous system. Oysters, therefore, are unsatisfactory for laboring men, but will do for the sedentary, and for a supper to sleep on. — *Dr. A. J. Bellows.*

¹ See p. 38.

FAMOUS OYSTER-EATERS.

OYSTERS have their social as well as their natural and economic history. The name of the courageous individual who ate the first oyster has not been recorded, but there is a legend concerning him to the following effect: Once upon a time — it must be a prodigiously long time ago, however — a man of melancholy mood, who was walking by the shores of a picturesque estuary, listening to the sad sea-waves, espied a very old and ugly oyster, all coated over with parasites and seaweeds. It was so unprepossessing that he kicked it with his foot, and the animal, astonished at such rude treatment on its own domain, gaped wide with indignation. Seeing the beautiful cream-colored layers that shone within the shelly covering, and fancying the interior of the shell itself to be beautiful, he lifted up the aged “native” for further examination, inserting his finger and thumb between the shells. The irate mollusc, thinking no doubt that this was meant as a further insult, snapped his pearly door close upon the finger of the intruder, causing him some little pain. After releasing his wounded digit, the inquisitive gentleman very naturally put it in his mouth. “Delightful!” exclaimed he, opening wide his eyes. “What is this?” And again he sucked his thumb. Then the great truth flashed upon him, that he had found out a new delight, — had, in fact, accidentally achieved the most important discovery ever made up to that date! He proceeded at once to the verification of his thought.

Taking up a stone he forced open the doors of the oyster, and gingerly tried a piece of the mollusc itself. Delicious was the result, and so, there and then, with no other condiment than the juice of the animal, with no reaming brown stout or pale chablis to wash down the repast, no nicely-cut, well-buttered brown bread, did that solitary anonymous man inaugurate the oyster banquet.

Ever since the apocryphal period of this legend men have gone on eating oysters. Princes, poets, pontiffs, orators, statesmen, and wits have gluttonized over the oyster-bed. Oysters were at one time, it is true, in danger of being forgotten. From the fourth century to about the fifteenth they were not much in use; but from that date to the present time the demand has never slackened. Going back to the times which we now regard as classic, we are told that we owe the original idea of pisciculture to a certain Sergius Orata, who invented an oyster-pond in which to breed oysters, not for his own table, but for profit.

We have all read of the feasts and fish-dinners of the classic Italians. These were on a scale far surpassing our modern banquets at Greenwich and Blackwall. Lucullus had sea-water brought to his villa in canals from the coast of Campania, in which he bred fish in such abundance for the use of his guests that not less than £35,000 worth were sold at his death. Vitellius ate oysters all day long, and some people insinuate that he could eat as many as a thousand at one sitting — a happiness too great for belief! Callisthenes, the philosopher of Olynthus, was also a passionate oyster-eater, and so

was Caligula, the Roman tyrant. The wise Seneca dallied over his few hundreds every week,¹ and the great Cicero nourished his eloquence with the dainty. The Latin poets sang the praises of the oyster, and the fast men of Ancient Rome enjoyed the poetry during their carouse, just as modern fellows, not at all classic, enjoy a song over their oysters in the parlor of a London or provincial tavern.

In all countries there are records of the excessive fondness of great men for oysters. Cervantes was an oyster-lover, and he satirized the oyster-dealers of Spain. Louis IX., careful lest scholarship should become deficient in France, feasted the learned doctors of the Sorbonne, once a year, on oysters; and another Louis invested his cook with an order of nobility, as a reward for his oyster-cookery. Napoleon, also, was an oyster-lover; so was Rousseau, and Marshall Turgot used to eat a hundred or two, just to whet his appetite for breakfast. Invitations to a dish of oysters were common in the literary and artistic circles of Paris at the latter end of last century. The Encyclopedists were particularly fond of oysters. Helvetius, Diderot, and the Abbé Raynal, Voltaire, and

¹ Seneca, who so admirably praised poverty in his writings, and complained on the forum that he could not live comfortably with only ten million of dollars, treated oysters with some duplicity. The temperate sage ate a few hundred every day, until, in a fit of indigestion, and after having listened to a brother philosopher, who inveighed against all the follies and vices of the times, he denounced them forever. With the bitterness of a friend changed into a foe, he turned around and denounced them as vile things, pleasing only to gluttons, because "they so very readily slipped down, and so very readily came up again." — *Putnam's Magazine*, October, 1868.

others, were confirmed oyster-men. Before the Revolution the violent politicians were in the habit of constantly frequenting the Parisian oyster-shops; and Danton, Robespierre, and others, were fond of the oyster in their days of innocence. The great Napoleon, on the eve of his battles, used to partake of the bivalve; and Cambacères was famous for his shell-fish banquets. Even at this day the consumption of oysters in Paris is enormous; according to recent statistics the quantity eaten there is one million per day!

Among our British celebrities Alexander Pope was an oyster-eater of taste, and so was Dean Swift, who was fond of lobsters as well. Thomson, of the "Seasons," who knew all good things, knew how good a thing an oyster was. The learned Dr. Richard Bentley could never pass an oyster-shop without having a few; and there have been hundreds of subsequent Englishmen who, without coming up to Bentley in other respects, have resembled him in this. The Scottish philosophers, too, of the last century — Hume, Dugald, Stewart, Cullen, etc. — used frequently to indulge in the "whiskered pandores" of their day and generation. "Oyster ploys," as they were called, were frequently held in the quaint and dirty taverns of the old town of Edinburgh. These Edinburgh oyster-taverns of the olden time were usually situated underground, in the cellar-floor; and, in the course of the long winter evenings, the carriages of the quality folks would be found rattling up, and setting down fashionable ladies, to partake of oysters and porter, plenteously but rudely served. What oysters have been to the intellect of

Edinburgh in later times, who needs to be told that has heard of Christopher North, and read the "Noctes Ambrosianæ" ?

The Americans become still more social over their oysters than we do, and their extensive seaboard affords them a very large supply ; although we regret to learn that, in consequence of over-fishing and of the carrying away of the fish at improper seasons, the oyster-banks of that great country are in danger of becoming exhausted. — *Bertram's "Harvest of the Sea."*

Many a famous Briton has been addicted to the British oyster, — a belief in which is still one of the articles of social faith in the mother-country. Richard Bentley writes from the country, not long before his death, "My great relief and amusement here is my regular supply of oysters. These things must have been made in heaven. They are delectable, satisfying, delicious, and mentally stimulating in a high degree. I can indite matter by the yard when I have had a good meal of them. I get them down in all manner of ways, and it is difficult to say which is the best, such are the intrinsic excellences of the raw material." Pope divided his gastronomical affection between lobsters and stewed oysters, and made the presence of a stew the condition of his acceptance of an invitation to dine with Lord Bolinbroke.

Thomson's death is by some attributed to a surfeit of oysters. We have not our Boswell handy, but we remember that at least Johnson's cat was fond of oysters,

and that the glorious Sam used to do the marketing for her, because his servant was too proud to undertake such a commission. The reader of the "Noctes Ambrosianæ" will remember that "Christopher North," the Ettrick Shepherd, and the rest of them, were mighty eaters of oysters. Jamie Hogg, we are told, never had "recourse to the cruet till after the lang hunder." The first fifty he devoured in their juices. The pepper enabled him to get well into the second hundred. A dozen and a half were aided by vinegar, and it went hard if with the stimulus of mustard he did not reach the two gross, though to the more civilized eater it may be difficult to see wherein such a gorge against nature differs from the eating of a yard of Bologna sausage or a pail of porridge for a bet. London has its traditions of Dando¹ and other heroes whose mission in life it was to make themselves the sarcophagi of dozens and grosses of oysters. Ben Jonson, by the way, in "The Devil is an Ass," describes

"The roysters
At Billingsgate feasting with claret wine and oysters,"

and Peter the Great, who always had oysters for dinner in two or three fashions, and called the oystermen his "life preservers," used to hold deep discussions with the oyster-wife at Woolwich Dockyard. — *New York World*.

¹ "On some far-distant shores,
There are who seek the oyster for the pearl;
She sometimes brings with her a priceless dower —
But Dando only sought her for herself."

THE HAPPINESS OF THE OYSTER.

“AND then the oyster itself—the soul and body of the shell—is there no philosophy in him or her? For now we know that oysters are really he and she, and that Bishop Sprat, when he gravely proposed the study of oyster-beds as a pursuit worthy of the sages who, under the guidance of his co-Bishop, Wilkins, and Sir Christopher Wren, were laying the foundation stones of the Royal Society, was not so far wrong when he discriminated between lady and gentlemen oysters. The worthy suggester, it is true, knew no better than to separate them according to the color of their beards; as great a fallacy, as if, in these days of Bloomerism, we should propose to distinguish between males and females by the fashion of their waistcoats or color of their pantaloons; or, before this last great innovation of dress, to diagnose between a dignitary episcopal and an ancient dame by the comparative length of their respective aprons. In that soft and gelatinous body lies a whole world of vitality and quiet enjoyment. Somebody has styled fossiliferous rocks ‘monuments of the felicity of past ages.’ An undisturbed oyster-bed is a concentration of happiness in the present. Dormant though the several creatures there congregated seem, each individual is leading the beatified existence of an epicurean god. The world without—its cares and joys, its storms and calms, its passions, evil and good—all are indifferent to the unheeding oyster. Unobservant even of

what passes in its immediate vicinity, its whole soul is concentrated in itself; yet not sluggishly and apathetically, for its body is throbbing with life and enjoyment. The mighty ocean is subservient to its pleasures. The rolling waves waft fresh and choice food within its reach, and the flow of the current feeds it without requiring an effort. Each atom of water that comes in contact with its delicate gills involves its imprisoned air to freshen and invigorate the creature's pellucid blood. Invisible to human eye, unless aided by the wonderful inventions of human science, countless millions of vibrating cilia are moving incessantly with synchronic beat on every fibre of each fringing leaflet. Well might old Leeuwenhoek exclaim, when he looked through his microscope at the beard of a shell-fish, 'The motion I saw in the small component parts of it was so incredibly great that I could not be satisfied with the spectacle; and it is not in the mind of man to conceive all the motions which I beheld within the compass of a grain of sand.' And yet the Dutch naturalist, unaided by the finer instruments of our time, beheld but a dim and misty indication of the exquisite ciliary apparatus by which these motions are effected. How strange to reflect that all this elaborate and inimitable contrivance has been devised for the well-being of a despised shell-fish? Nor is it merely in the working members of the creature that we find its wonders comprised. There are portions of its frame which seem to serve no essential purpose in its economy, — which might be omitted without disturbing the course of its daily duties, and yet so constant in their presence and position, that we cannot

doubt their having had their places in the original plan according to which the organization of the mollusk was first put together. These are symbols of organs to be developed in creatures higher in the scale of being; antitypes, it may be, of limbs, and anticipations of undeveloped senses. These are the first draughts of parts to be made out in their details elsewhere; serving, however, an end by their presence, for they are badges of relationship and affinity between one creature and another. In them the oyster-eater and the oyster may find some common bond of sympathy and distant cousinhood.

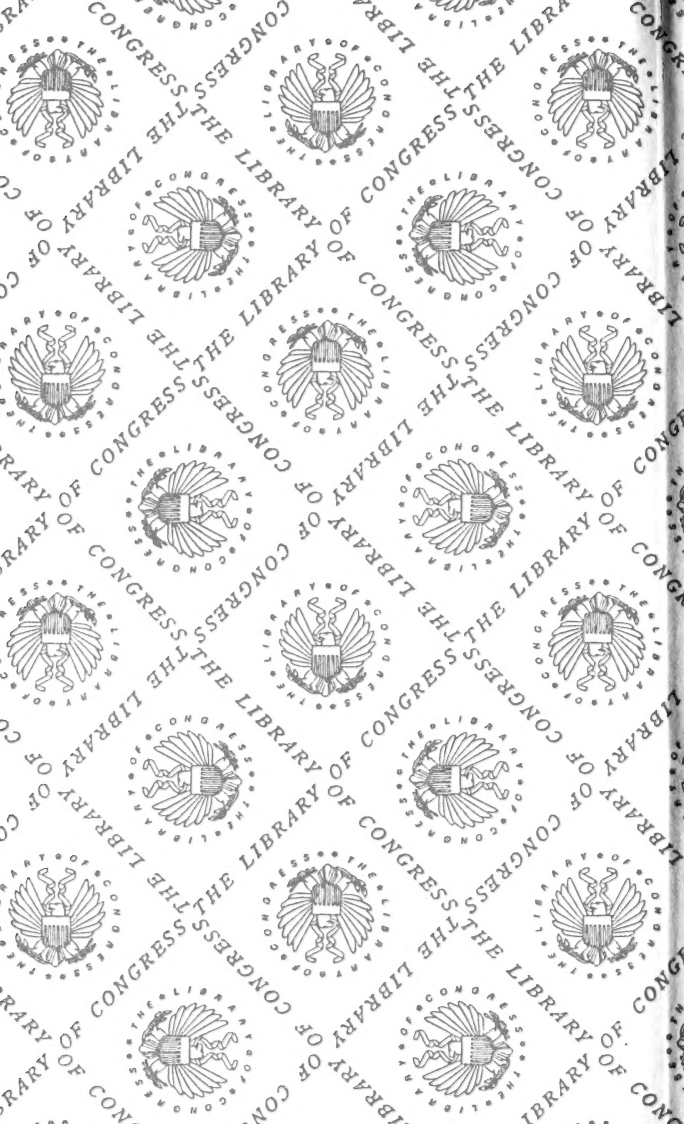
“Had the disputatious and needle-witted schoolmen known of these most curious mysteries of vitality, how vainly subtle would have been their speculations concerning the solution of such enigmas!” — *Westminster Review*.



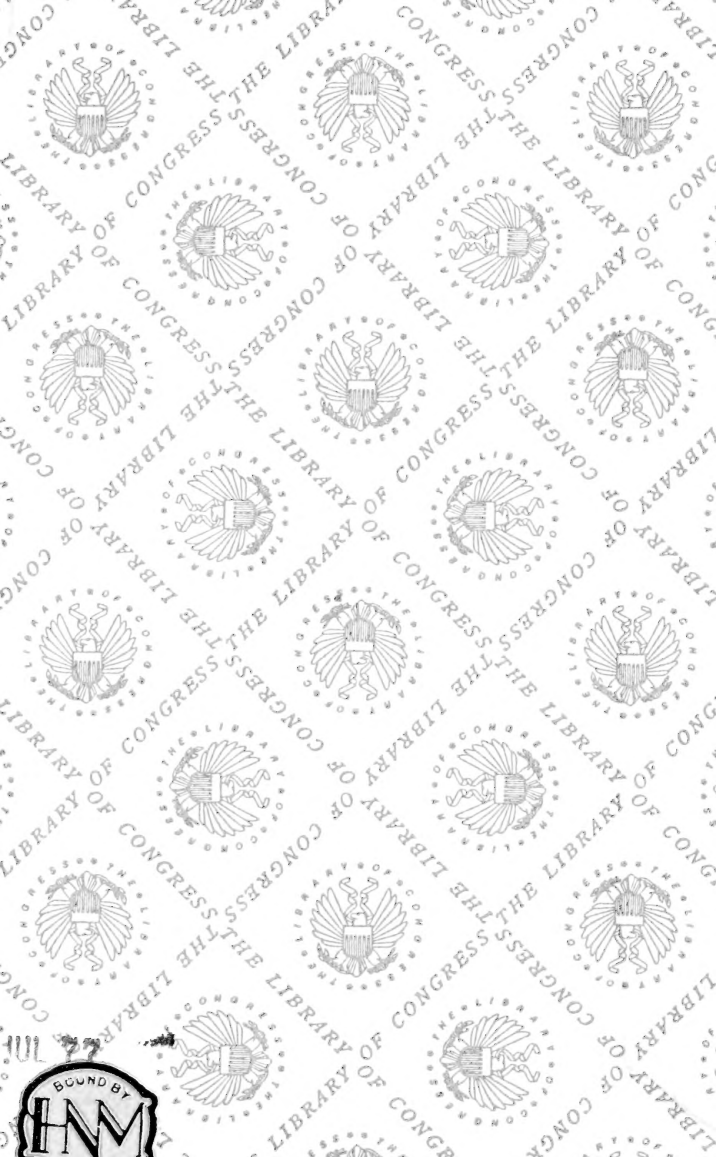




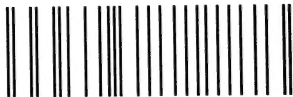




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