VACATION CRUISING

ROTHROCK


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VACATION CRUISING

IN

CHESAPEAKE AND DELAWARE

BAYS.

BY

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"In brief, I may say that we have had somewhat too much of 'the gospel of work.' It is time to preach the gospel of relaxation."

HERBERT SPENCER, *New York Address.*

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TO

MY MOTHER

THIS LITTLE VOLUME IS

AFFECTIONATELY DEDICATED,

IN GRATEFUL REMEMBRANCE OF HER DEVOTION
TO THE WELL-BEING AND HAPPINESS
OF HER CHILDREN.

CONTENTS.

VACATION CRUISING

IN

CHESAPEAKE AND DELAWARE BAYS.

CHAPTER I.

DESCRIPTION OF THE YACHT, AND REASONS FOR THE CRUISE.

THE plan of spending this vacation on the water grew gradually, and at last commended itself to my judgment, because it was cheap, full of health, and promised as complete a change in mode of life as one could hope to obtain.

Furthermore, as I proposed partly utilizing the time by such natural history studies and observations as would not consume brain-power faster than it was created, some few books, a microscope, plant-press, and paper were required.

These conditions were most fully met by making a small yacht my means of conveyance, my home, and my laboratory. It is to be remembered that study was far from being the primary object of the cruise.

To carry out my plan a strong, nearly new boat was purchased,—not a racing yacht, in which everything was sacrificed to speed, but a solid, "well-fastened" little sloop, whose qualities were safety first, comfort second, and some speed at the tail-end of a long list of good points.

This boat, originally the "Varuna," of Bridgeton (New Jersey), was renamed "Martha," for reasons which were entirely satisfactory to my little boys (who were my sailing companions part of the time) and to myself. The custom-house papers gave thirty feet long, eleven feet beam, and three and a half feet deep as the dimensions of the little craft.*

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* Much greater depth and less beam in proportion to length are now regarded as important elements of safety, and doubtless truly so; but I was obliged to have a boat whose depth would not prevent my entering harbors where I particularly desired to go. An old waterman expressed his opinion of my boat by saying, "You can't drown her."

No more sail was carried than was absolutely required. The spars were shorter and stronger than were usual in sloops of her size; and, as further security against a capsize, more than a ton of pig iron was placed and fastened as low down inside as we could get it. Six hundred to a thousand pounds more outside on her keel would have added to her sailing qualities, though without this the boat gave no indication of unsteadiness.

Before the vacation began every seam had been most carefully gone over and made tight; the standing rigging was newly set up, and every cord of the running rigging was either new, or as good as new. Our ground tackle was two powerful holding anchors and plenty of manila rope to swing to. Cleats and reefing gear were all in perfect order. Not once during the entire summer were we endangered or incommoded from want of preparation of anything we should have had ready, but which was not ready.

A good aneroid barometer held a place so conspicuous that it *must* be noticed, and thus we were left without excuse if not forewarned of coming danger by storm. Compass, charts, lead

and line, side-lights, anchor-light, and cabin-light completed the details that contemplated safety.

Next came comfort. First of all, every avenue to the cabin was guarded by wire mosquito-netting,—so well guarded that we absolutely escaped all torment from these minute flying fiends. We always kept the sliding cabin windows open. Hence we had the full benefit by day and by night of whatever "air was going." The "bunks" were large enough for men of moderate dimensions to sleep comfortably in, with tossing room besides. The rule that all bedding must be frequently aired was religiously adhered to.

Food.—Canned corn, tomatoes, and baked beans, with rice, oatmeal, prunes, good pilot-bread, ham and the best breakfast bacon, tea, coffee, and sugar, I purchased for the season at wholesale price. Fresh fruits and meats were obtained as required. If there was lack of luxurious living, there was no want of nutritious plain food. The medicine-case was well supplied,—not that it was needed much for the inmates of the boat, but because, in the out-of-the-way places where we went, it often enabled me to relieve some suffering fellow. There is a comfort in giving help without

hope of reward, or without possibility of it, save such mental approval as a pure charity brings to the giver. A little of this does go a long, long way into after-life, softening one's own sorrows, and brightening his own joys. Hence, then, by all means, a medicine-chest.

Another most important article was added—a small, cheap camera for dry-plate photography. One may now be had at a price which is within reach of every tourist, and nothing is easier than to become an adept in the use of the instrument. Let me suggest, however, that each tourist contemplating a prolonged trip purchase enough plates at once for his use, and that he fairly test their sensitiveness before leaving his base of supplies. I have no complaints to make because a large proportion of the plates of a well-known dealer failed to give the results I had anticipated, and which I had always obtained before from his supplies. The fault was my own, that I had not tried the lot before starting out. We can hardly as yet guess how important a factor this amateur photography is to be in the book-making of the future. Neither can we measure its possible influence in opening minds to the

quiet beauty or the sublime grandeur which our land everywhere possesses. To judge what its possible effect may be a century hence, study what it has already done for men—and women too—who, before they became amateurs, had no appreciation of the fact that a tree or a rock could have either individuality or attractiveness. Without wishing to be over-enthusiastic, or be regarded as filled with the zeal of a neophyte, I can hardly avoid counting this art in as one of the humanizing forces of the times.

READING MATTER.—What so good as some of Kingsley's writings? Real enough to charm and invigorate the mind, suggestive enough to open whole realms to any student who has the capacity for observation or for generalization, yet without the details with which some authors drag their readers down to the level of those everlasting figures. There is a mental condition which grows out of constantly contemplating ratio and percentage which is dangerous, because the victim always fails to note that the sunshine is leaving his soul, and that, as his facts and his averages pile themselves higher and higher, his own inner self is being dwarfed. Who of all writers could so fitly

fill the little space left for reading matter as Charles Kingsley? Of course there were, besides, the ordinary scientific and yachting manuals.

One more element remained to be considered, which, if not under the head of comfort, comes under the more important one of health,—I mean cleanliness. Nothing so disturbs rest as the thought that as one sleeps visitors, demons of the night, children of filth, are feasting upon his blood; or that some disease-germ, vigorous in the absence of fumigation, is nursing in his veins a progeny that shall work him unknown harm. This bar to bliss when cruising is often intimately associated with a hired vessel. But then there could be no excuse for it on board one's own yacht, so I determined that, inside and out, the vessel should be cleaned every day. This rule was observed during the entire cruise, save for two weeks very early in the season. The yacht was also pumped out, washed out, and fumigated on the least suspicion that anything might be wrong, or on the bare idea that peace of mind or health of body could be in the least degree subserved by any additional precaution.

And now,—

"Over the rail
My hand I trail,
Within the shadow of the sail;
A joy intense,
The cooling sense
Glides down my drowsy indolence."—*Drifting.*

NOTE.—During the summer I had the pleasure of having with me, each for a short time, the following gentlemen: Messrs. George Johnson, William Butler, Jr., James Sellers, Professor G. M. Philips, and Mr. James Bull. My two little boys were with me several weeks. So that not the least among the delights of yachting is the privilege of having friends share whatever of pleasure there may be in it.

CHAPTER II.

DOWN THE CHESAPEAKE AND UP THE JAMES.

FRIDAY afternoon, June 9, I met the "Martha" at Delaware City, whence we were to go through the canal to the Chesapeake Bay. Of course it was an unlucky day on which to begin a long trip, though I am bound to declare that, looking back on the events of the cruise, I do not see just where the misfortunes came in. The day was exceedingly warm, and a dead calm rested upon the waters. The glare of the sun was almost intolerable to the eyes; though I must say here that this intolerance of the bright reflection ceased in a few days.

The hours from ten, when I reached the place, until three, when the yacht came into the lock, passed away very slowly. The local industry which appeared to be most thriving at that time was sturgeon-catching. Two or three antiquated river sloops and schooners lay alongside the wharf.

The odor arising from them told plainly enough what their vocation was. But the crews of these sturgeon-boats revealed most unexpectedly a fondness for the beautiful. The air of the town was filled with the perfume of roses, which were then blooming in profusion. Sturdy, oil-odored sturgeon-fishermen wandered through the town with huge clusters of roses, giving you as they passed the mingled perfume of the rose and the fish in the same inhalation. This unlooked-for susceptibility, however, was not so strange as it was to discover that the place where the roses came from was a bar-room filled with a noisy crowd. The roses and the rye were dispensed over the same bar.

The "Martha" entered the lock at Delaware City, as has been said, at three in the afternoon. By four we were hitched on to the steam-tug "Swallow," and long before dark were through the canal. When constructed, this canal must have been one of the great internal improvements of that age. The wonder is, however, that in spite of it Baltimore did not filch away from Philadelphia more of the grain crop which was grown on the Pennsylvania hill-sides. It is

doubtless well known who the moving spirits of the enterprise were, and also what their object was in cutting the State of Delaware through. One can readily understand how, in the interest of its great city, Pennsylvania could well afford to have made the canal, if necessary, in order that her own grain crop at least might be handled in and exported from her own chief port, rather than to have gone abroad from another State.

As a rule, there is no inspiration in canal navigation, or certainly few people find it. For all this it was a really enjoyable trip across from bay to bay. Our transit was made in the delicious cool of the evening, after a frightfully hot day. The adjectives used are strictly intentional and premeditated, for the sufficient reason that they express more truly than figures can how the noonday and the evening temperature affected us. I do not know where the mercury would have stood, because I never carry a thermometer when on a Southern cruise in summer, for it is simply exasperating to know just how much heat we are enduring. It is far more comfortable not to have the exact figures; they always intensify the sun's rays. In the canal we enjoyed the scenery and

the rich perfume from the magnolia and the fox-grape. I would really quite like to spend a week in working (botanizing) along the banks of the canal. There is a luxuriant, and apparently a very varied, flora in the region.

On Saturday morning our patience was almost exhausted before we were taken in tow by the tug for the Elk River. The master of the tug did not care to venture out so long as the fog remained dense. Probably he was entirely right, because until eight o'clock objects distant more than a hundred yards were shut out from view; though the captain of a large Crisfield schooner did not think so, and, hoisting his sails, he started to work his way down to the Elk. However,—"luck in leisure,"—we passed him very soon when the tug did start.

As we entered the Elk the fog cleared away entirely, and the glorious water view opened before us to the southward. I never look from above the Bohemian River down toward the bay that this panorama does not impress me. It does so more and more the oftener I look at and enjoy it. To the south there is no visible limit. The bold, timber-covered bluffs east or west, with

navigable rivers coming in between, run so that the horizon widens as one looks south. It is a scene characterized neither by grandeur nor yet by quiet beauty alone. The combination of water, of plains, and of hills in just the proper proportion is what completes this perfect picture, —so perfect, too, that each season brings its own special beauty to the view. Back from the water a little distance, on higher ground, may be seen the comfortable houses of the farmers. Without indicating the presence of great wealth, the whole appearance of the region is one of thrift and abundance. There is no sign of the "take-it-as-it-comes" spirit which is so common south of Annapolis; the air of the place rather speaks, "Make the most of it." Turkey Point, high and timber-clad, the location of an important light-house, stands like a sentinel between the Elk and the wide, shoal mouth of the Susquehanna River.

Probably one should say as little harsh in character about wind or weather as possible when cruising, for he can alter neither one nor the other; neither does it indicate a well-ordered mind to find fault with that which cannot be helped, and which, even if we could alter, would

probably be the worse for the interference. Still, as a simple inquiry, it may be allowed us to ask, —how many days of the summer season does the southern-bound navigator find head-winds to contend with on the upper, or indeed the whole, Chesapeake Bay?

By four in the afternoon we entered what is known to fishermen, oystermen, and others of aquatic tastes as Still Pond Harbor. It lies just south of where the Sassafras River empties, or rather opens, into the Chesapeake. That which is taken for the harbor generally is but a deep indentation or bay opening to the west, and hence, with a wind from the same direction, is merely a trap from which there can be hardly an escape, and in which one must ride out a sea backed by the width of the bay. In the October gale, some years ago, there were several "oyster-pungies" lost in this very harbor; so, at least, I was informed. I had good reason for knowing that there was one such unfortunate there as late as 1879, for, entering the harbor about dark in the evening with the schooner "Alice M.," we struck fairly upon the wreck,—fortunately for us, however, with no evil results. Not a sign marked

the presence of this dangerous obstacle save the "wake" or ripple made by the wreck itself.

The Still Pond is an offshoot or an inland prolongation of the harbor, and with which it is connected by an inlet say seventy feet wide and twice or thrice as long. That we found it and came to anchor in it, as but few yachtsmen do, I am indebted entirely to the sagacity and the pluck of "Lew," to whom, by the way, I have not yet introduced the reader.

"Lew" is a comely, open-hearted yachtsman, of say twenty-one, whom I was fortunate enough to secure as assistant before I left the Delaware. He is experienced, companionable, and trustworthy; and I can only hope that in future I may never meet with a worse man or a less reliable man than Lewis Seaman. It was through him, as I have said, that we found the way into Still Pond. I had been in the harbor before, and had not found the pond. He had not been there before, but did find it. That is just the difference. He noticed the inlet and saw how rapidly the tide ran out, and at once reasoned there must be a large body of water behind the inlet to force a current through with such velocity.

So we headed for the inlet, and gradually saw how it increased in size as we approached, until, when in its mouth, the pond opened to our view; but the current, which suggested the pond, well-nigh prevented our reaching it. The wind died away as we approached the inlet, and when we were in it, ceased entirely. So the anchor was dropped, and then "Lew," taking a rope over his shoulder, went ashore. I hoisted the anchor on board, and "Lew" towed the yacht through into the mouth of the pond. East and west the land-locked, beautiful pond spread out before us. Every one who is fond of the water has some ideal harbor which suggests perfect safety, easy landing on attractive shores, and what more each must add for himself to complete the picture. To me, when longing for a week on the water, this one, Still Pond, is ever uppermost in my mind. I often plan a whole vacation spent there. There is room enough for a large fleet in the pond, but, unfortunately, the bar across the mouth prevents vessels drawing more than three feet of water from entering. My chart shows on the southern shore of the harbor another arm, much like this on the north, but I have never

explored it. In the interest of humanity, it is to be hoped that means may be taken to deepen the channel into this Still Pond; for it is doubly hard that men should perish, as in that October gale, when there is an absolutely secure anchorage in full sight.

Considered from another stand-point, this place is one of those glorious surprises which so often strike a person cruising in the Chesapeake. Not only did the beauty of the spot take possession of me as soon as it was disclosed, but within half an hour after we had dropped anchor, Lew's net had caught all the fish we needed for supper. Had the Pilgrim Fathers landed here instead of where they did, it is doubtful whether their piety and importance would have allowed them to stop short of the belief that a spot so delightful and so prolific was created specially for them, and the work of Indian extermination might have been prosecuted with intense zeal. Pike, yellow neds, perch, catfish! Surely such a bill of fare might well awaken the enthusiasm of any man with a yachtsman's appetite, even if he were absolutely devoid of his sporting proclivities.

Every hour of day or night appeared to me to

have brought some peculiar sound. In the morning we had catbirds, blackbirds, kingfishers, and fish-hawks; at noon, a family of crows, young and old, kept up a most persistent and vigorous cawing. Whether the last was a lesson in elocution for the junior members of the family I cannot say, though there appeared to be some object and some method in it. At night a legion of frogs gave us a prolonged high-toned serenade.

Close along the northern shore there is a clean, gravelly bottom, and a somewhat greater depth of water than a little farther out, where, on top of the gravel, a slimy, dark, oozy mud is deposited. The tide at that point appeared to flow more rapidly along-shore. Examining the mud microscopically, we found much decaying, loamy matter, some very fine sand, and a number of the silicious skeletons of diatoms. I never saw so many, or such industrious fish-hawks. All day long we could hear them coming down with a splash into the water. Of course an occasional bald eagle appeared, to exact his contribution from the hawks. Even the crows seem to be unusually aquatic in their habits here. I saw one go down into the water almost as recklessly as

the fish-hawks did. High grounds and low grounds were close by our anchorage, and we found the yellow clover, the small verbena, the blue-flag, and the mountain-laurel all within a stone's throw of where we lay.

This was not the first time that I have wondered why men will sail without a barometer on board. We had a fine thunder-storm, and from our point of safety could enjoy it. The heavy thunder and vivid lightning and puffy squalls would have combined with the rain, which came down in force, to make sailing in the bay unpleasant enough. When we anchored, there was not a cloud in sight; but for all this the barometer warned us to prepare. We did so. There is always more or less danger in sailing in the bays in small craft, and it is simply common sense to take the lesser risk which the barometer affords.

Monday, the 11th, we were off by six in the morning. It was natural that we should leave Still Pond with regret. We had no reason to anticipate finding other harbors both as safe and as pleasant. Let me say to other yachtsmen that, in going out the inlet, back-flaws and baffling

winds may very often, if not usually, be expected as the bluff, where the pond narrows into the inlet, is passed. Sometimes these uncertain elements cause no little trouble in "working ship" where the channel is so narrow.

Once out in the bay the little "Martha" encountered the full force of a strong head-wind, and fairly danced on the waves like a cork. White-caps were forming on all sides. The wind was puffy and uncertain,—now almost a calm, when the boat would lose her headway and lie like a log; then in an instant a violent puff would strike the sail, knocking the yacht down, rail to the water, before she could gather speed enough to make her mind the helm. We now appreciated the full value of the fixed iron ballast. More would have been better, as the excessive buoyancy was a disadvantage in these short, chopping seas. Ballasted, as the boat had been the previous year, with sand, most of which was hardly below the water-line, such sailing must have been dangerous in the extreme. The amazing stupidity of many yacht-owners is absolutely a marvel. Most of those with whom I spoke before placing the iron in my vessel were rather inclined to tender their sym-

pathy that I could be stupid enough to buy iron when I could pick up sand or stones. The reason why I did not buy more and place it where it belonged, outside in the form of an iron keel, was because it involved an expense greater than I felt at liberty to incur. The worst fault was not lack of stiffness, but great buoyancy. Lew remarked, in a quiet way, "This boat takes the trouble to go right over the tops of all these waves." So it was; for sometimes she actually appeared to jump half her length out of the water.

Three miles ahead we sighted another point, one which marked a tempting harbor. The tide had turned and was against us; this, with adverse winds and waves, decided us to put into the harbor,—Worton's Creek. The attempt to beat down to Annapolis involved a long, hard day's work, with no pleasure whatever in the sail. Giving the yacht more sheet, we headed for the creek, entering it in good style, flying past a party of fishermen who were running out an immensely long seine. Once fairly in, we sighted two arms, one of which ran northward, opening into a considerable expanse of water, the other and more inviting one extending toward the south. We beat

into the latter about a mile, and dropped our anchor opposite to Buck Neck Landing. Shortly afterward the steamer "Van Corlear," from Baltimore, came in and afforded us a chance to send off our mail.

For a while the place appeared to be alive, carriages thronging the wharves to receive those coming, and to help away those who were leaving. But they departed with the steamer, and in half an hour the place resumed its wonted quietness. Dreaminess appeared to rule the hours. For the rest of the day hardly a sign of life was visible. I made several attempts to purchase some rope which I needed on the yacht, but found the merchant was taking a nap, or had gone visiting, or was somewhere else than in his store. Late in the evening the desired purchase was made. The law of compensation, it is evident, runs through the whole universe outside of ourselves. I am convinced now that it at last decides the individual destiny. Were it not for some such law, men at Buck Neck Landing might live forever, or certainly as long as the patriarchs. The world's troubles do not appear to concern them, the world's thoughts never agitate them; come peace,

come war, nerve-tissues and myosin are renewed as fast as expended, and but for some beneficent disease or accident men never would leave there to stay even in Paradise. The place would be overcrowded. With fish in the waters and fruit on the land, these kind-hearted, generous, and honest inhabitants would remain, in quiet and in sunshine, until they multiplied enough to wear their clothing out by jostling against each other.

There was a solitary living exception to what I have said, visible from meridian until four P.M. A good-natured colored boy amused himself by the hour sculling a heavy "yawl-boat" over to the western side of the creek; then, hoisting a broad board in the bow for a sail, he threw himself down in the stern of the boat and scudded before the wind back to the eastern shore. He was full of the languid poetry of drifting; his whole soul was saturated with it, though it never found expression. The solitary reader of his Muse was myself. Happiness is a purely relative term. This, of course, is a platitude. But who of all mankind ever come to fully appreciate the breadth of even so plain a thing, and to rest content with the present? I have in mind now two

who illustrate the extremes. One of them is that young negro. He came alongside, and I gave him a bucket of preserved prunes, which neither Lew nor myself could tolerate. He received them with open eyes and mouth. If he only knew how little generosity there was in that gift, we would suffer in his estimate. He soon became too full of happiness on preserved prunes even to enjoy the pleasure of crossing the creek behind his board-sail. We saw him on the other side, with his feet hanging over the boat and receiving the caress of the water, just as his face, upturned to the sun, was comforted by the superheated rays. An hour later Pompey came alongside again. For the gift of a cigar he consented to have his "picture tuk."

Marked on the lower part of the store building I found the statement, "High-water mark. September 17, 1876." It was gratifying to obtain the fact, not only because it was a fact and indicated a storm-tide several feet higher than common, but because it evinced interest in an unusual event. However, two months later I should have seen busy times on that very quiet wharf, when the peach crop, one great interest of the region,

was being shipped. We went ashore during the evening, and enjoyed the hospitality and conversation of one of the near residents.

ANNAPOLIS.—Tuesday, the 12th, we left our anchorage on the last of the ebb tide, and headed south for Annapolis. We hoped by making an early start to reach our destination in spite of the adverse and heavy weather. So we did, but it was at the cost of vast patience and severe buffeting. As the crow flies, the distance would have been considerably less than thirty miles. In a fair wind the run would have been a very short one; but in a small boat, with wind and tide both against us, it consumed a great part of the day. Yet it appeared that we were not much worse off than others who were in sight and bound the same way. Harbor after harbor was passed, until by two o'clock P.M. it was clear that, even with the odds against us, reaching our destination was merely a question of time and perseverance. Hoping to avoid the force of the waves, we left the eastern shore and started for the other side. To my surprise, where I expected to find a sheltered shore, the water was almost or quite as rough as the one we had left. The difference in

color between the deep-green water and the yellowish hue in shoaler places was strikingly apparent. From Bodkin Point, down along the western shore, the beat appeared almost interminable. We had fully decided at one time on anchoring in Magotha Harbor. On maturer reflection we both concluded it would be just a little unmanly to remain there over-night, when a friend and prospective shipmate was waiting for us in Annapolis. It did appear, though, as if we never could get by Sandy Point. "It shoals" a long, long way out. Then, too, fellow-yachtsmen, be advised: do not attempt, as we did, to go inside of the buoys off Greenbury Light when it is blowing a gale, unless you know the ground too well to make a mistake. The "Martha" tried the experiment, and, though she did drag over, there was nothing at all to spare. It is very trying to keep outside, especially when the wind is against you, but probably you will find it best to do so.

We received a lesson in naval architecture when crossing from the eastern to the western shore. My boat, being the usual model of the Delaware Bay,—broad and short,—was at her very

worst in the head-wind and "choppy sea" of the Chesapeake. She labored severely, with lee rail under (for we were carrying whole sail, though the wind whistled through the rigging), or rose over the waves until it appeared as if more than half the hull was out of water. Alongside of us came a Chesapeake "bug-eye," * of light draught, but long and narrow. We saw her start from Tolchester Beach, and creep up on us swiftly and surely. We were laboring; she was moving along without effort, going not only faster, but working more to the windward. At the very time this forty-feet bug-eye was leaving us, we ourselves were distancing a large coasting schooner. The bug-eye careened over very little, went easily through the water, made no pounding or splashing, and looked almost into the wind. Thus she proved herself as possessing every requisite of a first-class seagoer. It is doubtful if she drew more than two feet and a half of water; it is much more probable that she drew less. She certainly did not

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* The term "bug-eye" appears to be a corruption of "buck-eye," which name was at first given from the auger-holes on either side of the bow, and through which the cable ran.

have ballast enough to sink her if she had filled with water. These were all most desirable features in a small boat. But here was a direct violation of what we have been taught were cardinal features in small-boat construction,—shallowness and small beam on the one hand, and great length, with no ballast, and shallowness on the other. The present ruling fashion is that a small boat shall be at least four times as long as broad, and that she shall carry, say, half her tonnage, or more, deep down in the water, in the shape of a lead or iron keel. It is certain that a boat built after this, the English cutter model, may "knock down;" but it is certain she will not stay down. Unless she fills, she must right again. I believe that, so far as our American sloop and the English cutter have come into fair trial, the cutter has proven the better boat,—safer and faster. I am not sure what the result of a contest between the cutter and the bug-eye would be. From what I have seen of the latter class of boats in the Chesapeake, I am most strongly prepossessed in their favor. The model of this nondescript is peculiar. Probably the light cedar gunning-skiff which does duty as a yawl-boat for us is as nearly an exact imitation

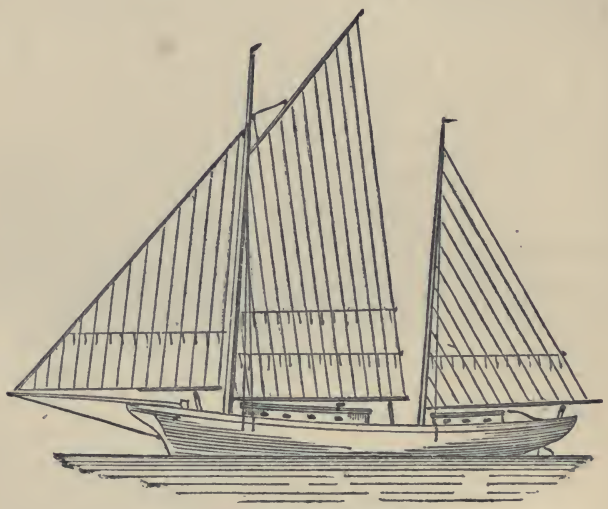
of the bug-eye model as one can imagine. Now, that same skiff, with sharp bow and stern, such as the bug-eye was, gave us, when we towed it down to Annapolis through heavy seas, a most astonishing illustration of sea-worthiness. Every vessel we met had her yawl swung up, or on deck. Yet our yawl rode so easily that the line by which we towed her was seldom stretched, and not a tin-cupful of water worked into her during the whole day. The best statement I can give of the bug-eye model is one furnished to *Forest and Stream* by "Talbot." Here it is. The accompanying illustration will give a general idea of the appearance of the craft. It should be added, however, that the smaller vessels of this class have all their sails triangular in shape.

CHESAPEAKE BUG-EYES.

Editor Forest and Stream:

The inquiry contained in your paper concerning the bug-eye, as it is called by our oystermen, is a step in the right direction, and Mr. Roosevelt can obtain any information he may desire from Captain James L. Harrison, Tilghman's Island P. O., Talbot County, Maryland. Captain Harrison is the builder of the fastest boat of this type on the Chesapeake. If this model is peculiar to this section, there remains in store a treat for all who adopt it in

other waters, where speed and safety are desired. The boat is not perfectly flat-bottomed, as Mr. Roosevelt supposes, but built so as to combine light draught and carrying capacity. The centre-board is constant, also single head-gear. The jigger is always



CHESAPEAKE BUG EYE.

stepped so as to trim sheets to traveller on deck. Many of them are built with round sterns with overhang, as in the cutter. Schooner rig prevails to great extent, but adds nothing to speed. These boats are extremely fast, and brave the heaviest gales of our winter. Larger vessels often capsize, but the bug-eye never. I enclose you the dimensions of the boat thought to be the fast-

est in the whole fleet, with a sketch showing rig: length, fifty feet; beam, twelve and one-half feet; dead rise, one and one-half inches to the foot; draught, light, three feet; centreboard, twelve feet.

TALBOT.

It appears from the above, especially when one remembers the sharp-sterned "pinkies" of half a century ago on the New England coast, and which were so remarkable for sea-going qualities, that in estimating all the good lines in a boat-model we must probably give considerable importance to the shape of the stern. Indeed, some assert that the shape of the latter is of as much importance as that of the bow. I have a half-conviction that, taken all in all, these same bug-eyes are as fast and as safe as many of our renowned yachts of the same size.

The evolution or mode of development of the bug-eye is interesting. So far as now appears, the whole fleet of them grew out of the equally famous Chesapeake log canoe,—"kunners," as the negroes and some of the illiterate whites called them. These originally were made from three large pine logs, which were neatly and strongly jointed together by three dressed faces, so that

one made the bottom and the other two the sides. These were hollowed out and finely shaped outside. Being nothing but wood, they were of course unsinkable, besides being extremely strong, tight, and durable. Then two long masts, which had a most wonderful rake, were added. A jib was, or was not reckoned part of the outfit. These Chesapeake canoes did their work so well that they became the popular small boat of the region, and to increase their size and carrying capacity the largest available logs were used. Still, the limit in size did not appear to have been reached, and the model is essentially preserved in boats now framed and planked up in the ordinary ship style. These are the latest product of Chesapeake naval genius, and are the popular bug-eyes. The small modifications of the canoe type which they have introduced are somewhat more "dead rise" and more swell amidships. It may be well for our yacht constructors, before absolutely and finally adopting the deep English type as the highest product and most suitable vessel for our waters, to examine very carefully into the claims of these nondescripts. We offer no opinion; that must be formed after full, fair trial. Chesapeake naval-

constructive genius cannot well be despised. It has too famous a place in the history of the Baltimore clipper, which a generation ago so astonished the world. To my mind the secret of their wonderful stiffness remains unsolved. Oystermen say they will live out a storm longer than any other model on the bay. There is no other style growing more in favor with these men than the bug-eye. Hence, then, a fair trial, if for no other reason than to test the value of an American type.

A day could not be spared, on our way down, to see the points of interest in and about Annapolis without a serious break in our plans. However, as we found a friend (Lieutenant Bull, of the navy), the break was made, and the time spent in the grounds of the Naval Academy, under his guidance, was a more than sufficient compensation for waiting.

When we left, on the morning of the 14th, we were comforted by the assurance, received the day before, that we might expect head-winds going down the bay about nine days out of ten at that season. However, thanks to the squall of the previous evening, the wind had hauled around to the north, and we had a fresh breeze following us

all day. So that, after a run of ninety miles, we dropped our anchor for the night in Smith's Creek, a little offshoot from the Potomac. The small number of sails we saw in making the run was a surprise, bearing no comparison to what we expected, or to what we should certainly have seen had we been on the Delaware. Still, it is hard to think that Baltimore, with its superb water-approaches, will long lag in the race.

The little bay, for such it was, in which we had anchored was completely landlocked, and not more than two hundred yards wide; yet it contained water enough for a good-sized vessel. This abundance of superior harbors may be considered as a peculiarity in which the Chesapeake is pre-eminent. This, along with the navigable waters, estuaries, and rivers intersecting the land in all directions, has in one sense retarded the development of the country,—*i.e.*, by making water communication so easy and so extensive, it has in so far superseded the necessity for roads. The sailing canoe is the ordinary means of travel from place to place along the shores. This retarding effect was observed even by the early colonial writers.

June the 15th still gave us, in the morning, a promising northerly wind, and we started out early, hoping to make a big run to the southward that day. It was, however, four P.M. when we reached Milford Haven, on the Piankatank River. Our intention had been to push on down to Mobjack Bay, but the weakening wind warned us to seek a harbor while we could have daylight to do it in. No rule can be regarded as invariable when one's doings depend upon the uncertainties of wind and weather. It was my desire, however, always to be at anchor by three in the afternoon. This allowed a turn on shore to see what could be found, and gave us a chance to take in all the surroundings, and decide what we would do in any emergency which might arise during the night.

Milford Haven is still another of those surprises which constantly greet one yachting along the western shore of the Chesapeake. Now, as elsewhere, we were landlocked for the night. The entrance, which at first appeared too small to admit a vessel, widens out into a broad, deep mouth, and inside the harbor which it leads to a whole fleet of canoes and some good-sized

schooners lay. During the evening spent there Mr. J. and Lew occupied themselves catching crabs. Half an hour of the sport was sufficient to cover the deck with vigorous pugnacious specimens, who the night through manifested their excessive vitality by threatening any one audacious enough to leave the cabin in the dark hours. However, this was more than compensated for when we came to enjoy them cooked. There is a difference in flavor of crabs, just as there is in that of oysters; and for both Milford Haven is justly famous. Cape May "goodies," served up with the oysters and crabs, make one even now, after the lapse of several months, remember our anchorage in the Piankatank with feelings of complete satisfaction.

There was a source of annoyance in our charts. These were all that we could desire out in the deep water, but along-shore, in water where we thought we could go, they gave us no information. The score of little bays and harbors that one "might make," if only his chart would indicate the depth of water or show him the way in, were a constant aggravation, because we knew there were such, and such quiet places, too, as we most de-

sired to enter with camera in hand. Chart-makers, we shoal-water yachtsmen, we owners of very small craft, do beseech you to give the channel and the depth of water into every small harbor in the Chesapeake. Our experience at the mouth of the Potomac was provoking. The chart led us to put in there because of a small safe harbor which was indicated; but we searched in vain for it, and were obliged to make a considerable run out of our way to find a secure anchorage.

June 16th found us astir by sunrise, which this season of the year means by about half-past four. We thought ourselves early risers, but the partridges were up before us, and we could hear their musical whistle from all sides. Is it so that there are early and late risers among our day-birds? It was not until long after the "Bob White" whistle was heard that the crows began to make themselves conspicuously noisy. However, this was Virginia we were in, and it is only within a few years that black folks have dared to speak at all.

Our anchorage in Milford Haven was on the southern side. The anchor was let go in two fathoms of water, but during the night, swinging with the tide, the yacht had been left stern

aground. This accident caused but little delay. We were soon floating, and in less than the length of the yacht were again in the channel, with water enough for a large schooner. Most of these harbors have certain features in common. Thus there is ordinarily a bar at the outlet, where the current of the main body of the water, meeting with that coming from the harbor, causes enough retardation of the water to allow the suspended mineral matters to fall to the bottom. Such, at least, is the explanation which forces itself on my mind. There may be a much better one, however, for aught that I know. Then, again, leading to and from all these harbors, there is a strong current where the inlet or outlet is narrow and the harbor is wide. Hence through this narrow part there must be a rapid current, with great capacity for deepening and eroding the channel. This, in fact, is just what we find, and when by storm or otherwise the channel is closed, this swift current very speedily opens another.

We asked a negro who came along-side to sell oysters, just after we had anchored, who the females were that, in the absence of the men of the

crew, saved their sloop from the vengeance of the governor when he was hunting oyster pirates, a few months before. There was a nice little story going the rounds of the newspapers that these Piankatank women, recognizing the emergency, escaped by themselves getting the anchor and sails up and navigating the vessel to a place of safety. One of our popular illustrated journals gave a page or two of rhyming history of the affair. The negro knew nothing of it; but, if it "was so, he guessed they must have come from the other side." Whether true or not, it illustrates that home praises are often very faint, and that it is only when echoed back from a distance that they are heard at all. Alas for fame!

There is a tortuous, very narrow channel from Milford Haven out to the bay, in which, by sailing east, we hoped to save important time that would have been lost to have gone out from the north as we came in. A very intelligent colored man, one Richard McKnight, undertook to pilot us through this lower passage. We found him a character, who, between serving during war times as a cook for a Northern general and as a sailor, had gathered quite a fund of information. The

use he made of his knowledge as we drifted slowly out was very entertaining. His observations upon the animal life around us were quite acute. As for the fish-hawks and the eagles, he seemed to have been taken into their secrets. Their sounds and movements were familiar to him as those of the little boy who accompanied him. Among other things, he told the local tale as to why the eagle exacted a tribute from the hawk. The former was the earlier inhabitant of the region. When the fish-hawk came, he did not know how to make his nest. This the eagle taught him to do, under promise that the hawk should pay in fish for the instruction. This obligation was disregarded, and the eagle was obliged to take his due by force.

So simple a tale as this, not elaborate enough or far enough reaching in its relations to be classed as a myth, was, nevertheless, extremely suggestive. It brought to my mind the fact that these tales are always found, when found at all, among those who, without being ignorant, are nevertheless always illiterate. How the folk-lore originally came, it is, after all, hard to explain. It would be hard to prove that it had always a

more substantial basis than this tale of the colored pilot. Our American Indians have such explanations as this for the habits of almost every animal.

Those wild winter nights when, in 1865, I was in the most unknown and uncivilized parts of British Columbia were in one way a perpetual delight to me. My Indians, crouching around the camp-fire, amused themselves by telling, night after night, the same tales, with as much eagerness and interest as if they had been wholly fresh and new. Thus the beaver and the porcupine decided to travel together. The beaver was to take the porcupine across the rivers, and the porcupine was to help the beaver down the hills. The beaver, however, ducked the porcupine in crossing a stream; and then, as his hair dried in the warm sun, it became hard and rigid like quills. The porcupine retaliated by dragging the beaver down the next mountain, and so wore all the fat off of the under-side of his body; and none has ever come there since.

The run of the 16th was a very short one. We anchored for the night behind New Point Comfort. So far as the weather was concerned, we

rested well enough, but there was a fish-mill on shore which was most exasperatingly fragrant. It called to mind some passages from "The Tempest,"—

ADRIAN. The air breathes upon us here most sweetly.
SEBASTIAN. As if it had lungs, and rotten ones.
ANTONIO. Or, as 'twere perfumed by a fen.

The United States boat "Fish-Hawk" lay in the same place. We could not see just what she was doing, though, of course, she had some mission there, and was accomplishing it in the usual comfortable, leisurely government way.

Sunday morning, the 17th, the wind was so fair that we concluded to start for Fortress Monroe. An hour before sunrise everything looked unpromising. The wind was not only dead ahead, but there was too much of it. Any other place was better than where we were. It was certain that we must make a harbor somewhere else. Then, too, the Sabbath in full reach of the odors from a fish-mill! It would have been enough to banish all proper feeling, and to concentrate all one's attention on his nose. So the start was made, and soon, as the old adverse breeze died

away, a new and favoring one sprang up. This carried us to the fort by half-past two in the afternoon.

The following day we started up the James, anchoring for the night at the lower end of Jamestown Island. The next evening found us anchored off City Point, where my vacation work was to begin.

The only unpleasant association connected with the place was that my friend, Mr. J., who had been with us for a week, took his departure for the North and the treadmill of life again.

CHAPTER III.

DOWN THE JAMES AND UP THE CHESAPEAKE.

To the next generation City Point will have lost the meaning which it has for thousands of men now living. Its very situation, at the junction of the James and the Appomattox, is full of stirring suggestions. It is strange that the waters which flow past the birthplace of the nation should also have their source so close to the spot where the final struggle for its life and perpetuity was made.

Bermuda Hundred, City Point, and Petersburg are all associated, geographically and historically, and all were during the recent war a very focus of military operations. Plots and counter-plots were worked out there. Troops were embarked and disembarked on the very wharves whose ruins yet remain along-shore. Over those very decaying piles, hundreds, mayhap thousands,

of wounded or sick heroes marched, or were carried, on their way to Northern hospitals.

The town itself has but little to speak of. Whatever energy the place indicates is centred along the wharves, where the railroad and the steamboats meet. Rumor says some interest hostile to the growth of the place is at work. It is hard now to picture the sight of troops and engines of war on the very spot which, at the time of our visit, was covered with matured wheat. The only reminder of war that one sees are the six monitors which lie at anchor on the southern side of the channel. One officer, residing in Petersburg, commanded the whole fleet, while a squad of men does duty in allowing the old war-battered vessels to rust and rot in becoming dignity. Their decks are white; the iron, and other things which the unwritten law of the sea demands shall be black, receive their proper care and color. All of these monitors have seen service. They are part of the original fleet which first in a practical way settled the value of armored ships. Weak as they now are from age and in comparison with the ironclads of other governments which have decent self-respect, they

were once the very bulwarks of the nation. One hardly knows whether most to pity or to despise a power which in time of peace allows its strength to rot into weakness, and then to disappear,—all this, too, as the sop thrown to party selfishness on the one hand, and to party fear on the other. On the mere basis of probabilities, one might venture to assert that there are a score of land and water leaders, men yet unknown, who in the proper time and emergency would come forward to command our forces and to organize victory, provided that they had the mere material of war. We can probably produce Grants and Porters more speedily than ironclads and cruisers. Heroes are very much creatures of accident, as monitors are of time and money.

Taking the James as a whole, the banks are still very much as nature and war left them. Considering that nearly three centuries have passed since the early colonists landed, it is remarkable how many of the beautiful building-sites along the banks remain timber-clad to this day. Here and there a stately mansion rises on the bluffs or towers up from behind the belt of woods. This is to be said,—that when costly homes were

erected, the choice of the site was almost invariably in favor of a commanding position. Nowhere in the country is this more clearly manifest than along the James. More than this, I fancy one can see, only half concealed, the wish that in future these same halls might have clustered about them not only the associations of the old English homes after whose patterns they were built, but also something like baronial pomp as well. Virginia thresholds suggest not only a color line, but a caste line. This is not so much an individual peculiarity as it is due to times first and circumstances afterward; and it reflects the aggregate sentiment of a ruling circle. It may, like the odor of roses, persist even after the process of disintegration has set in. If one is struck unpleasantly by these *appearances* of strength, he must not forget the *real strength*, the genuine heroism and the broad statesmanship, which this old commonwealth nurtured. It is fair to judge a generation rather by what the best men desire to do than by what the average characters succeed in doing. When actions have passed into history and we sum up the doings of a past generation, we are most likely to estimate

their rank by what the pioneers in thought and deed have accomplished for those who followed them. This is surely the most ennobling influence to be drawn from history; and in meditating over the doings of two centuries with Virginia, it is well that we give ourselves the benefit of that lesson.

The same old tale of timber destruction which is written on the bare hillsides of the North is being rewritten on the banks of the James. Timber exportation is one of the industries of the region,—good enough for the present, but, in the interest of the future, not nearly so productive of benefit as a policy would be which made men save that timber where it is and gain the year's living from old acres better tilled. Three-fourths of all the vessels that went out of the James during our stay there were freighting away timber. Granting what must be granted,—the unhealthiness of the low grounds,—would it not be better to leave them for the present in standing timber, where it exists, or even to replant where it has been removed in anticipation of the time, which is surely coming, in which forest value will be as certain as the value of a silver-mine? The

question is, or soon will be, a national one—can we longer afford to be without some such system of forestry as has produced beneficent results in France and in Germany? True, it may be many years before Virginia will suffer from lack of timber. But then that simply means she yet has time to study a lesson which many other States have already learned to their cost,—that it is bad to be short of timber, and that, once gone, it takes many years and costs much money to restore a forest.

The difference between the season here and near Philadelphia is quite marked. As I looked from my cabin window on June 20th I could see much of the wheat crop already cut and "in shock." A day earlier I found blackberries (*Rubus villosus*) fully ripened; even the wild plums (*Prunus Americana*) were commencing to be edible.

With a fair wind, on June 20th we left City Point to descend the river. The first stopping-place was at Berkeley, a few miles below. I wanted a view of the old mansion-house, which, erected in 1723, has been the scene of many important historical events. Tradition tells us that

on the lawn in front of this building Patrick Henry rehearsed his great speech to the Virginia representatives, before whom it was in form delivered at the Virginia Convention. I can neither confirm nor deny the historical accuracy of this statement, which was given to me by the courteous and obliging proprietor, Mr. Stevens. In the same house President Harrison was born. It was used also by General McClellan during his Peninsular campaign; and then were removed the beautiful trees which once ornamented the lawn, facing and gradually sloping to the river, three hundred yards away. The original grant of this estate dates back to 1636, when it was given by the Crown to the Merchants' Trading Company, and by them sold to Benjamin Harrison, in 1645, for the sum of sixteen pounds sterling, containing then about eight thousand acres, and extending back to the Chickahominy.

Malvern Hill, where our great but unutilized victory was gained during the recent war, is but eight miles distant.

The steep banks of the bluff, where they face the river, show a mixture of sand and gravel which is very like that revealed by the cuts of the Chesapeake

and Delaware Canal. The bald cypress (*Taxodium distichum*) was at its very best when I saw it in June. Its light-green feathery foliage contrasted richly with the dark-hued pines back of it. To those who have never seen these trees before, they always present a strange appearance, which is due, first, to the fact that they grow down to and in the water; and, second, to their large, conical, buttress-like hollow roots. They can hardly help enlarging one's views of the possibilities of plant-life and form for variation. Along-side of or but little higher than the cypress, the buttonwood (*Platanus occidentalis*), with its large leaves, was thriving luxuriantly; and, still farther from the river, the leaves of the *Liquidambar*, or the sweet-gum tree, stood out boldly with their five to seven projecting ray-like lobes.

In one respect the condition of the negroes and poorer whites along the shores of the bay and the banks of the river has not much improved since the days of slavery. They were then, as now,—probably hardly more than now,—largely depending on the water for much of their food. Sailing up and down the James, we saw them, after the work of the day, actively engaged in fishing. In one house

which we entered we found an old gray-headed colored woman preparing the same kind of corn-bread that was the staple food years ago. By day and by night we could see and hear the sturgeon jumping out of the water, and coming down again with their characteristic heavy splash.

When it is remembered that most of the really desirable land in our Western Territories is already taken up, the idea forces itself upon one that capital seeking land investment would do well to turn its attention toward Virginia. It should be remembered that portions of Ohio, Indiana, and Illinois were once (indeed, still are) as much under the curse of malaria as the banks of the dreaded James River. Yet those same regions have become centres of active industry and of business prosperity. Cinchona has as nearly eliminated malaria as an element in retarding civilized occupancy of a new land as the telegraph has annihilated space. This woof and warp of human events is a strangely tangled thing. Who could have supposed that the discovery of remedial properties in a tree on the slopes of the Andes would open an avenue which made African exploration and settlement by white races possible?

Yet who can deny that it has done so? Those who will drink the waters of Marah have a right to the palm-trees of Elim. It is certain that the bad reputation of the region along the James was intensified by the long list of sick men sent home from there during the Peninsular campaign; but then it must also be remembered that the circumstances under which those victims had lived were altogether exceptional and trying.

At ten o'clock at night we would hear the negro fishermen singing as loudly and happily as though they had not already done a day's work. Light-hearted race! How well they illustrate that life and contentment are, after all, pretty much as we make them!

Our short stay on the James would, of course, furnish very incomplete data on which to base an estimate as to the number of vessels of considerable size which pass up and down the river each day. While we were there, probably it would be safe to say, there were three or four daily each way that went or had been above City Point.

On the evening of June 20th we anchored near what was left of the old Fort Powhatan. A still strong river-wall is all that marks the site of this

once-important post from the river side. A country store stands on the hill above, and a wharf furnishes a landing-place for good-sized vessels. Shipment of timber appears to be at present the chief industry. Earthworks, occupied for a time during the recent war, are on the hill back.

Continuing our voyage down the river, the next landing was made at Lower Brandon. During the war I had occasion to know the bravery and the persistency of purpose with which the Virginians adhered to their doctrine of State Rights. Here, at Lower Brandon, for the first time in my life, I was made acquainted with the hospitality for which the old families of the State are so proverbial. I presented myself at the door of the noble old mansion, a sun-browned yachtsman, certainly with dust on my shoes, and I fear with the odor of tar on my raiment. The gentleman of the house being away, permission to photograph the house and its surroundings was very kindly given by the ladies. By them, also, I was taken to the parlor and shown the old family portraits, each of which had a history. Indeed, it is very doubtful if a single private room on the continent contains a larger number of portraits of distin-

guished persons, most of whom, too, were related to the occupants of the house. Some of these paintings were more than a century and a half old.

Colonel Byrd, who figured so conspicuously in all the early doings of the colony and in its relation to the mother-country, had, of course, a conspicuous place among the family portraits. Mrs. H. most kindly allowed me to examine the original manuscript account by Colonel Byrd of running the line between Virginia and North Carolina. He was himself one of the leading characters in the work. Colonel Byrd's writings furnish a mine of wealth which no historical student of the times and the colony can afford to be without. They have been published under title of "The Westover Papers," and throughout are characterized by elegance, force, and reliability. Of course, on a flying visit it was impossible to do more than simply to glance at the precious document. I make one extract from it, which shows that the author was a keen observer of the lower animals as well as of man:

"When the water is shallow 'tis no uncommon thing to see a bear sitting, in the summer-time, on a heap of gravel in the middle of the river, not

only to cool himself, but likewise for the advantage of fishing, particularly for a small shell-fish that is brought down with the stream. In the upper part of James River I have observed this several times, and wondered very much at first how so many heaps of small stones came to be piled up in the water, till at last we spied a bear sitting upon one of them, looking with great attention on the stream, and raking up something with his paw, which I take to be the shell-fish above mentioned." (October, 1729.)

Of Colonel Byrd, Doyle ("English Colonies in America: Virginia, Maryland, and the Carolinas," p. 348) writes: "In 1720 the first event occurred which throws any clear light from without on the internal life of the colony. In that year boundary disputes arose between Virginia and her southern neighbor, and it was found necessary to appoint representatives on each side to settle the boundary line. The chief interest of the matter lies in the notes left us by one of the Virginian commissioners. Colonel William Byrd was a rich planter, whose multifold activities and varied accomplishments recall that generation of Englishmen to which Virginia owed her origin. Educated

in England, then called to the bar and elected a fellow of the Royal Society, afterward for thirty-seven years a councillor in Virginia, three times agent at the English court, and the leading spirit in every industrial enterprise, Byrd shows us how active and brilliant a career lay open to a great Virginian landholder."

It is, then, to Byrd's industry in recording the events of his daily life that his own well-established claim to historical remembrance is due. Besides this, however, these same labors made him the first American historical authority of his times, and also the preserver of a knowledge of social life which but for him must have been in great part lost. Along with his high sense of honor and a most keen penetration, he appears to have been, withal, somewhat caustic in his writings. Thus he characterizes Edenton as being the one capital in the world without any place of worship. This mode of expressing an opinion reminds one very strongly of—

> "'Tis in Annapolis alone
> God has the meanest house in town."*

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* See "Colonial Life in Maryland," E. W. Latimer.

The portrait of Colonel Byrd, and also that of Miss Eveline Byrd, hang on the parlor wall at Lower Brandon. The latter must have been strikingly beautiful. The impression she produced has almost become historical.

Nothing struck me so forcibly as the dignified and frank manner in which the war and its immediate issues have been accepted by the property-holders along the James. There is a nobility which is above even the reverses of war, and if ever in my life I felt that I was in the presence of such it was at Lower Brandon. I would like to say more, but deprive myself of the pleasure, lest the sincerity of what I have written should be doubted.

When night came I could look from my cabin window and see, two miles away, the lights where the negroes were fishing. I fancied that I could hear them singing. But along the line where the woods and the water met I could see no other light made by human hands. The fire-flies flickered among the foliage on shore, and the full moon rose out of the water to the eastward with an unusually cold red light. Scudding clouds and puffs of wind lent just enough of weirdness to the

scene to make me fully realize how these same shores appeared when the first voyage of exploration was undertaken from Jamestown Island to the present site of Richmond. I cannot help hoping—nay, thinking—that a new prosperity awaits the Old Dominion; that her soil, restored to its original fertility, may again produce bounteous crops; and that her scars of war will be covered by a mantle of peace which shall nevermore be turned aside.

I was particularly anxious to secure a good photograph of the Lower Brandon mansion-house. But here, as on Jamestown Island, the two places where, of all others, I most desired success, I absolutely failed to obtain the views. Uniform success during the previous season made me so careless that I did not attempt developing the pictures until I returned home. Then, when too late, I discovered my failure. The mansion is composed of two wings and a main central building. The wings were erected first, and of bricks brought over from England. One finds there the same alternating order of red and black bricks that he can still see in so many of the older parts of Philadelphia. Subsequently the main central

building, as it stands to-day, joined the wings. In spite of the injury wrought by war, it is a most imposing building. Inside all was once in keeping with the exterior; that it is not so now is largely due to some unjustifiable acts of vandalism, I am ashamed to say, on the part of our own Northern troops.

I had the pleasure of accompanying the ladies to the harvest-field, where Major Page was superintending the cutting of the wheat crop. I found him a courteous gentleman, who shook hands very cordially with me knowing that we were on different sides of the recent conflict. I cannot help asking just here how much of the Southern intolerance of Northern men may come from an ill-advised and indelicate aggressiveness on the part of the latter. I make no assertion, but simply ask the question.

There were on the estate about two hundred and fifty acres in wheat, and some eighty laborers engaged in harvesting it. The major suggested about eighteen bushels per acre as the probable yield of the one-hundred-acre field he was then engaged upon. In the thriving crop of clover I could see the sign of a restored fertility. The

absence of this on much of the land that I visited along the James was leading me to underestimate the recuperative process which is taking place.

Lower Brandon mansion, along with its large-hearted hospitality, is a house of "many industries," as one of the ladies remarked. It is the post-office for the region, and the money received for their service to the country is set apart for the church there, which, like many others, needs all it can obtain to enable it vigorously to prosecute its Christian work.

If to the occupants Lower Brandon appears like a "Paradise Lost" since the war, there are very many who hope that ere long it may be a "Paradise Regained." I visited the grounds early in the morning of June 22d. The cooing of the pigeons and the whistle of the partridges were everywhere heard. Squirrels played among the branches, or deliberately sat and chattered at me as I passed. Their only fear seemed to be when on the ground; but, once on the tree, they immediately stopped to inspect the intruder. The *Magnolia grandiflora* was in full bloom, and its fragrance appeared to temper the morning air. Mimosas, with their delicate foliage and still

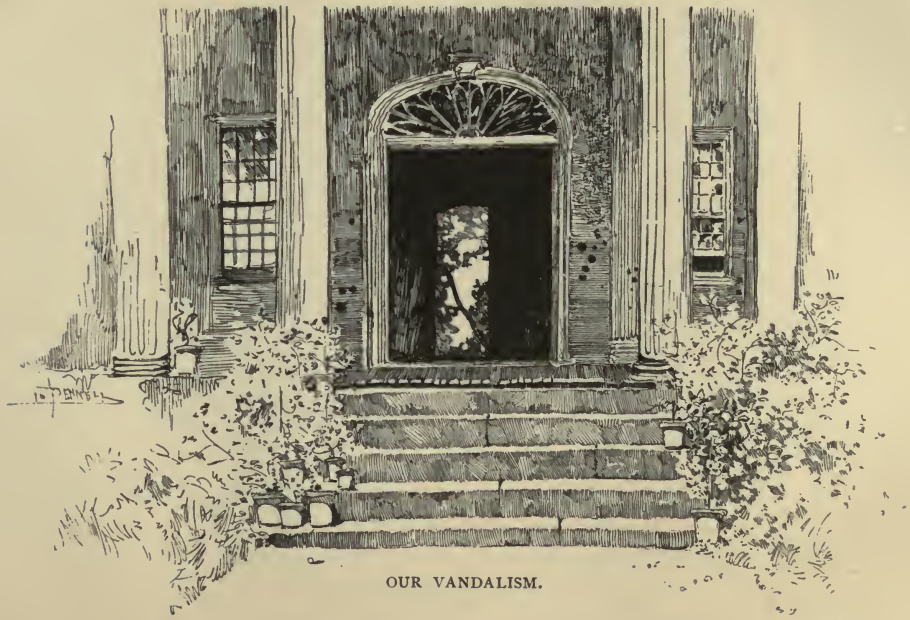
more delicate flowers, peeped out from under the taller trees. Honeysuckles twined everywhere about the mansion, taking possession of whatever they could embrace. The strange association of plants which originally came from homes which were widely distant from each other struck me very forcibly. Thus side by side were Scotch firs and mimosas, and over a vigorous Chinese alianthus twined in close contact the English ivy (*Hedera*) and the American poison-vine (*Rhus*), each appearing to thrive as though the land and climate had been made for it alone.

On the Japan quince (*Cydonia*), where the fruit was already half matured, I found a luxuriant growth of the fungus known to botanists as the *Rœstelia.* What is the subtle discernment among plants which enables even these low forms of life to recognize, and to appropriate for their own nourishment, the suitable life-blood of a higher form? *Rœstelia* is commonly found parasitic on plants of the rose family. To this the Japan quince belongs, and the fungus, even though American-born, recognized at once in a plant imported here from halfway around the globe a friend, or a servant, that would nourish it. It is

simply another expression of natural law, which operates regardless of the limitations of time or longitude. Whether the fitness here of each for each is to be expressed in terms of evolution or of direct design, it is none the less wonderful. I can see a broad system of philosophy in the teaching of Mr. Darwin and some of his leading conservative followers. The wildest guesses, too, of some of his enthusiastic disciples may prove true; but so long as guesses are promulgated as verified scientific facts, they only by so much retard the very cause they are intended to aid. Take, for example, the soberly-stated proposition of a leading writer of the evolutionist school, that among our horned animals those frontal appendages (horns) came because of the irritation produced by the butting warfare waged among the progenitors of our present horned animals. The form of logic expressed by such reasoning is "that it is easier to believe the proposition than to prove to the contrary," a mode which, in spite of its convenience, is not safe. Even the argument in favor of the statement, derived from the order of appearance of these animals in past time, does not justify the mode of reasoning employed,

or the positive, dogmatic teaching growing out of it, since there is an utter want of direct proof of the cause producing the appendages. How many unknown causes may have led to the same result? It is this toleration of *probabilities* in scientific reasoning which has done so much toward burdening our modern writings with such a load of false conclusions.

Not long ago I was under the shade of some maple-trees whose more than half-matured fruit covered the ground. Among these specimens there were some where one-half of the fruit (that is, one of the pair of winged seeds) had aborted, or failed to grow. Surely, in accordance with the old, well-established law, it must be, I thought, that those half fruits will each be larger than in a fruit where both halves have grown to normal size. I was ready to prepare a note of it for a scientific journal. However, I restrained myself until I had examined the facts fully; when, lo! the half-fruits were found to be no larger alone than when grown, as they should have done, in pairs. This is not a fable, even if it has a moral. I am quite willing to point it against myself, providing some of my contemporaries will seriously



OUR VANDALISM.

ask themselves whether they have not been as unfortunate in some of their scientific reasoning.

Before leaving Lower Brandon and its associations, I must call attention to the bullet-marks shown by the illustration on the eastern front of the mansion. These are but a partial expression of the lawlessness of our own troops. The shots were not fired in battle, but represent the ungoverned lawlessness of warfare. I do not mean to assert that our own soldiers were worse than others, but simply to say that all such acts as mutilate property, destroy life, or in any way injure an individual, unless done (as these were not) in execution of military duty, are wholly inexcusable and unjustifiable upon any pretext whatever. There is a still worse tale of vandalism to be told in connection with the same building. On one of the windows there was, written by himself, the name of each President, down to that of our martyred Lincoln. Associated with these were the autographs of many statesmen and scholars. One might suppose that such honored autographs would be secure, engraved with the diamond on the glass, against even the great destroyer Time, and that they would be both sacred

and safe among the soldiers of Freedom. But they were neither, for an unpalsied Northern arm shattered the pane and destroyed the roll.

It is sad to see how many of these old estates are changing owners, going, though, it may be, to those who will care for them and respect their traditions. After all, is there not in the pride of ancestry, in the attachment to the State, a principle which, if not in itself pure, unadulterated patriotism, is yet a sure foundation for patriotism to rest upon?

River navigation is always most uncertain. How often we were "headed off" by the wind in some days of sailing on the James it is hardly possible to say. We started to Brandon in a calm, but reached our anchorage in a furious little gale, which covered the river with white-caps in a few minutes. However, the tide was going out, and we soon found the yacht had nestled down into a soft bed of mud, where she quietly lay. That was not a hundred yards distant from where an ocean-steamer passed an hour before.

On the evening of June 22d we anchored south of the Chickahominy, and next morning ran over to photograph the mouth of this historic river.

In itself it is nothing but a good-sized stream, opening through swamps and low, pine-covered bluffs into the James. For all this, however, it has been the scene of some of the most important events witnessed in our short colonial and federal life. Captain John Smith, very soon after the location of the settlers upon Jamestown Island, set out to explore the Chickahominy region, which, though nominally under control of Powhatan, was directly governed by his brother Opechancanough, who from first to last was hostile to the whites. It was on this trip that Smith was captured, and marched from village to village by his captors, then doomed to execution, and rescued from the jaws of death by Pocahontas. This, at least, is the legend, which, it is to be remembered, came not at first from Smith himself. The romance of it never was heard of until Pocahontas became, after baptism, the Lady Rebecca. Here, too, is a strange incident in her life, which, as it has not been so fully told elsewhere, I will quote from Doyle ("English Colonies in America: Virginia, Maryland, and the Carolinas," p. 143): "It now came to Argall's ears that Pocahontas, now about seventeen years old and mar-

ried to one of Powhatan's captains, was with the king of the Potomac. Argall at once determined to possess himself of her, as a means of ransoming the English prisoners and goods taken the previous year. With this view he went boldly to Japazaus, and told him that unless he delivered up Pocahontas to the English he must no longer regard them as brothers and friends. This threat, backed up, according to one account, by the promise of a copper kettle, proved too much for the fidelity of Japazaus. Pocahontas was beguiled on board Argall's vessel, and found herself a prisoner. Other influences possibly were at work to bring about a union between the races. In the spring of 1613, Pocahontas was baptized by the name of Rebecca, and married to one of the principal settlers, John Rolfe." This was just about one year later than when, as a captive, she was the wife of one of her father's captains. Was she for a brief period a widow? One year later, Ralph Hamor, who appears to have been both educated and influential, went to Powhatan with a request for another of his daughters. I will not give the full particulars of that visit, but refer the reader to Doyle (*op. cit.*, p. 145). This same

Hamor (apparently) wrote that Rolfe "married one of rude education, manners barbarous, and cursed generation, merely for the good of the plantation."

The least that can be said is, this is a pity if true,—so much of a pity that we prefer to accept Bancroft's account of the conversion and courtship of the Indian princess. It may be that Hamor's own unsuccessful suit had somewhat soured his disposition against the Indian race and manners.

Still more history has been made for Virginia along the banks of the Chickahominy. In 1616, owing to the almost exclusive attention which was paid by the colonists to the culture of tobacco, there was not enough of corn for food. The Chickahominy Indians had promised a supply, but, seeing the straits to which the whites were reduced, refused contemptuously to deliver the stipulated quantity. This resulted in a fight, in which twelve Indians were killed and as many more captured. This for a time enforced peace; but only for a time. The Indians, a few years later, made a bloody retaliation, which threatened the very life of the young colony.

The events of 1860 to 1864 along the famous little stream are still fresh in memory. At last white-winged Peace, in the shape of trading-schooners, go up and down the Chickahominy giving Northern money in exchange for Virginia lumber. We may now well believe that its future will be as quiet as its past has been turbulent.

Prosperity came slowly to Virginia; but it did come, nevertheless. Bancroft, describing the condition of things there in 1656, says, "Virginia had long been the home of its inhabitants. 'Among many other blessings,' said their statute-books, 'Almighty God hath vouchsafed increase of children to this colony, who are now multiplied to a considerable number;' and 'the huts in the wilderness were as full as the birds'-nests of the woods.'"

I was much struck by the patriarchal appearance of some of the negroes. One, whose white head and placid countenance was especially impressive, called to mind the lines of Keats,—

> "While his bow'd head seem'd listening to the Earth,
> His ancient mother, for some comfort yet."

Nights in June, along the James, apparently

were just suited to the fire-flies. Rather, I should say, these bright little creatures were almost the only things visible after dark. They would crowd about the yacht when a mile out from land.

The bluffs, along the southern shore especially, furnished a most instructive lesson in world-making, stratum after stratum being piled each above the other in a very striking way, their horizontal position suggesting naturally enough their deposition from the water, and then, being undisturbed ever since. On the other hand, the water, I might say, gives an equally interesting lesson, but one which is not so far advanced. Approaching the southern shore, just below Hog Island, as we were hunting a channel into a little creek, we found by the lead-line that for a long distance the bottom was almost absolutely flat. "One fathom" was the report, repeated until it became painfully monotonous. The lead indicated everywhere that soft mud was being evenly deposited. In many places an oar could be run down into it several feet with the utmost ease. The bluffs were once just as the river-bed now is, and, allowing sufficient time, the future student of geology may find the now-forming mud flats above the surface of

the water, and point to them as being simply another page in the same natural history.

Jamestown Island was the next point of special interest below the Chickahominy. Mr. Brown, the present proprietor of Old Jamestown, received me with the utmost kindness, and allowed me to photograph whatever I desired to. The patience of gentlemen who own such interesting spots as this passes my comprehension. But once during the entire vacation did I meet with anything which approached a rebuff, and that was under circumstances which were fully and satisfactorily explained afterward. Yet I had no letters of introduction anywhere; and I take this opportunity of saying, once for all, that the pleasantest memories of my trip on the James are associated with the uniform kindness I received from those upon whom I called for information, or for permission to photograph points of interest. I especially desired to secure good photographs of the ruins on Jamestown Island. My want of success has been explained in connection with a similar failure at Lower Brandon.

Even the ruins of Jamestown have almost disappeared. Fragments of the old magazine remain,

and also a portion of the church tower; but these, with the cemetery back of the church, are the only visible memorials of a time and a settlement which we regret have left so few monuments. It is evident, however, from the scattered bricks and the faint indications of old cellars and the like, that the settlement covered a considerable area.* It was ill-fated from the very start. The unfortunate site was chosen simply because, being an island, it might more readily be defended against Indian attack. It is strange, however, that it was necessary for the friendly Indians to warn the settlers that, if they expected exemption from such onsets, they must clear the ground and remove the reeds or tall grass that grew on the low, swampy lands, for in these the attacking parties would surely secrete themselves.

Disease, growing out of the situation, swept away the settlers, and proved so inimical to the young colony that its abandonment as the chief point was merely a question of time. Disaster after disaster was associated with the place. About 1609 the condition of things there was

* It is more than probable that the James River now flows over what was once within the limits of the town.

disheartening. Smith, who had ruled wisely and firmly, was so injured that he was obliged to return to England. Percy succeeded him, but, owing to ill health, lacked the force of will required in one who was to rule over so turbulent a community. Doyle (*l. c.*, p. 132) thus describes the situation: "The Indians slew the settlers' hogs, and cut off any stragglers from the fort. Ratcliffe, who had gone in command of a foraging party, was entrapped into an ambush by the Indians and killed, with thirty of his men. The outward aspect of the colony proclaimed its state of anarchy and distress. Jamestown looked more like the ruin of an ancient fortress than an inhabited town. The palisade was torn down, and the gates off their hinges. Rows of deserted houses told of the mortality which had thinned the settlement, while their shattered timbers, torn and broken for firewood, bore witness to the sloth and thriftlessness of the survivors." Abandonment of the whole place and embarkation for more promising shores were seriously considered, and only the arrival of reinforcements, with fresh stores and with *provisions*, prevented the execution of this purpose. Then, several years later, came

the first massacre by the Indians, in which three hundred and forty-seven settlers were slain. This assault was directed, if not led, by Opechancanough, of whose subjects, it will be remembered, twelve had been killed and twelve captured in a previous encounter with the whites. In 1644 the same inveterate foe instigated another massacre of the whites, in which three hundred perished. Then, among its other reverses, Jamestown was burned in the struggle between Bacon and Berkeley. Jamestown was abandoned as the capital, and Williamsburg named as its new location. (In 1696?)

The most interesting ruin of Old Jamestown is, of course, its church tower. One marvels that a church so large as this was (judging from the ruined tower) could have been erected at so early a period in colonial history. It is to be remembered that to the men of those times (at least, to the better part of them) worship was something more than a luxury. I did not measure the tower (as I should have done), but should say it had a square base of about twenty feet. The remains still rise say twenty-five feet, and are entered by a fine large doorway. The bricks, of course, were brought from England. The first question which

naturally suggests itself is: Why should a spot so full of sacred and patriotic memories as this is be allowed to fall into ruin, and to be overgrown by weeds? Or, worse still, why should it be allowed to remain so? Alas for mankind! The proprietor apologized for the appearance of the ground, and said, "I would gladly open it up and uncover the graves, were it not for the fact that to do so would simply be to make them more accessible to curiosity-seekers. Men come to the old tower and carry off the young ivy shoots; they break the tombstones, and nothing is so sacred as to prevent its destruction." From what I saw, there could be no doubt about the truth of his statement.

Through the gateway of the tower we passed into the old graveyard, over what was probably the site of the body of the church. Here and there an opening in the rank underbrush and weeds revealed a tombstone or sepulchral slab, and on some of these an inscription may be made out. Time has dealt harshly with the lettering, and in some cases almost destroyed the characters. There is a remarkable instance of the effect of tree-growth, furnished by a buttonwood tree

(*Platanus occidentalis*) which stood by the side of a grave. Since the time of burial this has grown into a very large tree. Meanwhile its lateral growth encroached upon the horizontal slab covering the grave, and also carried it upward slightly. Hence the stone became imbedded in the base of the tree, and was also subjected to a considerable vertical strain. The two forces fractured it. Mr. Brown informs me that human agency aided in its further destruction afterward. There was no date to indicate the age of the grave.

From other graves I copied the following inscriptions:

"Under this Stone lies interred
The Body of
Mrs. Hannah Ludwell,
Relict of
The Hon. Philip Ludwell, Esq.,
By whom She has left
One Son and Two Daughters.
After a most exemplary Life,
Spent in chearful Innocence
And exercise of
Piety, Charity, and Hospitality,
She Patiently submitted to
Death on the 4th Day of April, 1731, in the 52
Year of Her Age."

Another reads:

"Here Lyeth William Sherwoo—d, (?)
That Was Born in the Parish
of White Chappel Near
London. A great Sinner
Waiting for a Joyfull
Resurrection."

The colony was then, at the time of Mrs. Ludwell's death, more than a century old. This further shows with what rapidity even our supposed imperishable memorials are effaced by time. It raises the question, also, Was this the first cemetery the colonists had upon the island? It also makes clear that removal of the capital from Jamestown, in 1696, did not depopulate the place, however much it may have lessened its importance. Doyle has correctly stated that the life of the Virginian of that period was, from choice, in the country, rather than in the town,—his plantation interests demanded his presence.

There is probably less than an acre inside the brick wall surrounding the cemetery. It is incomprehensible that the State of Virginia should not have made some provision for the care of these grounds. Some other States would have pur-

FRAGMENTS OF OLD MAGAZINE, JAMESTOWN ISLAND.

Page 85.

chased the site, and established such a custody there as would have effectually protected the place.

A few hundred yards above the church tower, along the bank of the river, we came upon what tradition calls the "old magazine." I at first thought I had reason for doubting that this had been its purpose. However, a closer examination showed me that tradition was probably correct. The vault and the thickness of the walls make this the most plausible theory. The illustration shows that the building is now almost wholly undermined by the water. A cypress-tree, still farther up, stands now well out in the water. This, too, the illustration shows. Yet, some thirty years ago, the road, I was told, ran by that tree; hence so recently as this the magazine must have been well inland. These data serve to show with what rapidity the river is encroaching upon the land.

Williamsburg was laid out with such great anticipation of its future, and in such extreme loyalty to the king, that its ground-plan was that of the letter W. However, it failed to meet the hopes which were formed.

The long-cherished idea of a college for the colony was realized there. Doyle (*l. c.*, p. 273) says of it: "Meanwhile, the college was advancing, and before Nicholson's term of office had come to an end two sides of the quadrangle which the building was designed to form were completed. A few years later, however, a fire undid all that had been accomplished; and when Beverly wrote, in 1720, though the damaged buildings had been restored, no further progress had been made."

This institution was first contemplated in 1619. The Indian massacre, which so shortly followed, put an end to all consideration of the project at that time. In 1660 grants in its behalf were made; but it was not until 1695 that it was actually chartered. Along with the charter the College of William and Mary received, through the intercession of the Rev. James Blair, a small endowment also. In 1776 it was made surveyor-general of Virginia, and thus received about five thousand dollars a year from fees. This source of income was swept away by the Revolutionary war. Washington was examined here, and received from the college his authority as a deputy surveyor.

The objects of the college were specified in the petition of Blair for its charter. "They were to be Greek, Latin, Hebrew, Philosophy, Mathematics, and Divinity." Of course this assumes that its chief function was in the interest of the Church. It may be interesting to note its influence. Bishop Meade ("Old Churches and Families of Virginia," vol. i. p. 28) writes of this College of William and Mary in 1811: It "was regarded as the hot-bed of French politics and religion, and I can truly say that then, and for some years after, in every educated young man in Virginia whom I met I expected to find a sceptic, if not an avowed unbeliever." From this we may infer that, so far as the dogmas of religion were concerned, its mission remained unfulfilled.

Quoting again from Doyle (*l. c.*, p. 274): "Yet we may well doubt whether the college did much for the colony. About thirty years later one of its own Fellows pithily described it as a 'college without a chapel, without a scholarship, and without a statute, a library without books, a president without a fixed salary, and a burgess without electors.' The College of William and Mary had but a small share in training that generation of Vir-

ginian statesmen who left so deep an impress on the history of the world."

Of its subsequent history we prefer to say nothing, save that an institution which lost a large part of its government support through the Revolution in 1776 would appear to have still some claim on the Union which grew out of that struggle.

Passing Hog Island on our way down, we ran in along-shore, and spent Sunday at anchor near Ferguson's wharf, which is nearly abreast of the Point of Shoals light-house.

The bluffs looked very inviting, and I expected to find something of interest there. We had seen a blue stratum exposed at several points along the river. Here it formed the base of the bluffs, and was very suggestive of tertiary deposits, which I had seen elsewhere. However, Lew anticipated me in the discovery. He soon returned to the yacht with the news that there was no end of such things (coral and fossil shells) on shore. I suggested that the coral might have come there as ballast from the West Indies; but Lew scouted the idea: "There is too much of it for that." So we went ashore together. The blue stratum was

full of shells (pecten and its usual associates). Here and there the tide had undermined it, and masses fell to the tide-level, where the shells lay in profusion. The coral revealed itself just at the tide-line, and not in the bluff, but out in the water. So far as we could see, it was there as an immense mass, from which we broke off a fragment weighing about two hundred pounds. It never came there as ballast. As to its origin and its extent geologists may decide, if, indeed, they have not already done so long since. We—that is, Lew and I—made considerable collections of these interesting things for the Philadelphia Academy of Natural Sciences.

June 25th gave us a strong head-wind, which, with the tide against us, made the run to Newport News a tedious one. No stop was made, as we had "done the place" on our way up the river.

Newport News appears to be one of the spots created for some great ends. Its high situation indicates easy drainage, and, so far as that goes, freedom from many diseases which curse some neighboring towns which are built on lower land. The great depth of water along-shore, its accessibility (being free from ice the year through), and,

above all, its being midway between the lands of wheat and of cotton, are factors in its destiny which indicate a great future for the place. Add to these the fact that a strong railroad company is erecting buildings so large, so costly, and so permanent that it cannot afford any failure on the part of the place. It is, besides, quite as easy of access as Norfolk, and has advantages which the latter does not possess. Northern energy and capital had "taken hold," and many "modern houses" were contemplated, if not actually contracted for. Most of the buildings erected when we were there were of the class that suggested the name "Shanty-town" naturally enough. Their temporary character, the inmates, and the proportion of bar-rooms were strong reminders of some new Western towns I had seen; but, like them, Newport News bids fair to grow into something better. The push and energy of the new West, however, were in striking contrast when placed alongside of the ways of the old South. It is strange indeed that this, the first river region of the continent actually settled in by an English-speaking population, should be about the last to feel the awakening of a real active life. Were I a young

man seeking a home, with the privilege of choosing between the West and the James River region, I should decide in favor of the latter. I offer no advice to others in this matter, but what I have written represents my own views upon the subject. I make the statement, too, with a full knowledge of the unhealthfulness of the region; but remember, at the same time (leaving Indiana, Illinois, and portions of Ohio out of the question), that the Juniata Valley of this State (Pennsylvania) was once as bad as the valley of the James is to-day.

The name Newport News is still full of stirring memories. For one short day the victory gained by the "Merrimac" ("Virginia") awakened hopes among the Confederates which must have been bright,—the more so as all that had been expected of the new ironclad was far more than realized in her combat with our wooden vessels. These hopes were but bright illusions, for the very next day the "Monitor" turned the tide of victory against the soldiers and the sailors of the South.

Besides the memorable naval battle associated with Newport News, it and the whole northern

shore were closely connected with our campaigns against Richmond; just as Norfolk and the southern shore were with the defensive operations going on at the same time on the part of the Confederates.

Fortress Monroe and Hampton.—We anchored on the evening of the 25th of June in Hampton Creek, among "oyster-pungies" and fishing-canoes. Negro life appears here, I may say, certainly in a most characteristic form; possibly, too, I may add, after considering all its obstacles, in a most promising form. Evidently very much of the old spirit—the war of the races—is still found in certain quarters in Hampton. "Nigger, light that lamp!" was the order given in a store of the village to a colored man of the establishment. The fact that it was silently obeyed would probably indicate that it was neither unusual nor unexpected. I will not add in which of the churches, *I was afterward told*, the white gentleman held a conspicuous place. However, time is a sovereign cure for many diseases. Probably in another generation such specimens of linguistic pathology will be studied even there with about the same interest and disgust as that with

which a microscopist of to-day examines a section from any other festering sore.

As I watched the water in the night from the deck, one of the "nettle-fish" (jelly-fish) passed by, slowly drifting out with the tide. It was brilliant enough to be seen as a ball of phosphorescent light. We found them so abundant as to be nuisances. In Mob-jack Bay, north of York River, bathing-houses are built for the express purpose of protecting the bathers against them.

On the night of the 26th of June we had a settled rain. Even if there is no inspiration to me in the patter on the deck, it is always pleasant. In the "Marble Faun," Hawthorne makes his count say, "The sky itself is an old roof, and no doubt the sins of mankind have made it gloomier than it used to be." It was a leaky roof that night, in all truth, but our deck was better than the roof; so that we had none of the count's gloomy philosophy in the little cabin. The next morning it was still raining, but I could look out from my "ten-by-twelve" home and commiserate the negro fishermen as they went by in their open canoes. So on down through the various grades of comfort one may go. I have no doubt that

yon negro, clad in oil-cloth, cares nothing for us, but is extending his sympathy on down toward his poorer comrade, who is now passing the point below in a very dingy old canoe, and who has not one single stitch of oil-cloth between himself and the rain. Men, in comparing, seldom care to go higher than themselves. It is best that they should not in anything but virtue.

But, take it "all in all," the life on the water is a healthy one. In spite of rain and wind and soul-tormenting calm, hardened hands and sun-browned face, I have enjoyed it all. It is simply a return to first principles,—a vagabond life, if you insist upon so considering it, but still one which most men some time long for. June 1st I came on board my boat painfully conscious of having nerves and aching points all over my body. But after a month of aquatic life I found muscle had the nerves in subjection, and not a single pain interfered with perfect peace of mind or of body.

I have looked in vain through Bacon's "Wisdom of the Ancients" for an interpretation of the fable of Antæus, the earth-born giant. This enormous being was said to have been monarch of Libya, and a son of Neptune and Terra. I have

often wondered why the wise Baron of Verulam allowed the conflict between the giant and Hercules to pass unnoticed. His "Novum Organum" supplied, so thinkers say, the pass-key which opened all the dark chambers of mind and matter. I believe, however, that no single thought as to what the fable might mean ever entered the lord high chancellor's dream. Great truths usually become plain when the world is ready for them,—at least so nearly ready that, when started, they can take care of themselves. Modern civilization had not in 1609 A.D. brushed away the last particles of soil which clung to man. He was still of earth, a little earthy, and not wholly unnatural. He, too, as well as Antæus, remembered his ancient mother, knew that he was fashioned from the dust, and drew fresh strength whenever he pressed the dear bosom again. The little pigmy cares, to Antæus, were only playfellows that entertained him as he lay full-length, absorbing might from the greensward or leafy bed. But these same associates, with whom we dwell not only by day, in business hours, but at night, in the renewing and strengthening hours, have grown to be the Hercules lifting us up so high

from earth that neither hand nor foot nor mind can often touch the soil whence all our early strength came. Only once in a great while do we get down to our fount of life and vigor; and then we leave it strong or weak as we have lingered there or hastened rashly away into the grasp of Hercules again. How much these summer-loitering hours with earth and sky and water would renew our youth if we would allow our minds and bodies a holiday ungrudged!

When a man, already rich, comes to endure labor, through the heat of summer and through the cold of winter, simply for the gain it brings, then he needs a force to drag him off for a season, to isolate him from the world, while he can contemplate some high ideal in art or in science, in philanthropy or in religion.

The recent address of Herbert Spencer in New York came with great power from one who knew so well, experimentally, the evil effects of overwork. He told us,—

"In America, as in England, work with many has become a passion. The savage thinks only of present satisfaction, and leaves future satisfaction uncared for. Contrariwise, the American, eagerly

pursuing a future good, almost ignores what good the passing day offers him; and when the future good is gained, he neglects that while still striving for some remote good.

"What I have seen and heard during my stay among you has forced on me the belief that this slow change from habitual inertness to persistent activity has reached an extreme from which there must begin a counter-change, a reaction. Everywhere I have been struck with the number of faces which told in strong lines of the burdens that had to be borne. I have been struck, too, with the large proportion of gray-haired men; and inquiries have brought out the fact that with you the hair commonly begins to turn some ten years earlier than with us. Moreover, in every circle I have met men who have suffered from nervous collapse, due to stress of business, or named friends who had either killed themselves by overwork or had been permanently incapacitated, or had wasted long periods in endeavors to recover health. I do but echo the opinions of all observant persons I have spoken to, that immense injury is being done by this high-pressure life,—the physique is being undermined.

". . . Old Froissart, who said of the English of his day that 'they take their pleasures sadly, after their fashion,' would doubtless, if he had lived now, say of the Americans that they take their pleasures hurriedly, after their fashion. . . . Nor do the evils end here: there is the damage to posterity. Damaged constitutions reappear in children, and entail on them far more of ill than great fortunes yield them of good. When life has been duly rationalized by science, it will be seen that among a man's duties care of the body is imperative, not only out of regard for personal welfare, but out of regard for descendants. His constitution will be regarded as an entailed estate which he ought to pass on uninjured, if not improved, to those who follow; and it will be held that millions bequeathed by him will not compensate for feeble health and decreased ability to enjoy life."

Holiday grew out of holy-day. This originally meant a day which was perfect or excellent. The history of our word for such a season of recreation hardly more clearly suggests the sacredness of rest, than it does the godliness of strength which springs from the holiday. There is a sin against

the body which is unpardonable, because it leads to death, and so destroys the form in which creative energy has thus far culminated. Recreation once signified restoration to health.

Hampton Roads and the region around is the veritable historic centre of the country. An accident gave the name, Point Comfort, to the sandy point where Fortress Monroe now stands. Driven by a heavy storm in July from the Piankatank, Captain John Smith found his first secure shelter under its protection. Hence the name, inspired by gratitude. But how often since has the same safe anchorage awakened similar emotions!

The plans for French naval co-operation during the Revolutionary struggle were made here before the advance on Yorktown. In 1813, after being repulsed at Norfolk, the British vented their rage upon the unprotected village of Hampton. During our recent war the possession of Fortress Monroe decided in our favor most important events. Indeed, it is hard to say what might have followed had this position fallen into the hands of our adversaries. A glance at the map will show at once how essential to us it was. There might have been no iron-clad engagement

at Newport News, but, instead, Washington and Baltimore would have been exposed to immediate attack from the "Merrimac." Here the first slaves were landed; and in Fortress Monroe was issued General Butler's famous order which declared slaves to be, as property, "contraband of war,"—an order that removed the curse under which for two centuries the African race had groaned on our *free* shores.

To speak of that marvel of hotels, the "Hygeia" (under the very guns of Fortress Monroe), is simply to repeat what is already well known.

In the village of Hampton is St. John's Church, one of the ecclesiastical landmarks of the country. It was built in 1658, was in ruins during the war of 1812, and used then by the British as a stable, and burned in 1861, when General Magruder fired the town to prevent its being used by the Northern troops. The walls are built of bricks made in England, and seem as though they might still outlast the centuries, notwithstanding the trials they have endured. I am indebted to the present rector, Rev. J. J. Gravatt, for a photograph, showing one of its sides, in front of which is a group of Indian students from the Hampton School.

So much of history of the early and the late events of national life can seldom be found crowded into so limited an area. Yet I have only alluded to some of the striking outlines of all that has been witnessed here.

Still more important history—*at least, not less important*—is being made now on the same ground, but under the quiet rule of peace. Less obtrusive by far than the stirring events of the past, what is now being done toward educating the Indian and the colored races must leave a trail of light in the future. It will yet be reckoned among the first clear, shining acts of justice toward those with whom our dealings in the past have been dark as infamy. If we credit the Hampton School with no higher results than those of an experiment, thus far successful, we cannot over-estimate the importance of what it has accomplished. What is to be done with the Indians? Probably Hampton and other like schools will soon teach us.

Its great mission is with the Negro. A curse follows a crime closely; and the curse is looming up dark and threatening. If slavery was once fitly characterized as the black plague, what shall we say of the ignorance it engendered among

those who were the victims? Emancipation, irrespective of its righteousness, became a war measure necessary for the salvation of the country. With it came the right of suffrage, as naturally as sunshine comes with the sun. But a vote is a vote, whether cast by an intellectual giant or by a mental dwarf, and has as much weight in one case as in the other. In this is the well-recognized danger; for the perpetuity of republican government is assured only as long as the majority is intelligent as well as honest. Couple these evident truths with the fact that the rate of increase is vastly greater among the uneducated black race than among the more cultured whites. This is the whole truth and the whole danger, and this, then, the curse: that those whom we once enslaved and degraded threaten to subvert even the power that at last invested them with the dignity of a full citizenship. Shall the vigorous free black, with his enormous rate of multiplication, sometimes vengeful, usually injudicious, come to doom finally the very institutions which, as a slave, he has already so greatly endangered?

Hampton School demands not only national aid in its projected work, but national gratitude as

well. Every educated colored man it sends forth is a pledge to the future. Considering the difficulties which lay in the road of the institution, it is no longer an experiment, but an astounding success.

Copying from the official report of the school, which bears date of June 30, 1882, I find the following statements of Mrs. E. C. Dixon:

"Of the 389 graduates and 37 *Senior* undergraduates—those who left before the end of the third year—entered in the new 'Record-Book:' (males, 280; females, 146; total, 426), I have learned that 326 have engaged in teaching, and that more than *three-fourths* of the *whole—i. e.*, 319 —have made teaching their vocation since they left the institute; three are licensed preachers, as well as teachers. Over ninety per cent. have engaged in teaching. Of the whole number 27 have died; 2 became insane; leaving 397 to be 'kept track of.'

"Taking those engaged in teaching: Of these,

"276 have taught in Virginia.
46 " " " North Carolina.
14 " " " South Carolina.
16 " " " Maryland.

"5	have	taught	in	New Jersey.
5	"	"	"	Georgia.
4	"	"	"	Alabama.
4	"	"	"	Louisiana.
2	"	"	"	Florida.
1	has	"	"	Tennessee.
1	"	"	"	Missouri.
1	"	"	"	Kansas.
1	"	"	"	Delaware.
1	"	"	"	Ohio.
1	"	"	"	Vermont.
1	"	"	"	Nebraska."

One can hardly help noticing the overwhelming proportion of those students who went South, where they could render the most signal service. Such a showing leads inevitably to the conclusion, that, together with the knowledge imparted, the institute must keep constantly before its students what is their manifest destiny and their highest moral obligation.

We owe support to a school that does so much toward removing the national danger from ignorance, and substitutes for it, hope and high possibilities.

Besides the mere matter of education, in its common acceptation, we must also remember the trades which the negro has a chance of learning

there, some of which, at least, he can learn in very few other places. Hence the tendency of the work done in the school is not only to place the pupil on a respectable plane of life, but to enable him to hold his position in future. The full import of this can be understood only when it is remembered that over a large portion of the United States there are trades' unions from which the negro is systematically excluded, and by which, so far as may be, he is prevented from acquiring a trade. I am simply mentioning the fact, not criticising it. In truth, bad as the principle may be, it is in reality no worse than Wall Street gambling in the property of others, or than a wheat corner in Chicago, which speculates in the daily bread of the laboring man. Neither of these is worse than the others, for all spring from the law of self-protection first, and then grow into inordinate selfishness at last.

How well the Hampton work is done appears from the following extract, taken from the memorandum-sheet accompanying the "Report for 1882:" "Our printing-office, book-bindery, harness-, tin-, wood-working, and shoe-shops, will gladly compete for work wholly on the merit and

the prices of the articles made." [Signed, S. C. Armstrong, principal.]

Two large farms and a saw-mill, besides the above-named industries, give to the willing and energetic students further means of supporting themselves while receiving their education.

In a volume like the present it would be out of place to go more into detail than we have.

The Indians, of whom there were ninety-two in attendance during the year ending June, 1882, appear to be mainly, or in part, at least, supported by the government,—that is, the United States government pays one hundred and sixty-seven dollars apiece for each of one hundred Indian lads. This does not include, or meet the expense of tuition, which costs, besides, about seventy dollars a year for each student.

From the report of Miss Isabel B. Eustis, I quote the following pithy passages: "The success of the education of our Indians turns upon the conditions which await them on their return to their homes. We believe in their ability to stand in an ordinarily healthful moral atmosphere. The false conditions of life which exist in an Indian agency, the difficulty of obtaining healthful sympathy or wise re-

straint make their task of stemming the current of savage life an almost superhuman one. The girls have no foot-hold on which to attempt to breast it. The boys have their trades, and can separate themselves from their old homes and their camp life. There is absolutely no position of dignity to which an Indian girl can look forward after three years of training, with any reasonable confidence. There is nothing for her but to enjoy or suffer the present as best she may." . . . "Should the United States government ever find it possible to keep their treaty with the Sioux tribe, which provides for a school and suitable teacher for every thirty children in the tribe, the way might open for the solution of the knotty problem." Such schools located among all the Indian tribes "would give honorable work, full of inspiration to our best Indian girls." Just one extract more to show the other side,—the absence of such suitable employment. This I take from the report of Lieut. George Leroy Brown: "The girls must be prepared to stand up against a 'sea of trouble' and temptation."

There is one more aspect to this question of practical philanthropy which is working out a solution of so many social and political problems

and dangers. Those who lead in such movements are, in a large number of instances, ladies,—women of character, culture, and refinement, who endure the work and the sacrifices connected with it from the very best and purest principles. Yet to these very pioneers our leading colleges, in most instances, deny the advantages of an education which would be cheerfully accorded to the pupils of those ladies. It is useless to decry this as an act of flagrant injustice; just now our eyes are blinded when we look at the question. But some sort of moral revolution will come,—nay, is coming,—by which the scales will be removed; and we will then ask, how could we ever have been party to such a wrong?

It is right that the Negro or the Indian should be admitted to the best college course, when prepared for it. But how can it be right that his teacher shall be deprived of like advantages?

Do the ordinary avocations of daily life, where the sexes mingle without restraints, justify the fears of our conservative college rulers? The day is probably not far distant when public institutions, instead of being judged by what they think of themselves, may be measured by their

aggressive power for the widest usefulness; and when neither age, respectability of teaching force, well-equipped laboratories, nor crowded library shelves will atone for the sin of narrowness.

The Hampton National Home for Disabled Volunteer Soldiers is well worth visiting. Unfortunately, the limited time at my disposal prevented me from doing so. A view of the grounds, as one passes the water-front, leaves the impression that all possible is being done for the inmates.

Wind and weather often interfere with the plans of yachtsmen. My own experience did not in this respect differ from that of those who sailed before me. So with this explanation I must leave the large remainder of interesting facts concerning this most noteworthy region untold. What Fortress Monroe now is need not be stated, for others have done so more fully than I can do.

A delightful, easy southerly wind carried us up the shore, past Back River, which was once the scene of General Magruder's military operations. The ground is now devoted to labors more peaceful, more odorous, and more useful. An establishment for the extraction of oil from the small fish known as "moss-bunker" stands in sight from

the bay. These fish swim in schools, and may be recognized by the dark color they give the surface water. The refuse remainder, left after extracting the oil, is ground up and forms the basis of a fertilizer which is in considerable demand by agriculturists. That the business is lucrative may be supposed from the vast number of vessels engaged in the capture of these fish. Almost every inlet of considerable size along-shore has one or more "fish-mills," where "the catch" is "worked up." How long the industry will last at the present rate of destruction of the fish is a problem which we cannot yet solve. Those engaged in the business did not mention to me any scarcity of fish. Indeed, at Newport News the James River appeared to be dotted over with the dark schools. Between catching oysters in winter and the fish in summer, these amphibious beings, negroes and poor whites, manage to eke out a living, such as it is. The negro workers I saw at one fish-mill, which shall be nameless, were as degraded a looking lot of human beings as I ever met. But for the fact of their speaking English one might have supposed they were fresh from the "Guinea Coast."

It is a puzzle to me to understand how a man can labor amid the filth, the stench, and the associations of such an establishment, and still retain anything of purity, though I know some men who do; nevertheless, I cannot understand it.

As noon of the 28th of June approached, we rounded Too's Point light-house, on the York River, and looked long and eagerly before we saw Yorktown. A mere glance at the bluffs, which front the river, would leave on the mind of an observer the impression that these and the ground back of them were an ideal battle-field. There is very little concerning the place that remains unsaid. If I were obliged to offer an opinion at all concerning the town, I should say that neither fire nor war could damage its appearance very much. Time was when I regarded the surrender of Cornwallis as due entirely to the courage of our troops. I am now inclined to think he wanted to get away from the place badly enough to make almost any reasonable sacrifice. I have no doubt he would have left earlier had he found it possible to do so.

The evening of June 29th found us anchored in Antepoisen Creek,—that is, in the hook made by

the northern shore, which is guarded by Rappahannock Spit light-house. What evil genius inspired those who named Mob-Jack Bay, Sting-ray Point, Antepoisen Creek? Our run had been only about thirty-five miles. The wind was fair, though most of the way very light. So far as I am able to say, I think that, during the month of June, morning and evening can generally be depended upon for a breeze from some quarter in Chesapeake Bay. There is almost as certainly a trying noon calm, during which the sun beats down with a most intense fervor. Squalls, to be dreaded, often come during June and July, and their usual time of appearance is towards evening. Our harbor in Antepoisen Creek was another of the many beautiful ones, such as we had hitherto found. Near its head we were completely landlocked and had about two fathoms of water under the bow,—just such a place as one can sleep most soundly in. There was no fear of anything.

A brilliant shooting-star darted across the sky in the early evening, and after it there were several others, but none so bright as was the first.

Lying on the ground, or on the deck of a vessel, one becomes acquainted with the sky. The

longer he looks the more unfathomable do its depths appear. The most distant stars seem on the hither side of space, shining out clear of their background, and leave on the mind the sense of a great void behind them, dark or blue from its vastness. A night without such meteors is rather rare, but we are so taken away from them by fatigue, or so shut out from heaven by slate and shingles, that we miss seeing their fiery trails when they journey inside the limits of our vision, and thus we think them something unusual. Cuthbert, the shepherd-boy of the northern English lowlands, fancied, when he saw such stars sink into the sea, that they were angels carrying home the soul of good Bishop Aidan. Like all who led his life, the lad had never come to think of the stars simply as of lanterns. He had watched them through all his eight years, and had made them his friends,—remote to be sure,—friends, too, that sometimes hid their faces behind the clouds, when he would fain have seen them; but still they were friends with some good mission toward such simple folk as lived in those trustful times. I have companions who have sought wisdom in the books until they are pale, and who have lost

the elastic step one should have until his head is silvered. They can name each star and tell its distance from the earth in miles, but they have never laid down and gone to sleep while looking up at them, and wondering, not studying, how big those stars were. I think these persons have missed an element of education which would send them back to work wiser and better and healthier for their gazing.

A zoologist could employ his time well on the boat some days studying the habits of the animals. Swallows come and sit on the gaff, when far away from land. That is not strange; but that anything so small, and withal so hated, as the potato-bug should venture miles away from shore, and then stop on a vessel, is both strange and reckless. We simply started them on their way,—with the hope, however, that they might not live to plague the farmers of the Eastern Shore. Off the Piankatank, as we went down the bay, my friend, Mr. J., shot a loon. Dissecting it, he found in the stomach, undigested, a small, slender fish, whereof my other friend, Dr. Bean, of the Smithsonian Institution, writes, as follows:

"The fish which you sent me on the 28th, and

which I return now, is *Siphostoma fuscum* (Storer, Jordan and Gilbert),—the common pipe-fish. It frequents our northern coast southward to Virginia at least; northwardly its range is unknown, but it extends probably as far as Maine.

"In the pipe-fishes the dorsal fin is the principal propeller, and the body is held obliquely in swimming; they swarm in the sea-weeds alongshore, feeding upon minute crustaceans and probably small detached fragments of Algæ. In some species the female is much deeper-bodied than the male, and in the breeding season is more brightly colored. The male has only a rudimentary anal fin, and behind this is a marsupium, or egg-pouch, into which the eggs are received from the female. The young are developed before they leave the paternal pouch. The brood is usually large, considering the size of the parent.

"The graceful movements of the pipe-fishes, together with the peculiarities of their embryology, make them extremely interesting animals for marine aquaria. The dorsal is usually oscillating with an undulatory motion, its margin describing the form of the letter S. Food is sucked into the bill with considerable force. The gill-openings

are minute and situated about on the median line of the body; they can be wholly closed by the operculum, and thus doubtless facilitate the inward movement of objects desired for food.

"The number of species of pipe-fishes on our coast is rather large, the Southern States having a much larger proportion of them than the Northern. The whole number of recorded species in the known seas is upward of one hundred and twenty. They prefer warm seas, sometimes entering fresh waters.

"In some cases the marsupium of the male is abdominal instead of being behind the anal. We have not yet heard of such species in our waters."

"Crabbed" is a word the meaning of which I should enlarge, and say it is a senseless pugnacity and a disposition to attack anything with or without hope of success. This I would deduce from observations at headquarters. Lew brought a crab to the surface, which, though the well-baited hook was less than a foot away, was, nevertheless, attacking the lead sinker with all his might. Probably on reaching the bottom the sinker had fallen on his back or touched one of his numerous appendages, and thus excited his wrath, or he

may have attacked it on the general principle that it was an intruder. When the water was clear and quiet, looking over the side of the boat, we saw another wrestling with a fish larger by far than itself. Their odd projecting eyes are sharp enough, and ever on the watch for something to attack. The first approach of an enemy causes the claws to rise in aggressive as well as defensive warfare. The crab is a mail-clad bully. Probably the fact that he is mail-clad, and hence more than a match for all his familiar associates, makes him reckless in attacking even those with whom he is not so well acquainted. He does not know that a falling brick would crush him, armor and all.

Crabs serve to reinforce some ideas one occasionally gets of men,—the less brains, as a rule, the more pugnacious,—that is, granting that all stomachs are equally good. I am persuaded that an angel would quarrel when suffering from dyspepsia.

Though we had a gun on board, no song-bird was shot, or even fired at, from my boat. We had every morning in the early part of our cruise what was to me a sacred concert. Blackbirds, robins, sparrows, even crows and fish-hawks,

joined as best they could in the chorus which was sure to bring the sleepers on deck. Is a man the worse for having emotions? Less than a year ago a gentle mother sat with a suffering infant on her lap, and she promised the babe that when summer came, and it was well, the birds would sing to it. The promise was kept sooner than any one dreamed it would be, for only a few days later, before even a crocus was above the ground, they did sing a sweet song close by where the tiny form lay at rest. I believe the spirit listened from beyond the clouds. Since then their notes sound to me so much like music intended for the best part of man that I always stop to listen. At all events, the soul capable of such enjoyment is somewhat the purer for being gratified.

On June the 30th we started early, hoping to make the harbor in the mouth of the Patuxent. This was only about forty-five miles in a direct line. Knowing the uncertainty of the wind, we desired to take every advantage that time could give us; hence an unusually early start. At first we had a fair wind, and plenty of it; it was right "astern" also. Before we reached the Great Wicomico it was "dead ahead," and when we fairly opened the

mouth of the Potomac there was a calm. This at first was simply an annoyance. We supposed it was merely one of the lulls we had so often experienced before, and endeavored to comfort ourselves by such philosophy. Hour after hour passed, but no wind came. The tide was carrying us down and across the bay,—just the direction we did not want to go. Then annoyance deepened into exasperation (senseless, to be sure), as the little yacht was tossed like a feather on the heavy swell. There was not a trace of air. Never before did I so fully realize what was meant by a dead calm. With each lurch of the boat the blocks creaked and the sails flapped heavily from side to side. The heat was more than the word intense implies; it was scorching, and the glare from the superheated deck was almost unendurable. What was the pleasure in yachting? None, under such circumstances. So that entire day passed. Exasperation gave place to,—well, call it fear. "All men are cowards at times," and it only renders matters worse to add to the weakness of fear the sin of prevarication.

All day the barometer had been going down. It was certain that a storm was impending. East,

south, and west were filled with heavy clouds. We could hear the heavy thunder, and see the vivid lightning flash across the sky. Would there be enough of wind before the squall burst upon us to enable us to make some harbor? Or must we too stand the onset in our little boat out in the middle of the bay? These questions were never uttered, though I am quite sure they were inwardly asked by both Lew and myself.

Later in the afternoon a slight wind was seen coming over the water towards us from the mouth of the Potomac. It came so slowly that we feared it would die away before reaching us. After what appeared like an age it began to be felt, first fanning our cheeks, then filling our sails; and in a few minutes more we were quietly slipping through the water, back toward Great Wicomico, which we had passed early in the morning. This, to be sure, was not where we wanted to go, but choice was lost in thankfulness to reach any harbor. In two hours, just as darkness had fairly settled around us, we let our anchor go in a quiet arm of the Great Wicomico. It was a lovely, secluded little bay, in full sight of one of the greatest fishing establishments of the Chesapeake,—a perfect,

"restful" place that we had found for the morrow, which was the Sabbath.

During the night the storm came; and, as we heard the wind whistling fiercely through the rigging, and felt the yacht rocking on the waves, we thought even kindly of the breeze which had carried us away from our destination, but into perfect safety.

I have related the experience of that day to show the most dismal side of yachting by sail. If one has a long purse and no end of generosity, if he is willing to keep a floating home for sailors, to be simply a passenger on his own boat, to go when and where his sailing-master directs, then a large steam-yacht is much better. I was yachting under other circumstances and with other objects in view; and, furthermore, as the season wore along, I gradually came to prefer risking my boat under my own directions than to accept what greater skill the presence of a sailing-master might bring. I will simply add: yacht-owner, learn the rudiments, go slowly, but command your own craft. If there be any manhood in the sport, that will bring it out. If there is not, then it were better abandoned.

I must, however, say this: if one can find another Lew, then he is fortunate. Lew is equal to any emergency likely to occur on a small craft. Entering the harbor I have described, our boat, though drawing only a little over two feet of water, grounded. While I was off in the yawl-boat hunting the channel he jumped overboard and pushed the yacht into deep water. By the time she was fairly floating I had found the channel, and we were soon in our Sunday harbor.

On Monday, July the 2d, we were off, and with a stiff breeze astern soon passed the mouth of the Potomac. I do not know whether, or not, this river is usually treacherous, but it has so happened, that both my friends, with whom I have conversed, and myself have been, as a rule, baffled there, by the wind. By ten o'clock in the morning we were safely on the northern shore, and soon after two o'clock were at anchor back of Solomon's Island, in the Patuxent.

We had passed during the morning from one State into another. Was I mistaken in supposing that I saw greater thrift north of the Potomac? A few years ago it would have been argued that the difference was due to the greater dependence

of Virginia on slave labor,—that, though Maryland was still a slave State, yet it was not absolutely wedded in all its life habits to the enervating curse. This may or may not be true. I shall not attempt to decide. I cannot take leave of Virginia, where I received so much kindness, and for the character of whose citizens one must have such respect, without bringing out the early relation of the mother-country (as judged by her own writers) to the perpetuation of the system of negro slavery in the colonies.

Quoting from Doyle ("English Colonies in America, Virginia, Maryland, and the Carolinas," p. 388), I find: "In 1719 the Assembly [of South Carolina] took the further step of imposing a duty of forty pounds on all imported negroes. Had this measure been carried, it must have put an end to the slave trade so far as South Carolina was concerned. It is sad to think that such a measure was frustrated by the cupidity and jealousy of the English government. But it had become a settled maxim of colonial policy to allow the provincial assemblies no control over external trade, and in all commercial legislation to regard the profit of the English merchant rather

than the social and industrial well-being of the colonists. The proprietors and the crown were for once united, and the measure was vetoed." . . . "A Virginian clergyman, writing in 1724, deplores the number of negroes, and the consequent discouragement to the poorer class of white emigrants. In South Carolina more than one attempt was made to stem the tide. In 1678, an act was passed offering a bounty on the importation of indented white servants, Irish alone excepted. That they were designed to counteract the influx of black slaves, is shown by the provision that they were to be distributed among the planters, one to every six negroes" (*loc. cit.*, p. 388).

Patuxent may be called the dividing line between the low, sandy shore on the western side of the Chesapeake and the bolder bluffs which we find more common on the upper parts of the bay. I have never seen a more beautiful illustration of how perfectly parallel to each other, strata may be deposited, and how subsequent erosion may remove some and leave other portions, than the northern shore of the Patuxent, shows at the river's mouth and some distance inside and outside. Neither have I ever seen more tempting

building-sites than these same bluffs offer. High, dry, fronting on salt water, with no fresh-water marshes near, such situations, one might infer, would be healthy. For aquatic sports the harbor of the Patuxent would afford abundant facilities. I have no doubt game is abundant both on land and on the water in season.

It is safe to say, that when the demand for country homes becomes more common among persons of culture than it now is, these bluffs will be in demand as building-sites. Of course, that will be when facilities for reaching Washington, Annapolis, and Baltimore are greatly increased.

From the Patuxent we crossed to the Eastern Shore. Early in the morning there was a gentle breeze. It soon showed that we could not depend upon it. I therefore headed directly across to secure an anchorage where we could hold what ground we had gained, and not drift hopelessly back with the tide. It was late in the afternoon before we had any wind. A large schooner that passed across our bow, going up the bay, had drifted back several miles astern of us. Night came on, dark enough, and we were obliged to appeal to the lead-line to aid us in finding our

way up the Choptank, after passing the light off Benoni's Point. We at last, fearing to venture farther, let an anchor go in Lecompte's Bay on the southern shore of the Choptank. Next morning, July 4th, we had a fair wind into Cambridge Harbor.

Sunday morning, July 7th, I rose early, at half-past four. The pure glory of the morning impelled me to do so. Home-life is very apt to rob one of the cream of the day. Tired by the duties which the acquisition of daily bread imposes upon us, we shut ourselves within ourselves and brick walls. But this is not to be endured when yachting. The windows are widely open, and the earliest streak of dawn along the horizon invites you forth to receive your day's allowance of health fresh from the hand of morning. Some one says early risers are apt "to be conceited all forenoon, and stupid all afternoon." This does not apply to one in whom the aquatic life has done its full work of regeneration. Constant intercourse with nature has banished conceit, and when afternoon comes he does as most other easy-going, sensible animals do,—deliberately goes to sleep and renews his stock of mental and physical vigor,—that is, if

at anchor. If sailing, there can be no drowsiness by day or by night, short of absolute exhaustion. I am becoming each year less surprised at how little real good the majority of our health-seekers gain by their vacation. That they reap so little benefit, is simply, as a rule, because they have not earned it, and hence do not deserve it. The professional man, if he wants the vigor of the sailor who is with him, must do as the sailor does. One new muscular fibre is added to another, when by exercise we throw off the sloth-softened old ones.

When one can hardly keep his conscience quiet, when it reproaches him for making his vacation unduly long, then he is in a fair way to accomplish something notable on his return to duty. This sense of wasting time is often the very best sign that vacation is doing a worthy and beneficent work. It tells how well the man has become, that he longs for activity in duty instead of longer rest.

The jelly-fish exist by thousands in portions of the Choptank. They fairly swarmed around the boat. But, graceful and wonderful as they were to watch, they were nevertheless a nuisance, inasmuch as the daily bath was often postponed

because of them and their merited title, "sea-nettles." The mode of reproduction of these soft animals is wonderful, and when first fully made known sounded almost as strange as a fairy tale. It has, however, been written again and again, and is in every "Elementary Zoology;" so that we refrain from giving its details here.

The Choptank differs but little from the other rivers of the Chesapeake. Almost any one of them would afford a naturalist good working-ground for an entire season. There is, however, more monotony in the country bordering the Choptank than in that along the Patuxent, for the former is nearly a dead level. Yet to me there is a quiet charm about the many-armed Choptank, which makes me wish to spend a whole vacation on its waters. During the season there is, *for those who care to catch them*, an abundance of fish, crabs, and oysters. And during colder months water-fowl congregate there in vast numbers.

The Choptank has for Pennsylvanians, and especially for those of them in sympathy with the Society of Friends, a special historical interest. Late in December, 1682, says Bancroft, "tired of useless debates, Penn crossed the Chesapeake,

to visit Friends at Choptank, and returned to his own province prepared to renew negotiation, or to submit to arbitration in England" ("History of the United States," vol. ii. p. 125). The difficulty alluded, to grew out of settling the boundary line between Maryland and Pennsylvania. I have often been amused at a statement made by Alsop in times long antedating the American Revolution, —a statement which has all the characteristic truth and point, with none of the venom (or something worse) which so often appears in the scamp's doings and sayings,—"He that intends to court a Maryland girl must have something more than the tautologies of long-winded speech to carry on his designs." The brightness and unaffectedness of the modern representatives compel the belief that sham is as much despised by them as it was by their good mothers.

Cambridge may be taken as a characteristic town of the Eastern Shore. To those who have, as we had, friends there, it is always a most delightful place to visit. When we say that on the Eastern Shore one finds more traces of the old colonial life and customs than elsewhere in Maryland, no disparagement is intended. On

the contrary, we may be quite sure that the social habits and the hospitality, which form such striking reminders of earlier times, are real and most sincerely genuine, and are very certain to be impressed on the memory long after more formal meetings are forgotten.

There is certainly a great future awaiting the Eastern Shore. The climate, soil, and situation all combine to make one think that its rejuvenation cannot be long delayed. During the past few years the new industry of oyster-canning has given some towns a most extraordinary impetus. I do not regard this, as it is now conducted, as likely to be of any great, permanent good, because it must require but a few years to remove the oysters on which present prosperity depends, unless oyster-raising becomes, as it may, a feasible thing. To this we shall allude later. But when I remember the agricultural capacity of the Eastern Shore I think its future is certain, simply because the rest of the country "hath need of it." I am convinced that in the next generation the owner of land on the Eastern Shore will be said to have, like the owner of a rich silver-mine in the West, "a sure thing."

The early history of Maryland reveals some strange modes of aiding Church and State. Think of raising a church-rate by imposing a duty on tobacco! I fear many sensitive mortals in these days would wash their hands clear of the contamination caused by touch of the funds. Yet when, in 1698, the Episcopal creed was the one recognized by law, the rate was so raised. Hawks, in his "Ecclesiastical Contributions," calls to mind another striking bit of legislation: In Maryland "the vestry of Port-Tobacco Parish imposed a tax on bachelors, and the Assembly confirmed it. It, at least, indicated the sense of the Legislature that it was a luxury to have no wife, and that the privilege ought to be paid for." These are mere remembrances of the past, only alluded to because they had well-nigh been forgotten, and because they may serve to illustrate the changing phases of human thought and morals.

The yacht left Cambridge on the morning of July 9th,—that was just before peaches were ripe. Hence we were prevented from seeing the shipment of the great peninsular crop. Peach season is, of all times, the one in which to visit the region. More information can be gained then than at any other time.

We could notice a great change in the weather since we went down the bay a month earlier. Then the wind appeared to be continuous, or usually so, in one direction from early in the morning until towards evening. When we left Cambridge we found that the calms we had experienced off the mouth of the Potomac and in crossing from the Patuxent to the Eastern Shore were but the first of a series. From Cambridge up, we were reasonably sure of a morning breeze (though often a very gentle one), then a noon-day calm, then more or less threatening weather towards evening. Not that evening always brought its squall, for it did not, but that it nearly always attempted to,—if such an expression be allowable.

Starting from Cambridge at 9 A.M. with a fair breeze, which died out, it was full twelve hours before we dropped our anchor in the snug little harbor between Poplar Island and the main-land. I was particularly anxious for a good, rousing wind that day, as my friend, Captain Thomas Howard, was with me, and I wanted to show my little sloop to the best advantage. When we stopped for the night it was blowing hard from the south. The last two or three miles of our run were made before

a wind under which the yacht fairly staggered; and as we passed over the shoal water in the darkness, before reaching our anchorage, I knew that if we made any mistake and ran aground, the mast would go like a reed in a hurricane. In spite of the wind, which whistled vigorously through the rigging, we lay down in a most comfortable frame of mind. We could feel the boat tugging away at the anchor, but having full confidence in the strength of our cable and in the holding power of the anchor, we could sleep undisturbed.

Though I am one day late in doing so, I must here add, William Butler, Jr., of West Chester, had come on board at Cambridge to share the luck of the cruise with me.*

Leaving Poplar Island next morning, we threaded our way out into the bay past the southern end of Kent Island. It should here be stated that a light-house has been erected within a few years on the end of the bar which "makes out" from the southern point of Kent. Outside of that bar

* I will also state, that owing to news from home, Lew was obliged to leave me at Cambridge. In his stead I hired a colored man (Moses Robinson) for the rest of the summer. A more faithful servant no man was ever fortunate enough to have.

is one of the deepest parts of the bay. My chart shows, for a single point there, eighteen fathoms.

The low shores of Kent Island, in spite of their monotony, were very attractive. Besides this, too, the island played a very important part in the early history of the country, being claimed both by Virginia and by Maryland.

In 1631* the Virginia Assembly sent a surveyor named William Clayborne to take possession of the island. It was claimed both "by royal grant and by actual purchase from the Indians." It appears to have been occupied several years earlier by settlers and by Indian traders from Virginia. Besides its fertility, its position from an offensive or defensive point of view, as well as its value as a trading-post, made both colonies eager to possess it. Clayborne was a resolute, and probably a somewhat reckless, man, belonging to a class still largely represented in our frontier States. Things remained in an unsettled and somewhat threatening condition on the island until the spring of 1635, when Clayborne took steps which inaugurated open hostilities. In the naval skirmish

* There appears to be a little conflict of dates between Bancroft and Doyle on the Kent Island troubles.

which ensued, three Virginians and one Marylander were killed. Clayborne, being worsted, was obliged to leave the island. Maryland now took possession, and Captain Evelyn was made its governor. The inhabitants being mainly from Virginia were naturally enough hostile to Maryland, and the new governor appears to have had anything but an amicable community to deal with. Accordingly, we find it was not long before he proclaimed martial law. For a time, at least, there seems to have been no bloodshed, though it was necessary to refer the case to the home authorities in England. By them, after much debate, it was finally assigned to Maryland. In 1641, authority was given by Maryland to the Kent Islanders to wage war against the neighboring "Susquehannock" Indians, who had become exceedingly troublesome. At first, the relations between them and the islanders appear to have been of the most friendly character, *but only for a time;* it was nothing but the inevitable conflict between a higher and an inferior race when brought into actual contact. One or the other must ultimately give way.

About 1644 Clayborne renewed his attempt on Kent Island, and, after holding possession for a

year or two, was finally ejected by Calvert, of Maryland, who himself died very shortly afterwards; and his death, as Bancroft tells us, "foreboded for the colony new disasters" (*l. c.*, vol. i. p. 192).

From Kent Island across to Annapolis our run was short and pleasant. We reached our old anchorage there just about noon. After dinner Mr. B. and I went to the top of the State-house. When the gentlemanly janitor accorded this privilege, it was with the proviso that we should not use our pencils or knives on the building. Apart from the fact that we had no desire to leave any kind of a memorial of our visit, was the further fact that we could not have done so if we had desired, as previous visitors had already covered the dome with their scribbling. Adventurous, ambitious fellows had climbed, at the risk of their bones and lives, up under the timbers of the dome, and there marked or carved their names. Who can fathom the depth of human vanity? The desire for such notoriety implies the lurking supposition that some one will care to read the inscription. As a rule, the less the importance of the scribbler the greater the desire for such immortality. To

return to the dome, however. Such a panorama as we had there spread out below us is seldom to be seen. The country was looking its very best. The reaped and the promised crops bespoke the fertility of the soil, just as the throng of small boats engaged in fishing, told how prolific the water was. Undulating hills, with valleys through which navigable streams ran, made a perfect lowland landscape. Mountains near, or even remote but visible, might have made a *stronger* picture, though they could have added nothing to the calm, peaceful perfection of that landscape. I could have studied and enjoyed it day after day without weariness.

The evening of the 11th of July found us in Chester River, after a most wearisome drift across and up the bay. About four P.M. dark clouds came up in the south, and, anticipating a blow, we lowered away our sail to take in a double reef. This was hardly done before the squall was upon us. In a few minutes we had, for the river, very high waves, and, more than all, found that we had a lee-shore much nearer than we liked. However, the vessel carried her sail well, and we "clawed off" in good style.

Queenstown, in the southern bend of the river, was where we desired to anchor for the night. We succeeded, after getting aground, in working our way into the little harbor through a provokingly narrow channel. The names of the towns on the Eastern Shore are strikingly suggestive of Old England: Queenstown, Oxford, Cambridge, Easton, Chester, all indicate pride in, and affection for, the mother-country.

Sometimes for weeks the yachtsman has to do almost constantly with calm or squall, and the alternatives narrow down to drifting or scudding. We apparently had entered upon one of those trying periods. As we came out of Chester River, there was a bare suspicion of wind. No one could say where it came from,—first south, then west, then nowhere. After exercise of great patience and muscle we had worked, by three P.M., out into the bay again. Meanwhile, the clouds were piling up dark and threatening, and the falling barometer told that beyond doubt a storm was impending. Together with these, there were obvious warnings—there was a peculiar, hazy atmosphere and an absolute stillness—which led us to think that when it did come, it would be severe. The

cloud-bank moved, from the southeast, west, then toward the north, gathering, as it went, into a heavy, blue-gray or lead-colored (but not black) mass. There is something in waiting for such an onset not unlike the feeling with which the soldier waits for an enemy's charge. It was certain to come, and it was certain to be full of danger. Those who can best control their feelings are the most fortunate. The man who under such circumstances boasts that he has no fear is not so much to be envied for his supposed fortitude as pitied for his lack of truthfulness.

There was a large schooner which came out of the river with us. She had headed northward for Baltimore, and we were endeavoring to enter Magothy* River, to the west. First we saw the schooner take down her topsail, then her fore-sail, then her jib, and then her mainsail. We knew that there was no time to waste. It was evident that the captain, looking to the wind-ward, had reason for his prompt action. So we lowered our jib and put a double reef in our main-sail. We hoped to carry enough of canvas to run into Magothy River. The bay was still as

* Sometimes spelled Magotha; at others, Magothy.

calm as a mill-pond after we had shortened sail. But in a few minutes, darkness suddenly shut the schooner to the north of us out from view. In an instant later the rush of the wind was upon us. The stanch little boat endured the tremendous strain so bravely that we were at once reassured as to her seaworthiness; and she held her way toward the harbor. "Mose" braced himself against the tiller, and, though a powerful man, it required all his strength to keep the boat from luffing, as her jib was down. In less than five minutes the waves were breaking over us, and the spray dashed into our faces until we were no longer able to endure it. If we could have stood at our posts the boat would have gone safely into the Magothy River. But we could not, and there was nothing left for us to do, except to lower the mainsail and go to the southward, under bare poles, before the wind. This had become the more necessary as we were now among larger vessels, all of which were scudding. Hence, if for no other reason than to keep out of their way, we were obliged to do likewise.

The intensity of the wind did not last more than twenty minutes; but while it did last our

speed was fearful. To make matters worse, we were towing the yawl-boat, which ran up on to us and would drive its iron-clad bow into the stern of the yacht with tremendous force. As the darkness "lifted," we saw coming down astern of us a large schooner. To keep out of its way, the jib was hoisted. It was impossible to prevent the yacht from "yawing" when she rose on the waves, and then the jib would fly from side to side until each time the sheet tightened it made our heavy bowsprit quiver like a reed. Soon after, we hoisted the peak of the mainsail. We soon saw that there was no danger now so long as we kept going before the wind, for, in spite of the high seas which followed us, not a drop of water came on board after we headed south. The buoyancy of the boat was wonderful. And, from that day forth, I felt that my yacht more than compensated for being slower than some others, by being safer. The iron ballast, low down and well fastened, evidently, was just where it was doing the most good.

In an hour it was all over; and, under all sail, we were heading for Annapolis Harbor. We could now look around and see the damage done by the

squall. Several vessels, whose sails had been split, were repairing damages. Others, like ourselves, were hunting an anchorage. Just as the sun went down we dropped our anchor in the same snug berth that we had left two days before.

Looking back on this squall, I can now only regard it as a small cyclone,—at least, having its revolving character. Before it disappeared the clouds were again back in the south. The rain, though heavy, was not in proportion to the wind.

Viewing these storms, after several seasons of cruising, I am more than ever surprised that a good barometer is not regarded as an essential part of every vessel's outfit. I am safe in the assertion that mine never once deceived me during all the time I had been using it, and that it has often put me in a safe position by its timely warning. Once, indeed, taking advantage of its indications, we sought shelter through a gale which strewed the bay with wrecks, and which cost many human lives within a few miles of where we lay in quiet. It may appear like a waste of words to urge this subject, but, knowing that many yachting-parties never include this instrument among their effects, I wish to say that when I claim small vessels may

undertake long voyages, I only do so when this instrument is on board and all due precautions have been taken. Anything short of this is simple foolhardiness, which nothing can justify or extenuate.

"Mose" proved to be a character,—huge of frame, of unbounded good-nature, and possessed of such a fund of unusual expressions, which he used without the slightest regard to their meaning, that we were kept in perpetual laughter. His patience knew no limit. He would sit by the hour untangling the "worst snarled" gill-net, and immediately go through the same work again if from carelessness or clumsiness one of us tangled it a second time. "There," said he, as he opened a mass of knots which had tried him for half an hour, "I'se got one more aggrawate out on it." He serves to illustrate forcibly what education is doing for the colored people. "Ef I only had the larnin' my brother has I'd be satisfied." The brother is younger than "Mose," and consequently his school-days came in later, more fortunate times. Under my tuition he wrestled with the alphabet and with the task of writing his name. His success will be measured entirely by his per-

severance. His respect for the barometer is infinite. "Dem little tell-tales,—I'se seed 'em before. It's time to hunt a harber when dey says so." His cooking is cleanly done, and the galley is always in order. Both of these features are much more than mere taste. They make yachting more comfortable, and even make our simple fare more homelike.

The day after the squall we started again to go up the bay. Leaving Annapolis early in the morning, the breeze, though ahead, was promising enough, so far as its strength was concerned, but on our very first tack it died away entirely, and we drifted hopelessly. About two o'clock it revived just a little, and we headed for Magothy River. By dint of hard rowing, we at last rounded Sandy Point, and then reached the mouth of the river. Then turning south into Deep Creek we anchored for the night. For small craft, a more desirable haven than this could not well be found. Later in the evening I discovered that the water was as well stocked with pickerel as the shore was with wood-ticks. The channel had from six to eight feet of water in it, but along-shore it was shallow and muddy. In the shoal water the interesting

"water-weed" (*Anacharis Canadensis*) was growing in the greatest profusion, and as we rowed through the tangled mass the startled pickerel could be seen darting on all sides of us. The plant was in full bloom. Female flowers could be found in abundance, but no male flowers, though we made most diligent search for them. Though one of the commonest plants, this shows some of the most striking vital phenomena. It is hardly a fanciful statement to say that we can see it in the very act of living. Place a single fresh leaflet under a microscope which magnifies about five hundred diameters, and you can plainly see the fluids in the cells rotating up one side and down the other, showing that the very foundation—or, rather, essence—of life is motion. It is a fresh illustration of Ritter's celebrated statement, that "life is simply a change of relation." In the expansion of this generalization he did not limit himself to what we call living things, but, with a more than poetic truth, applied it to the action and reaction of one portion of the globe upon another. The male flowers of this plant are so rare that it is evident its increase is not limited to the usual mode by seeds. Apparently, wherever its joints

touch the earth new root may be taken. Years ago it was introduced into Europe, where it has become a serious pest by its rapid growth and by its tendency to choke up the water-courses. It even impedes navigation on the European canals. During the middle of July you see, as I have said, abundance of the female flowers. They attract attention by their long, thread-like tubes and exserted, knob-like stigmas. But the male flowers,—where are they? Seldom seen, but, when found, are usually separated from the plant which produced them. Chance floats, perhaps one out of many, past a female flower of another plant, and so by the accomplished act of fertilization the life and vigor of the species are maintained. We like to believe, with most of the botanists, that a crossing of the sexual elements of different individuals of the same plant species is the condition upon which a long-enduring vigor depends. So, doubtless, it is in most instances. But how are we to explain the amazing reproductive power of the plant in European waters, where no male flower has ever been found? The eel-grass is a much more conspicuous example of this separation and floating of the male flowers. Yet, uncertain as

such a mode of fertilization must be, I was amazed at the number of fecundated, seed-containing ovaries which I found among *Anacharis*.

The chief productions of the region appeared to be melons, peaches, and "garden truck." Proximity to Baltimore doubtless made such interests very lucrative there. The busy freighting-season for these productions was just coming on, and it was with difficulty that I convinced one farmer that I could not be induced to do his carrying for him.

The morning of July 14 was clear, and gave no indication, by barometer or otherwise, of an impending storm. By five A.M. we were well started,—that is, in the absence of the wind we went out, like Barkis, "with the tide." But we were no sooner in the bay than a nice breeze sprang up. It bore promise on its wings, for it was none of those puffy winds which we had felt so often before, but a steady, constantly strengthening one that intimated its full intention of remaining with us for the day. It increased as the sun rose. Before ten o'clock, however, dark clouds were in the west, and the barometer gave undoubted signs of a coming storm. As far as

we could see to the south the vessels were "holding the wind." This encouraged us to think that this same friendly breeze would last until we reached Still Pond Harbor before the storm came. Swan Point was left behind us, and in a couple of hours more we passed Worton's Creek; then we rounded the point and stood in for Still Pond. We had the usual difficulty in getting over the bar, and working through the narrow inlet to the pond. But we succeeded, and by one o'clock we had two anchors out and sails all snugly stowed. Then we went below,—"Mose" to preparing dinner, and we to preparing for an "afternoon fish" after the storm was over. So far as the ordinary dangers of navigation were concerned, we had passed out of them when we entered our harbor. It was astonishing to see how little impression the wind made on the boat where she lay; but, looking outside, we could see others tossing furiously on the waves. The rain was severe, and the wind too, though the latter was nothing like that of two days before. During the afternoon we had a succession of thunder-storms. The play of the lightning was very grand. Both zigzag and sheet lightning illuminated the heavens. As we

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watched, we could see tall spires and ruined buildings, even, represented in the fiery shapes on the sky. Afloat or ashore, it matters not: man lives more during an hour of storm than during any other equal period. His own utter weakness and the unlimited power of the elements, both, force themselves upon his mind. There is no escape from either. He need not be an abject, cringing coward to realize both to the fullest extent. On the contrary, he may be a brave man, and one full of good faith and of good deeds, and still these feelings will rise and overwhelm him. A thunder-storm is a rich experience,—one well worth living through.

On our way up from Magothy we met the "John McClintock Yacht Club," bound down the bay. As they were from Philadelphia, we could not refrain from saluting them, though our vessel was very diminutive alongside of theirs. The salute was returned in the most cordial and gentlemanly manner. Wishing each other a successful voyage, we held our courses and were soon out of sight. These yachting-parties, where congenial friends hire a good vessel and at a minimum of expense get a maximum of rational recreation,

are becoming much more frequent. They are also creating a just public sentiment in favor of aquatic sports. There was a time, not many years ago, when to be a yachtsman was entirely synonymous with being a blackguard, in the eyes of many well-thinking persons; and, to tell the truth, this imputation was too often deserved. He who wrote "Rob Roy on the Jordan" did missionary work, both when he distributed tracts and alms among the poverty-stricken souls, and when he sailed his little yacht,—no less in the one case than in the other. He preached salvation to soul and body both.

There is needed, now, a book describing the models of small craft peculiar to our American coast, with a clear statement of the merits and defects of each. It should also give descriptions of the most suitable waters for sailing in at each season, along with some statements concerning the historical and other attractions of each harbor likely to be visited. To the above might be added a very interesting chapter on the most important voyages undertaken in small vessels. The fact is, that in this age of huge ships size has come to be regarded as the sole measure of safety. We

forget, however, in what small vessels the men of earlier days made the most notable maritime discoveries. Leaving out of sight the probable discovery of this continent by the Northmen, in open boats, long anterior to the days of Columbus, we have Irving's statements concerning the vessels of the great admiral: "Three small vessels were apparently all that he (Columbus) had requested Two of them were light barks, called 'caravels,' not superior to river and coasting craft of more modern days. Representatives of this class of vessels exist in old prints and paintings. They were delineated as open, and without deck in the centre, but built up high at the prow and stern, with forecastles and cabins for the accommodation of the crew. Peter Martyr, the learned contemporary of Columbus, says that only one of the three vessels was decked. The smallness of the vessels was considered an advantage by Columbus in a voyage of discovery, enabling him to run close to the shores, and to enter shallow rivers and harbors. In his third voyage, when coasting the Gulf of Paria, he complained of the size of his ship, being nearly a hundred tons burthen. But that such long and perilous expe-

ditions into unknown seas should be undertaken in vessels without decks, and that they should live through the violent tempests, by which they were frequently assailed, remain among the singular circumstances of these daring voyages."

Of Magellan's fleet, which started to circumnavigate the globe, the largest vessel was the "Trinidad," of but one hundred tons. Two were but sixty; and it was the "Victoria," one of the smallest, which brought back the news that the great deed had been done. Vasco da Gama's vessels were of only one hundred and twenty tons each. Martin Frobisher crossed the Atlantic, and entered the sub-Arctic strait, which has since borne his name, with two vessels which were of twenty-five tons each, and with a pinnace of ten tons. Now, that a steamer of less than three thousand tons' burden has almost come to be regarded as too small safely to cross the ocean, it may be well to make the following extract from the *London Times*, of May 11, 1819:

"GREAT EXPERIMENT.—A new steam-vessel of three hundred tons has been built at New York for the express purpose of carrying passengers across the Atlantic. She is to come to Liverpool direct."

This vessel, the "Savannah," started from the city of the same name on May 22d or 25th, and came to anchor off Liverpool on June 20th. Of this time, she was under steam eighteen days.

That same needed book should, for the benefit of amateurs, also give some history of the nautical terms most in use. Their study would serve to relieve the monotony of many an otherwise dull hour. Many of the words now so glibly used have come down to us through centuries antedating England's rule over the waves. Some of them were in common use from Denmark through Scandinavia even to Iceland, and all, without doubt, had a real meaning when coined, even though we now fail to recognize their origin. Take, for example, the word "starboard," which meant originally the side of the boat on which the steersman stood. It traces its origin to a time so remote that, instead of a rudder, the boat was steered with a paddle, or an oar, as much smaller ones are to this day. "Keel," in primitive form, appears in the old Danish and Swedish, and probably, from the former of those languages, was taken into the English. "Kelson," or "keelson," is merely a derivative from "keel." Our modern

word "schooner" is supposed to have originated in 1713 at Gloucester, in Massachusetts, where the first vessel of this class was launched. It is true that the name was then given because of a remark made by one of the witnesses to the launch. "See how she scoons!" said he as the vessel slid into the water. Hence our word "schooner," or, as first spelled, "scooner." But there is an old verb,—"scoon," which means "to glide swiftly," and it was this which the unintentional christener of the schooner used.

Angling and shooting each have a literature,—one containing volumes which are classic in our language. Why should yachting not have? Under title of "Yachting in Blue Waters," there is an article in *Harper's Monthly Magazine* for the year 1877, by Mr. Warren. I cannot forbear quoting from it:

"Yachting is undeniably looked upon by the mass of the community in the light not only of a slothful and luxurious pastime, but as an actual waste of time; yet it is none the less true, that the larger number of those who cruise upon blue water are men of positive character, who, becoming impatient of the humdrum conven-

tionalities of society, prefer to assert their manhood in contention with the elements. And these men, who may have been skirmishers on the outposts of science, are not infrequently, by the very nature of their new pursuit, drawn within its charmed circle, and by their observations and experiments become important contributors to it."

If this form of recreation has anything in it better than the old-time regattas, and their too often disgraceful associations (which I think it has), then by all means let us have it out.

Sailors' expressions are often full of quaint humor. During one of our prolonged drifts, when there was no wind, "Mose" took our long oars and went vigorously to work. "Cap'n Will," said he, addressing Mr. B., "dis is what we sailor men calls a woodin wind; but when we gets into de yawl-boat and goes ahead with a line and tows de ship, dat is a buggy-ride. You think makin' a woodin wind is hard work, but it ain't nuthin' to a buggy-ride."

Darkness came on at Still Pond before the net was placed as we desired. Though the next morning, one twenty-inch pickerel showed that during the month between our first and second

visits to the place the supply had not been exhausted.

There are fated spots sailors think. I never, save once, have gone from Still Pond to the mouth of the Elk that I did not have to drift, or, at most, to sail with barely enough of wind to give us "steerage-way." My last trip up, over the same water, was no exception. Hour after hour the surface of the bay was undisturbed by any breeze whatever. Our only comfort lay in the fact, well known to sailors, that some boats drift better than others, and we had the satisfaction of being among the best in that kind of navigation. Later at night, on July 15th, we anchored in Elk River,—still in sight of our starting-point in the morning. The rising sun of the following day brought with it a moderate breeze, before which we made our way through Back Creek to Chesapeake City.

In spite of its storms and its calms, its over-dreaded mosquitoes, and its alleged malaria, I have come to think of the Chesapeake Bay as my sanitarium. I know that I come back from my trips there stronger than when I start on them. It is a soul-expanding process simply to gaze out

on the water, to study the features of the headlands, and to conjecture in what time and by what agencies they were formed.

Who does not dread the Chesapeake and Delaware Canal, if he has any regard for his own vessel? Mine fared probably as well as small craft usually do in making the transit from bay to bay. The helmsman of a canal-boat managed to jam my yacht against the rocks of the tow-path, much to the injury of her planking. However, his associates remarked, by way of apology, "the fellow is only half-witted." I did not see that the explanation made the rent in the plank smaller.

It was a relief to be "locked out" into Delaware Bay, though our welcome there was a stormy one. Hardly were our sails up before the usual afternoon clouds warned us to prepare. This time, however, the barometer did not indicate anything heavy as likely to reach us. The yacht was kept on her course until we passed the black buoy, midway between Delaware City and New Castle. Rounding this, we dropped anchor in two and a half fathoms of water. By the time the sails were down and stowed, the storm had reached us. It was more severe by far than I anticipated from the

slight warning given by my barometer. This was the only time that I was ever misled by its indications in the slightest degree; and it should be said that it did fall some, though not in proportion, I thought, to the severe "blow" which followed. The wind came from the west, and the tide was running out very rapidly; so we lay in a direction diagonal to the two forces, and, as a consequence, were considerably tossed by the waves. Our big anchor, which had always held well hitherto, was dragged, and to prevent being carried out into the channel we were obliged to let the other one go also. Together, the anchors held us firmly, and we went below to dine and ride out the storm.

My somewhat tempestuous trip up the Chesapeake had made certain points more clear to me. As between the English yacht and the American, we may say that the former is an infinitely better sea-boat. The English vessel is characterized by greater draught of water and by correspondingly less beam. It carries its ballast as low down as possible, and much of it in the form of a keel of lead or iron outside. The American vessel, on the contrary, is characterized by less depth and greater beam, with but little ballast as compared with the

deeper boat. It is simply astonishing with what impunity the Englishman goes to sea in his very small craft. On the mere score of safety in rough water, sudden squalls, and in "clawing off" a lee-shore, beyond doubt, the English model is the safer one. The Englishman sails where he will in safety; the American goes where he can, often at considerable risk. It is to be remembered, however, that our shoal vessels come, to a certain extent, from the character of the waters in which we sail. Many of the most desirable places, to me at least, could only be reached in a vessel drawing less than four feet of water.

But, then, have we not gone from one extreme to another? Is there no compromise possible between English depth and narrowness, on the one hand, and American shallowness and breadth, on the other? Whatever else may be justified in the model, the prodigious spars and sails under which most of our yachts stagger are absolutely dangerous, and should be discountenanced by all yachtsmen who would do more than limit themselves to an occasional regatta. The question of "rig" appears until very recently to have been limited, with us, to one of two kinds for small

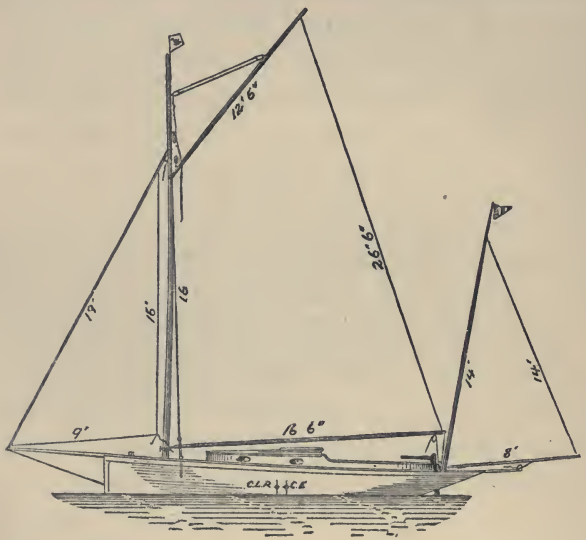
boats,—*i.e.*, the sloop and the cat-boat. For anything over twenty feet keel the latter of these may be regarded as about the worst possible form, sacrificing every other good quality to simple convenience. The sloop will still have many stanch friends, in spite of the signal victories which the cutter has so recently won among us. Were I yachting in waters where great draught was no objection, I should, beyond all question, prefer the cutter rig; but in either Delaware or Chesapeake Bay I think the yawl is to be the small boat of the future. So far as I know, there is but one yawl on the Delaware waters. Of course, he who introduces such a rig must expect to bear the cheap wisdom of "the rule o' thumb" men. The sufficient answer to all their objections is, that in England, in Boston, in New York, and in San Francisco, the yawl rig has been tried, and its merits too fully tested and too widely approved to leave any doubt as to its safety, convenience, and ease of working. We might define the yawl to be a modified schooner, whose foreboom came aft as far as the rudder-stock, and that aft of the rudder-stock was inserted a mast for a sail whose area should not be greater than that of

the jib. The special advantages of this rig are, first, safety in case of sudden squalls, for by letting the mainsail (*i.e.*, foresail) come down on the run, the mizzen and jib still set, leave you under storm canvas at once, with which the boat can be readily managed; or, second, if either of the other sails be damaged, the boat under foresail alone does well; or, third, if the rudder be unshipped at sea, the boat can be worked into harbor by slacking, or hauling the mizzen aft. It should be said that this has been done more than once.

The illustration (p. 162), from *Forest and Stream*, will show at a glance the whole plan and mode of working. A yawl of thirty feet deck need not draw over three feet and a half of water, and still be a thoroughly safe boat. Add to this, the fact that in most cases, if *absolutely required*, one man could manage her. If the yawl had no other advantage than the ease with which her sails can be reefed, that alone would compensate for the very small loss of speed which *is alleged* to exist when compared with the sloop.

The great mission of single-hand yachting is to take a legitimate, healthful recreation out of the hands of hirelings and "professionals," and make

it tributary to the growth of character and strength in the yacht-owner. It is interesting to read in this connection the following extract, taken at



CRUISING RIG OF "CANNET" YAWL.

second hand from what Dr. Waldstein, of the University of Cambridge, had to say on a closely-related subject before his institution:

"The same causes which led to the growth of individualism affected the great change in the spirit of athletic institutions. While before they were a means to a great political and social

end, they now become ends in themselves to which all other considerations become subservient. While before athletic exercise was a part of the daily occupation of the Greek youth, which was meant to contribute its share to the great end of making him a sound and normal being, harmoniously developed both in mind and body, and thus a serviceable citizen to his state, it now, step by step, becomes itself the great aim to which time, life, and aspirations of the youth are devoted, and to which they are made subservient. It is the step recurring in the history of athletic games in all times,—the step from the gentleman athlete to the professional athlete. In art we see the signs of the loss of proportion in such works, which increase in the next period. We hear from ancient authorities how pugilists and pancreatists were fattened up and made bulky, how muscular development was exaggerated even to ugliness. In the mythical figure most immediately influenced by athletic art, in Hercules, we see this in later instances, where the muscular development is abnormal and repulsive. The germs of the rapid decline of this great institution are to be found in the fungus growth of its own importance, growing till it obscured the great aim which gave it life and characterized its highest development. It leads to degeneration, or, as the pathologist would more accurately term it, to hypertrophy. Let me only bring before you one interesting instance to illustrate this step towards professional athleticism. This coin of Amyntas III., of Macedon, who reigned from 389 to 369 B.C., representing a horse with its rider, is typical in one respect of all similar representations before the middle of the fourth century B.C., namely, in respect of the relation of rider and horse, and of the corresponding importance of both in the mind of the people of that time. Like all representations of riders down to the middle of

the fourth century, the rider is here large in comparison with the horse. If now we turn to this coin of Philip of Macedon, there is a striking difference in this respect, the horse being disproportionately large, while the rider has dwindled down to an undergrown jockey. The whole matter is explained by the fact that this coin of Philip represents his racer whom he sent to Olympia, and who there came out the winner. Now, in the previous periods it was for the rider's sake that horse-racing existed; it was to show and encourage his skill in horsemanship, and he got the glory; there existed no jockeys. In the time of Philip the horse became the great centre of interest, and the gentleman rider and warrior of the Parthenon frieze is no longer to be found at Olympia. In the course of this natural or unnatural selection the horse, too, has altered its form, merely to excel in fleetness. It is curious to consider how similar the action of these 'laws' has been in ancient and in modern times. Thus, not only with the human form, but even with animals, the course taken by the athletic games in the later periods tended to destroy the ideal of form established, during the great age of Greek culture, by art through the earlier influence of the same institution. . . .

"The history of the Greek boxing-gloves, the *ἱμάντες*, typifies and illustrates the three chief phases in the history of the palæstra, from its height to its decline. The earliest form were the *μείλχοι*, which were to soften the blow to the striker and the one struck, and were thus subservient to the exercise. The second form was the *ἱμὰς ὀξύς*, a leather thong wound round the hand, protecting the hand of the striker, but increasing the severity of the blow. This belongs to the period when professional athleticism was beginning to be introduced. The third form, marking the period of decline, the Græco-Roman and Roman age, was the brutal

cæstus, garnished with leaden balls, which produced disfiguring blows, sometimes leading to death."

The application of the above extract is neither "far-fetched" nor difficult to see. We desire a generation of men and citizens with the physical proportions and mental qualities of the Greek in the days of Amyntas, instead of the jockey who dwarfed the master to less than his own size, or instead of the beast who wore the cæstus for the pleasure of a patron of worse morals even than himself.

CHAPTER IV.

CRUISING ON THE DELAWARE RIVER AND BAY.

THIS chapter is intended not as a mere "log" of our trips up and down the Delaware, but rather as a general statement of such facts of interest as came under the author's observation. It will also give some points which may be of service to other amateurs who undertake to manage their own boats when sailing in the same waters. It is, it is true, only amateur advice, but then, for that reason, is likely to touch the very points upon which the holiday cruiser wants information most, and which a veteran sailor would be most likely to pass over in silence.

Comparing the Chesapeake with the Delaware, each bay has peculiarities of its own. If the former has heavier squalls, the latter has swifter tides, which prevent your going against the current, unless the wind is fair. But the Delaware has its

full share of squalls, for, as already stated, the first hour we sailed in it, after coming through the canal, we encountered a heavy "blow."

The Delaware, though all harbor, so far as good-sized vessels are concerned, has but few of the cosey nooks which characterize the Chesapeake, and into which small vessels may creep for a night of quietness and safety. True, there are many small rivers and numberless small sloughs opening into the Delaware, where we could go and be out of harm's way, but they did not attract me as did the little resting-places of the other bay.

On July 21st we ran up the river to Camden, and by two P.M. were at anchor at Cooper's Point, from which we had started more than a month before. Our good little boat was cordially welcomed back among the others of the same class.

No one, of course, cares to contemplate what *may* happen after he has seriously determined upon a trip. It was a satisfaction to be back again at our starting-point. It was, furthermore, a greater satisfaction to think that the trip was made under circumstances which certain wise heads had regarded as unfavorable. I only refer

to this to point the moral that risk is determined as much by the individual as by the circumstances. A better sailor could have gone to the James and back in a much smaller boat; a worse one (if he could be found) might have been lost in a much larger vessel, in no worse weather than we encountered. Next to having a tight, strong, well-ballasted vessel, and one obedient to her helm, the yachtsman must be temperate and prudent if he expects the air and exercise to do their best for him.

I clip the following from the *Philadelphia Ledger* for July 24th:

[Special Dispatch to the *Public Ledger*.]

A VIOLENT STORM AT ASBURY PARK.

ASBURY PARK, N. J., July 23.—A violent storm burst over this place at half-past three o'clock this P.M., doing damage to the extent of twenty thousand dollars. The rain fell so heavily that the air seemed filled with spray, and it was almost impossible to distinguish objects twenty feet ahead. Tin roofs were carried away like so much paper, and shingles and trees were blown in every direction. The Howard, Gilsey, Barrett, and Sunset Hotels were entirely unroofed, and the Madison and Princeton Hotels were badly damaged. Six tents and some outbuildings at Ocean Grove were levelled to the ground. Boats were lifted from the water of Sunset Lake and blown some distance upon

the land. Seven teams were upset near the lake. Lamp-posts were wrecked everywhere, and chimneys were blown down on many private cottages. It was bathing-hour, and hundreds of people were in the surf. There were several narrow escapes from drowning, but only one life was lost,—that of a colored waiter at one of the hotels, who was blown out to sea. A boat containing two boys was capsized, but they were rescued. The telegraph wires were blown down between this place and Ocean Grove. Windows were broken everywhere, and the streets are littered with broken limbs of trees. The storm lasted about half an hour.

My object in making this extract is because of its association with certain somewhat unusual phenomena,—that is, unusual from the popular way of looking at them. For several days past my aneroid barometer on the yacht had been unusually high. On the morning of the 23d it had gone down to 30 inches; by noon it stood at 29.95. At three P.M. it began to rise slightly, and in two hours there was a calm. During the height of "the blow" at Asbury Park the yacht was anchored a few miles above Chester, waiting for the wind to subside.

We had left Camden at ten A.M. of that day with a strong, but somewhat puffy, wind from the northward, and hence astern of us. In three-

quarters of an hour it had gone around enough to have become a head-wind, and as such it continued the rest of the day,—so long, at least, as it blew at all.

West Chester (Pennsylvania) is situated, say fifteen miles in an air-line from Chester, and my friend, Dr. George Martin, residing in the former place, has kindly furnished me the mean standing of his barometer (after it was reduced to the sea-level) for several days before the storm. Thus, for

July	17th	it	was	29.943	inches.
"	18th	"	"	30.108	"
"	19th	"	"	30.133	"
"	20th	"	"	30.178	"
"	21st	"	"	30.198	"
"	22d	"	"	30.062	"
"	23d	"	"	29.929	"

These figures bring out very forcibly a fact well known to scientific men, but not sufficiently appreciated by many who have barometers in their houses, or on their yachts,—that a marked sudden rise, as well as a fall, may be the precursor of a storm. In other words, to speak more generally, it indicates an atmospheric change, which is

usually followed by more or less of a storm about the time that the index or mercury has fairly commenced to fall to a lower figure. This, too, is true even if a figure not lower than the mean standard of the place is reached.

It may be noted that the storm, the account of which I have taken from the *Ledger*, was not associated with a great fall at Philadelphia, Chester, or West Chester. It would be interesting to know the readings of the instrument at Asbury Park the day of, and a few days previous to, the storm there.

There is apt to be somewhat of excitement connected with yachting on the edge of a storm. One may fail to recognize how heavy the wind is, so long as his boat behaves well. I was under no apprehension, but, remembering now how fiercely the wind whistled through the rigging, I am persuaded that most people would have regarded it as quite strong. At all events, it blew hard enough to make us drag our best anchor more than half-way across the river; yet, there was no marked fall in the barometer where we were.*

* So thoroughly am I impressed with the importance of this subject that I make the following clear extract from "The

Up to this point not a single word has been said about the mistakes made in sailing. Possibly the reader might be deluded into the idea that the writer is an accomplished practical sailor. As a matter of fact, he is nothing of the kind. My object in buying and in owning a boat was to become a more practical waterman. Day after day I blundered on, making mistakes both numerous and humiliating; but there is virtue in persistency. These blunders became less frequent as the season went on. Occasionally a mud-bank would get on the wrong side of the yacht, and we would stick fast there until liberated by the friendly tide. This occurred at Chester when two friends were

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Sailor's Handy Book and Yachtman's Manual," by E. F. Qualtrough, Master, U.S.N.: "A sudden rise of the barometer is very nearly as bad a sign as a sudden fall, because it shows that atmospherical equilibrium is unsteady. In an ordinary gale the wind often blows hardest when the barometer is just beginning to rise, directly after having been very low."

"Besides these rules for the instrument, there is a rule about the way in which the wind changes which is very important. It is well known to every sailor, and is contained in the following couplet:

"'When the wind shifts against the sun,
Trust it not, for back it will run.'"

along, who charitably held their peace, even though they must have thought hard things of the awkwardness which deprived them of several hours of fine sailing. To be sure, these were tribulations; but I count the ability to manage my own yacht cheaply earned, even through such blunders. There is no position more pitiable than that of the boat-owner who must become the servant of a sailing-master. Therefore, command your own boat, and inform the professional waterman, who applies, that what you want is not a captain, but a cook. It might fairly be assumed that any educated man can soon learn as much as one of less education, and that to sail a yacht it is not absolutely requisite to forget all else besides. The one great charm in single-handed yachting is that whatever you want done, you must do for yourself, even if you have first to learn how.

After six or seven weeks of sailing I found that I had been so completely fascinated by my vacation freedom as to have neglected to keep the run of events. There had been several murders and defalcations, and the Pennsylvania Republican Convention had been held since I had read a newspaper. I knew nothing whatever of these

affairs; in which I was probably just like the great mass of mankind. So I came to understand how the world and its inhabitants can continue to exist, the one as serene in its motion, and the other as happy and as pure in their morals, even if the flood-gates of human iniquity are not opened for them daily by the early newsboy.

The ravages of the cholera in Egypt first came to my knowledge on the 26th of July. Anchored above Chester, we could see the quarantine "Visitor" come down the river, and could watch the health-officer board the in-coming vessels. That boat is the thin wall which cuts Philadelphia off from the contagion of tropical and unclean regions. To protect the million of people lying back of it, that "Visitor" should be armed with authority as solid as adamant. Brooklyn's great preacher once wisely said, "Cholera is God's opinion of the filth in your streets." Truly a brave statement, but only half of the truth; good and saving so far as it went, but needing the supplementary idea, that if the quarantine keeps the germs of disease out, the Divine opinion may not be openly expressed in terms of mortality.

Egypt's agony awakens fear in the cities of the

New World, just as the waves starting on the shores of the Mediterranean ultimately leave their weakened impress on the sands of our coast. These periodical pests, bad as they are, do have a mission. The loss of a hundred lives may awaken a wholesome fear of the causes of disease, and thus lead to such care as will shear pestilence of its dreadful power.

Here is an extract from an official letter written by a distinguished physician. It shows that even in so great a city as New York, cholera can be controlled:

> On Wednesday, when the epidemic was at its height, the 1st of August, 1866, I gave my pledge to the Board of Commissioners and to Mr. Schultz, president of the Board of Health, in your presence, that I would drive the cholera from the workhouse in from three to five days. I said this in no spirit of boasting, but in the simple reliance on the well-known and established laws of hygiene. The commissioners executed literally and promptly every order which was given by the committee.
>
> The epidemic began to decline from the day they were fully carried out, and on Monday last the pledge was redeemed.*

As nations become bound together more closely

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* Flint's "Practice of Medicine," second edition, page 476, foot-note.

in their commercial relations, so also do the dangers of intercourse increase.

The quarantine which now exists at Tinicum, about thirteen miles below Philadelphia, is the outgrowth of the act of April, 1700, which was passed by the Colonial Assembly, William Penn being Proprietary Governor. Quarantine is but one form of restraint which individual interests and inclinations must endure for the public good. National or State and City health boards would act, if authority as full were given them, with no less beneficent results; but their existence is perpetually threatened by the power which should be their support. Ignorance, or worse than ignorance, is constantly appealed to, to thwart their measures and to limit their usefulness. We tolerate the quarantine because the disasters which it helps to avert are so sweeping in their character, and force themselves upon us in so conspicuous a manner, that no expediency or mere political necessity dare interfere with its operation. Yellow fever, cholera, and other scourges of like character carry an inexorable logic in their death-rates. But the diseases with which local or general health boards (inland) have to do,—scarlet fever, diphtheria, and the

like,—may in a decade number more victims than either or both of the other plagues, which we allow the quarantine to stop outside of our doors.

It is just in the domain of sanitary science that modern medicine, whose essential character is preventive rather than curative, has wrought its most signal triumphs. To prevent an epidemic, is of vastly greater importance than to arrest it, after its work of decimation has been largely accomplished. To fully understand the problem which preventive medicine, through health boards, proposes to itself, it would be well to compare the ravages of a disease like smallpox two centuries ago with the relative immunity we now possess. Before the time of Jenner, Great Britain and Ireland lost from this loathsome plague, each year, out of their population, forty-five thousand souls. When that sublimely simple prayer for those in the perils of maternity was placed in the Episcopal Church service, about one sufferer in fifty perished in performance of a natural function. Probably the mortality to-day would not exceed one in three hundred. True, improved treatment has had a full share in this shortened roll of doom but when we consider what hygiene has done to-

wards the same end we can see how great is its credit.

That the quarantine precautions are no mere sham, or useless parade of zeal, is fairly to be concluded when we remember that in 1762 an infected vessel from the West Indies brought the yellow fever to Philadelphia, and that out of the then small population—less than forty thousand—there were a thousand lives lost.

In the perfected republic towards which we are growing, neither the ward politician nor his master, will dare to lay his hands upon the measures which belong to the public health, any more than he would dare to touch individual religious opinion. There will be no party or *clique* allegiance stronger than the allegiance a man owes to the health of his family and of his neighbor, and the success of the one will come to be largely measured by what it does for the other. The present drum-majors of election day will be recognized as those who make the display, but who originate no good or useful measure simply because it is good or useful; and in their stead will come men of better motives and larger deeds.

For a yacht the size of mine, the Delaware

River anywhere above Fort Delaware may be regarded as all harbor. It was my custom at night to run in along shore as closely as I dared to, and then to anchor in about a fathom, or a fathom and a half (according to the tide) of water. This gave me room to get away at any hour I desired to, and still kept me out of the way of boats large enough to harm me or mine by collision. Then, with a reliable anchor-light out, we could sleep without anxiety. Such, at least, was my comforting way of looking at it. One night, however, I remember we laid down in firm assurance that things were all as safe as could be. But before morning I found we had anchored in a spot where, between wind and tide, the boat had tossed enough to put her light out, and there in darkness we had waited for some other shore-loving vessel to run into us. The useful lesson was not lost, and in future we were never found without proper safeguards. The risk run then became a healthy episode in the cruise.

The Delaware Bay, by which I mean all below Fort Delaware, is a more turbulent sheet of water,—one, too, which is whimsical sometimes besides. It may, almost without provocation, so far as wind

goes, be quite rough enough for any small boat. In less than half an hour I have seen a very ugly sea "kicked up" by opposing wind and tide, and one against which it was exceedingly difficult to beat. Two harbors offer at the upper end of the bay,—Salem Creek, on the New Jersey side, and the channel between Reedy Island and the Delaware shore. The latter, however, furnishes only a partial protection. They are good starting-points for a long run down the bay. It should be said that Salem Creek is a hard place to get out of, if the tide be against you, unless the wind enables you to run tolerably "free."

Almost due east from the light on the lower end of Reedy Island is the entrance to Alloway's Creek, on the Jersey shore. This can be entered directly by a vessel drawing four feet of water. Run within, say, two or three hundred yards of the shore, and the creek-mouth cannot well be missed. It affords a safe and most desirable anchorage for small craft in heavy weather.

About a quarter of a mile above Duck Creek light, on the Delaware side, is Duck Creek. The water here is shoaler, and, unless he knows the way in, the amateur had better use his lead-line

pretty freely. From this, east by south, nine miles distant, is the Cohansey light, which marks the entrance to the creek of the same name. Here is an admirable harbor, which any one with a chart before him may easily enter. From this light, south by west, out in the middle of the bay, stands Ship John light. I have called attention to these lights particularly because, first, above the Cohansey light about a mile, and extending out into the bay nearly as far, there is a shallow spot or bar, which is in daytime often, if not usually, indicated by the "tide rip." Beware of this if drawing over two feet and a half of water. Caught there with a heavy sea running, one would be uncomfortable enough. My second reason for speaking particularly of Ship John light is, that, unless you are acquainted with the water there, it is well not to attempt crossing from the western side until Cohansey light is about east of you, and it were better to go still more to the south, so that in crossing you would go to the north of and about a mile from "Ship John." This, of course, all implies that I am writing for amateurs who have to feel their way. There is a third reason for mentioning that light; it is this: after you have en-

tered Cohansey you may desire, for some reason, to find a particularly safe, quiet anchorage. Follow the river up, say about a mile from its mouth, and on the south side, around the first bend, just when you have Cohansey light and Ship John in range, you will see a little creek, not over thirty or forty feet wide. There is water enough there, at all times, for a vessel drawing three and a half to four feet. I have abundant reason for remembering that place, for we lay there quietly through a storm of more than average severity. Rail-birds were abundant in the last of August, but out of season.

Were I seeking a place on the bay where I could go and spend a couple of weeks in September in my yacht, I should, I think, select the Cohansey. It is accessible, safe, within easy reach of Sea Breeze, which has daily communication with Philadelphia, and affords good sailing, while there is good fishing only a few miles to the south. Besides this, the water is salt, and the beach is very good. So far as I know, there are but two serious objections to the place,—first, the green-head flies during the heat of the day are numerous and hungry; the second is, the number

of mosquitoes at night. I suppose one must endure the former if he would go bathing, but the second were most effectually excluded from my cabin by a double thickness of mosquito netting.

I have made no allusion to the western shore of the lower Delaware Bay for two reasons,—first, because I know nothing of it; and, second, because my friends, who have cruised there, do not speak of it as being so attractive as the eastern shore.

Below Sea Breeze, the chart shows a conspicuous landmark, Ben Davis's Point. Using the line and following the shore into the depths of the little bay around the point (*i.e.*, south of it), one may easily run into Back Creek, if he draws no more than three feet. We found a schooner on the shoals at its mouth, and were told by the crew that there were some ugly cross-bars there. Here, however, a caution is requisite. Going out of this creek to the south, give the shore a wide berth until you have passed the black buoy about two miles to the southward. Between this and the shore an ugly bar "makes out." We crossed it in a very heavy sea, and had only a fathom of water on the hard bottom.

Once the buoy is passed, the yachtsman may take the shore down to the next resort, Fortescue. Above this, about a quarter of a mile, there is another creek, which is safe enough, once the bar is crossed. I was "brought up" there at half-tide in a vessel drawing only three feet of water.

From Fortescue to Egg Island Point light there is enough of water for ordinary yachting along-shore. If one is familiar with the place, he may take a pretty direct course from Fortescue to the light just named. Rounding this point, if the wind be favorable, even a stranger may keep a couple of hundred yards from the shore (not more), and steer north of east to the light-house south of Maurice River, until the mouth is just a very little west of north, when he may run past the buoy on the shoals and into the river. The landmark for the river-mouth is the ships' black-smith-shop, which stands a little way up in the river. There is no building with which it can be confounded north of the buoy on the shoal. By following this course I always have entered Maurice River in a light-draught vessel, but it must be remembered that, unless you are able to take the channel close to the shore as you round

Egg Island Point light, then you must give it a wide berth to avoid a bar, on which I saw a yacht, drawing only three feet of water, strike last summer. We could only tender sympathy to the unfortunates, but it was the crowning mishap to a long series which they had experienced. There are other creeks forming good harbors on either side of the bay from Fort Delaware down to Maurice River Cove. But the amateur yachtsman should learn to enter all that I have named, and, of course, as many more besides as he can.

From Maurice River Cove south, I should say, no amateur should go until he has become a tolerably good sailor, or has one with him, and then only in a strong, safe, well-provided boat. To point this statement I would say that in one of my trips to Maurice River, a boat several feet longer than mine came in there and ran ashore. It was the only thing left for her to do. There was a very heavy wind and high sea outside. The captain, who had been hired by the party, was said to have a chart, and yet, coming up from Cape May, he managed to get aground, though drawing but three feet of water; besides this, he split his jib and lost his only anchor, and then

ran by accident into Maurice River. I say "by accident," for we were assured that even if he knew of the place he did not know the way in. Here was a combination of blunders,—first, to go out in a boat any part of whose rigging or ground-tackle was weak, and with but one anchor; second, to trust to a man who was *not known* to be a competent navigator in all weather, and who proved to be wholly unacquainted with the bay. I wish I could think such trips were rare, but, on the contrary, I think they are only too common. There should always be *at least* two "good-holding" anchors on board, and, no matter how heavy the cable may be, it will pay amateurs to memorize the aphorism that "*No chain is stronger than its weakest link.*"

The sudden coming of squalls in June and July and part of August cannot be too strongly impressed on the mind; it may serve as a check on foolhardiness. Even with a barometer, one cannot *always* predict the severity of a coming squall. Besides this, too, it should be remembered that the blackness of the clouds is not necessarily in proportion to the force of the wind. I have observed that the "saltest" navigators can guess very wide

of the truth on such matters. I have seen the line of the coming squall on the water, but half a mile away, look so threatening that I lowered all my sails and let both anchors go; yet when the wind reached us its force was gone. On the other hand, I have seen a very severe "blow" where the previous indications were not in the least alarming. Sailors have learned to watch the vessels to the windward, if there be any, and to regulate their own conduct by the effect of the wind on the vessels which it first strikes. So far as any rule for general guidance can be given, this is about as good as any. But, after all, the one cardinal precept for such circumstances is, Be sure you have plenty of ballast, securely fastened, and as low down as possible. Next to this, never carry more sail than you actually need. Racing-rig is no part of a *cruising outfit;* and the sooner we all learn to subordinate speed entirely to safety, the sooner will the drowning-list be shortened enough to make even amateur yachting a perfectly legitimate and safe way of spending a vacation.

But this list of platitudes is long enough for any one man to inflict on his readers. It is to be

hoped that some one else more competent will complete the needed category.

A genuine water-spout is among the meteorological phenomena rarely seen by us. Probably they are not often seen by any one. Lying in Maurice River, during the storm to which we have already alluded, we saw a moving column over the water, rotating just as whirlwinds do. Like them, too, it was dust-colored (but what colored this?). It had the usual hour-glass shape. We did not see any sign that water was drawn into it from below, nor did we see any fall from above. It was not a very dreadful-looking thing, though what it might have been to a passing vessel is more than I can conjecture.

Maurice River and the Cove into which it opens are full of strange life, visible to those who seek for it. In fact, they are little worlds with, to a certain extent, characters of their own. The Cove proper may be said to cover an area of probably thirty-five square miles. Besides this, there is, extending south, toward Cape May, and on the same side of the bay, another shallow area of more than double this size. The average depth of water in both of these areas is, at low tide, about eight

feet, in some places becoming as low as three feet, and in others reaching as much as eighteen feet.

It is, as most lovers of oysters are aware, a spot celebrated for the quality of those bivalves; and the trade in them has produced a peculiar class of vessels, shallow and swift, as well as a peculiar class of men to sail them.

A few years ago one of a party with which I was yachting there brought to the surface on his hook a fish, the like of which our "skipper" and his associates declared had never been seen in those waters before. It was a *Remora*,* doubtless a wanderer from warmer seas. This one was about a foot long, rather slender, dark-colored, and had a curious sucking-disk covering the head and the forward part of the back. The group to which the *Remora* belongs has been made the subject of an enormous weight of encyclopædic knowledge. This we present in hope that some one of more than ordinary comprehension will be able to say what it really does mean: "REMORA, a genus of

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*Some of these species do sometimes get as far north as Labrador on our coast.

fishes which Cuvier placed among the Discoboli, but which constitutes an entire family, Echinidæ, near the Scombridæ, among Acanthopteri." That should be lucid enough; though, on the whole, we would almost rather accept the ancient notion that this same *Remora* was nothing but a fish whose sucking and adhesive capacity was entirely out of proportion to its size. Those of long ago coined the name from the word *remorari*, because the nondescript group was alleged to retard sailing-vessels by using the sucking-disk to adhere to their bottoms. Group, we say, because there are several species of them, some edible, and others useful in another way,—that is, by attaching themselves to turtles, and holding on until *Remora* and turtle both, are pulled to the surface by a ring and line fastened to the tail of the fish and leading to the hand of a fisherman above.

The sucking-disk on our specimen was about three inches long. The margin was slightly raised, thick, soft, and flexible. In the interior of the inclosure was a series of transverse ridges, which anatomists assure us are simply modified parts of the first fin on the back. These have muscles attached to them, and may be elevated so

as to increase the depth of the cavity on the central surface of the disk. Thus the vacuum was formed on which the adhesive power of the disk depended.

The ancient Romans had the idea that this fish retarded the progress of ships, as we have already said; and this became woven into their history, and possibly, also, to a certain extent, into sea-side mythology. Did Antony's vessel fail to come up in time to the battle of Actium? It was, because the Fates had fixed a *Remora* to the commander's vessel. It is almost a sin to doubt the tale, but it is probable that Egypt's queen attracted Antony's ships more than the *Remora* did.

However, to give the fish its due, it does use this disk to fasten itself to vessels. Stranger still, it thus attaches itself to other, larger fish, and so escapes their attacks,—a mode of defence which appears to be almost unique.

Familiarity with common objects induces a certain disregard for them,—I do not say contempt, for the old adage is probably too strong. To my unaccustomed eyes the external growths on the shells of living oysters were a source of perpetual wonder. Sponges and diatoms, one will almost cer-

tainly find, and much more besides. For objects large enough to be handled, and down to those visible only through the magic tube which increases vision a thousand-fold, the oyster-shell furnished life and foothold. I know it is a great risk for one, in this science-ridden age, to write about anything with so hard a name as diatom, to say nothing of the still larger names with which men of learning insist on ticketing these little organisms. But if the public do not care enough for them to examine and name them, men should not complain if the universal language of science lays hold on them. At all events, the long name is no fault of the little plants, and it were surely hard if the name should sound so large as to prevent their case being heard. These diatoms are wonderful plants, microscopic in size, thriving alike in fresh, or in salt water, and found in the oceans about either pole, as well as under the equator. During their life, in a small way, they render signal service to their animal neighbors by giving off oxygen to the water for them, and by making food upon which they may live. When dead, they leave a solid memorial behind. This memorial is, indeed, the most characteristic thing about

them, and is made of the purest silica,—that sifted, as it were, by the organs and processes of life, and then deposited as a shell around the living part within. The green interior of the diatom dies, decays, and disappears; but the sandy shell remains for all time, and may, when in vast numbers, even serve as a foundation to build cities upon, or may choke up harbors. It may pass unchanged in shape, unaltered in its wonderfully delicate markings, from the depths of the ocean, through the base of a volcano, and be thrown out in an eruption, and finally be found, bleached, beautified, and perfect, thousands of feet above the sea on the flanks of the fiery peak. This is no fable, but sober, scientific fact; for on the sides of Mount Erebus, as near to the south pole as men care to go, these skeleton memorials may be found now. Histories, too, these same little plants may become: those of to-day recording for the future the advance or retreat of ocean, just as those of the past have, by their sandy shells, declared the retreat of the waves from what are now inland spots. So they tell us of a retreat from Richmond, when, inch by inch, before man was, the waves in which the diatoms lived, retired and left the soil on which

the human hosts contended so recently. The skeletons of men, the skeletons of diatoms, lying on the same spot, each tell of strife.

> "There rolls the deep, where grew the tree.
> O earth! what changes thou hast seen!
> There, where the long street roars, hath been
> The stillness of the central sea."

Diatom life, whether on, or in the oyster, or wherever found, is a strange tale,—one which should hardly be started save in the presence of a good microscope. Take up some standard work on botany, and learn how curiously they are reproduced: by one individual dividing its interior, living portion into two parts, and then each half secreting a new shell around its outer face, so that when these perfected halves become independent individuals, each is made up of one old and one new shell. But sooner or later the succeeding generations become too small to represent the species, by this mode of reproduction. A new process now comes in to reproduce full-sized individuals. Two distinct plants unite, and their contents grow to maximum size, then take on their characteristic sandy coat, and begin again the first mode of reproduction. There is infinite

variety in almost infinitesimal size among these plants. Look them up, find their illustrations in Carpenter's work on the Microscope, and be convinced how wonderful they are. Meanwhile let me ask my friend, Professor Macloskie, to tell, in his clear way, what hints they furnish. "The shells (or shields, as they are termed) are chiselled and ornamented with markings which are characteristic of the twelve hundred or more species known. Some of them are circular, some elliptical, and so on through varying forms, as triangles, squares, lozenge-forms, fans, boat-forms, sigma-curves, stars, spiders' web, and the radiant sun. Fancy may detect all sorts of beautiful forms in their shields, and artists in the precious metals may here find an inexhaustible mine of new suggestions for elegant designs. The shields are adorned with systems of hollow pyramids or intersecting lines and bands. High powers of the microscope, with special arrangements of oblique illumination, are required to show these, and new advances in microscopic constructions are signalized by success in resolving diatoms that had baffled former efforts. Many forms are supposed to have markings which have not yet been dis-

covered, and there is reason to believe that our interpretations of some parts are erroneous, because the light which we employ is made up of waves which are too coarse for such fine work. Thus it is not by the fault of the microscope, but by the clumsiness of light, that we find ourselves bewildered." * Had Hans Christian Andersen been fascinated by these small things as much as some men of less genius are, he would have clothed their whole life with the charms of a fairy tale, and made their history plain enough to have been read in the nursery.

Squids' eggs are those half jelly-like, olive-shaped bodies which one finds so often in September adhering to the shells of the living oyster. Some people call them sea-grapes, but the oystermen have fearful names for them. They are little, if any, heavier than water, and hence, when agitated by a heavy storm, the water sweeps over the cove bottom, and the light bunches of sea-grapes float away bodily along with the oysters, which they help to buoy up. The oyster-farmer may

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* "Macloskie's Botany," p. 220, *et seq.*, a work furnishing exact information in a most readable form.

thus find his whole crop carried away by the wind and waves. To be sure, it is almost an unheard-of thing among landsmen, but the oysterman knows it is only too true and too common. "Dumb as an oyster" is a remark often heard; but whatever their intelligence may be, there is no doubt as to their extreme sensitiveness. A heavy clap of thunder, or a hard jar received by the vessel carrying them, it is affirmed, may kill a whole cargo. The dip of your oars in the water as you approach an oyster-bed may cause every one of the thousands of shells, over which you float, to close. Among the foes with which the oyster has to contend is the crab. Indeed, there comes to us from the Middle Ages a tale that the crab dropped a pebble between the open shells, which prevented their closure, so that, without danger to himself, he was enabled to capture the animal he was after.

But the little crab which we find inside the oyster-shell, and which we eat as a luxury, is quite another animal. Naturalists designate it as Pinnotheres. One might suppose that so hard a name was in some way intended as a punishment; but the oyster crab is a friend, not a foe, to his host. This crab is a real nursery, on which multitudes

of still smaller animals, with still larger names, live,—Zoothamium. It is too bad, but that is the fact. Now, the whole tale appears to be this: the Zoothamium is on the Pinnotheres, and the Pinnotheres lives inside the oyster, which, in turn, eats the Zoothamium. This is all very strange; but that when so insignificant a thing as a Zoothamium happens to die, and fall off from the stalk which supported it, still smaller and less consequential things—"rod-like vibriones"—should grow out of the stalk, is still stranger. It is almost past belief that there should be so much besides the oyster inside the shell; but as the official document, which was prepared with infinite care, says so, we must believe it to be true. It would be a very long chapter if we were to tell all that can be told about the friends and foes of the oyster. Not only is animal life leagued against it, but the elements conspire to destroy it. The wind agitates the water, this stirs up the fine mud and sand, which, entering the open shell, fill the oyster's respiratory organs, and it dies from suffocation.

The statement would be incredible, if it were not made on the best authority, that not one out of a million eggs spawned becomes an adult, edible

oyster. The very process of fecundation in our American oyster involves a chance against the species; for the eggs and the male elements are left to meet as best they can after extrusion from the animal, and can only complete the reproductive function if wind or tide bring them in contact.

Hence appears the urgent need of such investigations as those undertaken by the general and by some of the State governments. The importance of this oyster trade, now in its infancy, may be estimated, when it is known that the value, at first hand, of the Delaware Bay crop each year is about $2,425,000. Our young life on this continent has produced marked deviations in our way of looking at things as compared with Old World views. Older nations have learned by experience to husband national, as well as individual, resources. But two and a half centuries ago our ancestors landed on these Western slopes, and found them so prolific in forest wealth that before an acre could be cultivated it must be cleared. Just about two hundred years back, good William Penn wrote most enthusiastically concerning the food which the waters contained. Abundance in flood and in forest, induced habits

of extravagance, which have become so deeply instilled that we can hardly recognize the traditional wisdom of older countries, even when it is pointed out. We have come to regard our pampered habits of life and thought as the normal ones. Now, in the full vigor of early youth, with high hopes of an unexampled prosperity before it, the nation finds it has squandered the good things of its heritage. The forests are disappearing from the land and the fish from the sea. By great good fortune, prophets came to warn and masters to teach. Baird, Hough, Price, Sargent, Brooks, and Ryder are names that will be better known half a century hence, even than now, because the importance of their present work will appear greater as time passes. Because a wise man, who was a power in the land, and who but lately left us to join the "silent majority," said he had no heart for scientific investigation after it became useful, other weaker ones, without his genius, have emblazoned his watchword on their banners.

Let it be known, then, that the names recorded above, are of those, who do not scorn to make their knowledge useful, however much they value

it in the abstract. The streams restocked with fish, the beds replenished with oysters are practical illustrations of the value of science, worth as much as ever was or ever can be written on the morphology of the star-fish. I do not disparage the value of the latter, either. All abstract scientific studies confer standing and power on the nation, but their extreme advocates must not reveal to the world how one-sided their studies may have made them, or they will bring all science into contempt. Scientific arrogance is the spirit which, of all others, the culture of succeeding generations will least tolerate. Even abstract science may come to be regarded in the future much as we regard some learned pursuits of earlier times, though I sincerely hope not.

One out of a million oyster eggs reaches maturity! It was somewhat so once with fish spawn. But now these dwellers in the deep appear to be transplanted and hatched, one is tempted to say, with about the same certainty as chickens. Within the year, the daily papers have told us that John Ryder had succeeded in raising young oysters, after artificial fecundation of the eggs, in natural inclosures. This is one of the great achievements

of the age. It is a food-producing conquest over the thousand causes which conspired against starving men and women. Let it be told all over the land, that towards this end, that patient investigator has worked when others slept; worked when others saw no reward for his labors; worked year in and year out with a persistency which was sublime. It is just such studies that the government does well to encourage. The following extract comes from the *American* of November 10th, 1883:

OYSTER-BREEDING FROM ARTIFICIALLY-FERTILIZED EGGS.

Mr. John A. Ryder, embryologist to the United States Fish Commission, to whose labors in oyster culture we had occasion to refer in the columns of a recent issue of this journal, thus briefly summarizes the results of his latest researches in this important branch of economical biology: "While it is too soon to affirm that artificial breeding may be profitably available on an extensive scale in practical oyster culture, our experiment has demonstrated a number of very important facts. These are: (1) Oyster spat may be reared from artificially-fertilized eggs; (2) the spat will grow just as fast in such inclosures [artificially-excavated ponds, connected by a guarded passage-way with the open water of the sea] as in the open water; (3) food is rapidly generated in such inclosures; (4) the density of the water in the ponds is not materially affected by rains or leaching from the banks; (5) ponds

are readily excavated in salt-marsh lands, and can in all probability be used for fattening and growing *Ostrea Virginica* for market just as successfully as *Ostrea edulis* and *angulata* are grown by a similar method on the coasts of France. Pond culture where there are salt marshes adjoining arms of the sea, the waters of which have a density below 1.020, can doubtless be carried on profitably in connection with intelligent use of simple, cheap collecting apparatus placed in both open and confined waters to catch a 'set' of spat, which can then be transferred to ponds or open beds."

When we were in Maurice River there was nothing to indicate the activity which the first day of September would bring to those waters. Then a hundred sail, or more, of trim sloops and schooners, manned by hardy, enterprising sailors, would move to and fro across the dredging-grounds, plying a vocation which promises to grow into still more stupendous proportions.

It is a source of regret that the child-like, but not too moral sailor of a generation ago is disappearing from our wharves. He of the old type, who made the hour of the young ebb tide wildly melodious with his songs as he "hove the anchor short," or hoisted sail for departure to "furrin parts," may have gone with the advent of the unwelcome, alien, steam "ocean tramps" that carry

our produce away, when we should do it ourselves. But in a measure, this new race, landsmen in summer and oystermen in winter, has taken his place. Go among them, and you will find them a class by themselves, who have their own language and their own views of life. They may be as rough and as hard-shelled as the bivalve they capture, but, then, like it, they are good enough within. Sharp at a bargain, mayhap suspicious of new-comers, you will find them generous to a friend. You can trust them in the hour of need, and may feel sure that a favor is never lost on them.

On our inland waters there is no harder life than that which they lead in winter. So long as their vessels "can live" and carry sail there is no weather in which they do not go. Their business is fairly remunerative,—at least, enough so to make them stick to it from early manhood on. There is no "easy berth" on their boats, and one would find, that life through they

> "Tugged at it night and day,
> Till each was a saint in glory,—
> If he happened to go that way."

I cannot help admiring the persistent fortitude

with which they work and sail when even the decks and rigging are covered with ice, and always think of them as a sort of subdued Vikings, with all the hardihood of the prototype, and none of the viciousness which Taine has so vigorously portrayed.

This oyster-dredging is very suggestive, and a person wonders, when he sees the vessels dragging their great iron rakes over the oyster-beds, and finds the men amid the filth and discomfort of the business, that so many are willing to engage in it. But, then, take our ship of state. See her sailing over the shoals and dragging a host of rakes that stir up more mud and dirtier than all the dredges of Maurice River Cove, fouling as they go, the surroundings in which quiet folk must live. Probably, after all, hunting oysters is a cleaner, more reputable profession than hunting office.

There is one peculiarity about the inhabitants of Central and Southern New Jersey. I say peculiarity because I have nowhere else seen the characteristic so marked. I mean their rational enjoyment of life. Busy as the busiest at times, yet, again, say in August, you may find them, *sometimes* by thousands, *often* by hundreds, at the

shore of the bay, near Maurice River, engaged in a thoroughly old-fashioned picnic. Such a time as they have refreshes a whole neighborhood, and brushes away the gloom and business monotony from an entire community. I have somewhere read that once a year the Laplander brings his reindeer from off the mountains and moorlands to the sea-shore, and allows them there to drink and to bathe in the salt water to their full content, that they may go away invigorated for the rest of the year. Just so these sensible folk gather at the bay from miles and miles away to renew their youth, meet their friends, and to wash the burden of daily care from off their souls. Some come in wagons, some in vessels by water, some tent on the mosquito-plagued shore, but all enjoy themselves.

Wet, stormy days, when one does not sail, are not wholly lost time. There is some quiet enjoyment, if not, indeed, a sort of education, gained by lying in the berth and listening to the rain pattering on deck. It may be that in some corner of the brain lurks a cell or two whose characteristics are inherited from agile ancestors that swung by prehensile tails under the palm-leaves of tropical forests, and enjoyed such shelter because they had

no better. How else can we explain the pleasure with which men listen to the falling rain-drops on the tent? I suppose those were what most active men would call lazy days; but this term is quite too hard. They were, rather, recuperative days, in which animal energy was stored, until its very excess obliged us to break out into some exercise of mind or body.

In "Mose" this explosion was usually retrospective in character. He was not exactly "rocked in the cradle of the deep," but he began "goin' to sea when he cudn't do nuthing but run roun' de deck." His brain is full of stormy remembrances, and I suppose it is pleasant when one is in a good, quiet harbor to call back to mind the storms when there was no such resting-place available. "Mose" meditates a long time, then he breaks out suddenly with, "Cap'n, dis heah 'minds me." "Of what, Mose?" I like to encourage yarns in the cabin when the wind is whistling outside. They make me content to stay where I am and await more peaceful weather. "Dis heah 'minds me ob de nite I was a comin' out'n de Potomac in January. It was a snowin' and a blowin', and we was loaded down deep, and had a big deck-load on. Cap'n, he put

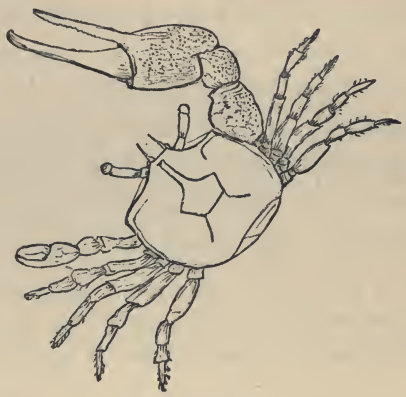
de schooner in Cornfield Harbor, and jis when he was a goin' to let de anker go, de wind cum round from de sou'east. 'Dis heah ain't no good place fur us, boys,' sais de cap'n. We hauled de sheets aft, and headed de schooner cross de Potomac fur Yeocomico River; but afore we got dere de wind hauled round, first one way, den anoder way, and it jist howled and blowed all it knowed how. Did you say dark? Yes, you cudn't see yur hand; and it snow'd till it cudn't snow no harder. I reckin we was half-way acrosst when we split our jib; den we parted our main-sheet. 'Dis heah is dangersum, or wuss, boys,' says cap'n. Fust a gust wud hit her, till you'd a thought everything would go; den a back flaw wud strike her, and way wud go de boom, till we spected it wud jist carry de masts out. Twicet we boys went into de riggin'; but den dat wusn't no good place, fur suah. Sartin as dem sticks went out'n her we'd gone, too. All on a sudden cap'n sings out, 'Boys, dis head-wind's gwine to cum steddy out'n de sou. Hard a lee!' sais he. De schooner cum up into de wind and looked out into de bay. Reckin was 'bout midnite wen we headed north, and I tell you it was squally, fur suah. We shuk a reef out'n de main-

s'l, and started fur Patuxent. We know'd drivin' her so hard was openin' de ole schooner's seams; but we was goin' sumwere wen we did git started. I tell you, de decks was wet and slippery wid slush. Purty soon de wind settled down and cum from sou'east, and den it jist screamed; but we kep' her goin'. I tell you we give her all de canvas she'd stand. 'Twas a sin how we made her carry sail. Reckin 'twas 'bout three o'clock in de mornin' wen we let her anker go in Patuxent. Wen I went below dat nite I kinder made up my mind dat I'd quit de bisness. Dat was nigh on't seven years ago; and here I am, on de water yit."

> "And what a vision greets their weary gaze!
> What realms of wonder, chaos of wild dreams
> Out-chaosed, kingdoms and seas of tumult!"

Watching the "fiddler"—that is, the "fiddler crab" (*Gelasimus pugilator*)—was a sort of kill-time employment for a wet day. In what one-sided currents the thoughts of men run! How many profound memoirs our naturalists have written upon bilateral symmetry as illustrated in the animal kingdom! yet not a single paper has been produced on the quadrilateral awkwardness of this betwixt-tide nondescript. Some friends of

mine have, by eavesdropping and spying in his muddy domain, been inquiring into his habits; but it is little they have discovered concerning him, save that, come day or come night, when the tide is out, he is most industriously engaged in carrying dirt out of the depths of his burrow. So far,



THE FIDDLER CRAB.

then, as known, his highest ambition is to dig his cellar deeper. Go ashore and see the flying troop darting towards the shelter of their homes, and then stopping outside, to see if you will come closer. They do have a use, however, that of serving to illustrate certain human peculiarities, —crabbedness as associated with cowardliness.

Sometimes, when approached, that one overshadowing claw is raised in a warning and in a "come-if-you-dare" spirit; but walk one step nearer, and it is instantly lowered to where the back and shoulders ought to be, while the whole ungainly anatomy trundles hastily away under the burden of that same threatening arm. Amphibious,—well, one must neither think nor say things too hard about an animal whose hold on life is limited to the narrow strip of earth between high- and low-water. Long before this, most of those who started with him must have gone for good to one element or the other. If he does excite our sympathy for the hardness of his lot, he, at the same time, awakens our admiration when we see the fleet-footed, multitudinous progeny he has raised on this undesirable, abandoned shore-line.

When we left Camden we started with an industrious colony of ants on board. How they came was always a mystery, for the boat had never once been alongside of a wharf during our stay there. We were no sooner started than they appeared, and then disappeared. Where they went was equally a mystery, and one which we never solved; but before long we learned to as-

sociate their reappearance with a falling barometer. When a storm threatened, these ants (and along with them the flies) came out in force; but a more harmless set of stowaways than they never stole passage on any vessel. They neither troubled our provisions, nor came about us by day, or by night.

Man's inhumanity has been well denounced; one sees it everywhere, sometimes absolutely needful, sometimes pardonable, sometimes inexcusable, but always and everywhere unpleasant to contemplate. It is not in the mere destruction of life that its greatest iniquity lies, but in the torture inflicted upon animals which are small and of but little use as food. I can hardly think that the slaughter of an ox brings with it the pain that a fractured limb does to an unlucky bird. There were places along the Delaware (and elsewhere) where bird-murder was at its height in August. Early in the morning, and at dusk in the evening, when the birds were flying most actively, the guns were heard constantly. All available places where the passing flocks could alight, were chosen by "pot-hunters" for their blinds, whence, the instant the birds stopped, the contents of one or both barrels were poured into them. At

many places along the usual lines of flight in the marshes, dead bushes were raised to afford resting-places, and thus to tempt the weary birds to stop and meet their fate. It is not for those killed outright that I raise this "hue and cry." That may all be justified by the mouthful of nutriment each small body furnishes. It has, too, a market value. But how about the scores of maimed victims, with broken wings and legs, that each day of such sport, or such business, leaves suffering or starving in the marshes? If there were a single element in such shooting which could take away the curse of cold-blooded torture, it might be looked upon with toleration. Is there no more sportsmanlike, less horrible, and equally-lucrative manner in which this business can be carried on?

One is likely to be regarded as super-sensitive for finding fault with such deeds. The charge may be true enough as public opinion goes, and if it is, then I hasten to accept it with all the demerit which attaches to it. I am in full sympathy with those maimed victims, and utterly out of sympathy with their destroyers. At the same time, I was and still am fond of the rod and

the gun and of all the legitimate uses that these implements imply. It should be a cardinal doctrine among genuine sportsmen never to kill game simply for the sake of killing it, and never to shoot at a game-bird or quadruped without the chance of killing it outright, or of finding it when wounded.

I never saw so few brilliant, nocturnal phosphorescent displays in the water as this year (1883).

There is a pleasure in listening to the sound of distant steamer-paddles. It is almost past belief how far they can be heard. More than once we recognized the solid beat of the "Republic's" wheels before she was in sight. On one occasion this same steamer gave us a remarkable illustration of the interception of sound. We were then lying on the New Jersey side, a few miles below Fort Delaware. The steamer passed down on the western side, perhaps a mile away; every stroke of her paddles could be distinctly heard. Suddenly she ran behind a large sailing-vessel, and (making allowance for passage of sound over the intervening distance) the sound ceased almost absolutely, to begin again at the proper moment after she came out from behind the sailing-vessel. I think I never

before had so striking an illustration of intercepted sound.

It is astonishing what a wealth of sounds there is about us in the night-time, when we are camping out in the forest, or when we listen for them on the water. True, there are some nights, when the stillness of death is everywhere, but on the average night, the air is full of sounds, which we only recognize when we listen for them. The rain-drops on the oak-leaves, the stealthy tread of some prowling animal, or the murmur of the water as it comes rippling against the boat-sides are all musical in my ears. I cannot understand or enjoy the music of Wagner: I am not sure that I ever could find anything in it which would strengthen me; but that of the rain-drops, or the murmur of the water within a foot of my head, is full of healthy influences for me. All the music of the masters is in its very youth compared with these.

If one is only in the secrets of nature, he will find that there is no wind but has its own distinct character. The south wind in early spring-time is very different from that of the dog-days. It brings with it other ideas, and touches our faces,

or plays with our hair, awakening other emotions. Then the east wind is as full of gloom as it is of fog. It darkens and depresses until the sufferer no longer wonders that Holmes inquired whether it ever reached Paradise. Euroclydon has a bad character. But full of promise and of exaltation is the west wind. It comes laden with healing powers gathered from all the plants of prairies and of plains, and these purified by sifting through the hemlock boughs on our mountain-tops. No one can mistake that which comes from the north. It is so sincere and earnest that, lying in the berth below deck, one may recognize its whistle in the rigging. In homely phrase the western poet describes its doings truly and pathetically when he tells what it does in autumn,—

"They's somepin kind o' hearty like about the atmosphere
When the heat o' summer's over and the coolin' fall is here.
Of course, we miss the flowers and the blossoms on the trees,
And the mumble of the hummin' birds and buzzin' of the bees;
But the air's so appetizin', and the landscape through the haze
Of a crisp and sunny morning of the early autumn days
Is a picture that no painter has the colorin' to mock,—
When the frost is on the punkin and the fodder's in the shock."

The rapidity of the tide in Delaware Bay is a

revelation to one who has been accustomed only to sailing on the Chesapeake. When two currents meet, a well-marked "tide-rip" is produced, which in the Chesapeake would certainly be regarded as indicating shoal water. In the Delaware Bay, however, this may be found over very deep water, as may be seen where the ebb tide from Salem Creek meets with that in the Delaware. Of course, there are places in the Delaware where shoals are indicated by just such rips. One appears at certain stages of the water on the bar between Delaware City and the head of Reedy Island, and another just above Cohansey light, on the New Jersey side.

Following down along the "rip" formed by the ebb from Salem Creek, I was surprised to find how sharply the line was maintained for miles below where the currents making it, first met. This was clearly shown by the floating staminate (male) flowers of the Zizania, or water-rice,—the tall grass which forms the mass of the reed-like vegetation along the muddy shores of Salem Creek. No doubt, a little later we should have found that some, at least, of the matured seeds were being transported from their place of growth to a new

point at which they might begin a young colony of water-rice. It was a good illustration of the means by which the geographical distribution of plants is effected now and has been for, no one knows, how many centuries. From some chance seed the new island, just emerging from beneath the surface, might receive its first vegetation. Under such circumstances it would probably grow and speedily cover the whole marshy spot. If, on the other hand, this water-rice seed had been drifted to shores already occupied, even if it reached there with the germ in healthy condition, there would have still been doubt as to its success in obtaining a foothold. It must then have contended with the other occupants of the soil, and the victory would have been decided by, first, the inherent fitness of each of the contending plants for the place; and, second, by the capacity each had for adapting itself to new conditions of life as they might arise. (As a matter of fact, the seed of the water-rice, along the Delaware, is pretty sure to be successful.) This struggle for existence every observer knows to be more than a Darwinian dream. It has been active ever since earth became a life-crowded surface; and in all places

where soil and climate furnished the rations upon which the lives of the battling armies depended, the struggle has been kept up. What the floating flowers of the Delaware suggested, then, is no narrow problem limited to the waters on which we sailed. It might be comforting to our pride if we could think that mankind was exempted from the limitations imposed by this relentless law. But it is all-embracing, and man, as a link in the food-needing chain of life, has written his own struggling history, in conquest, over other living links in the same chain. Our cleared acres and our tunnelled mountains are eloquent witnesses of the contests we have had, and of the victories we have won in competition with each other and with the soil from which our bread must come. But high over the curse comes the blessing; the strengthened survivors are themselves better fitted to enjoy what they have gained, and to transmit a full vigor to those whom they beget. Natural selection is inflexible. Competition, vigor, and perpetuity are joined in the eternal order.

Our larger plants have well-defined geographical areas over which each particular species may range. Only a few are really cosmopolitan in

character. But this year I encountered a small lichen, growing upon the trees at the water's edge, which, from some starting-point, has encircled the globe. It is known to inhabit every continent, and the islands of Polynesia as well. Still, it is a wee thing, seldom growing an inch long, with branching, gray or greenish-gray stem, and a small golden-colored cup on the end of its branches. Botanists have called it *Theloschistes chrysopthalmus*. They have other names for it, but this one is hard enough, so I will not allude to the others. I cannot give it an English name, for I do not know that it has one. This only shows how very little it has been noticed by common folk; yet it is older probably than any race of men on earth, and has reared a thriving colony in every quarter of the globe. We speak of our Anglo-Saxon as the greatest colonizing race, but it seems we must rest that claim upon other ground than mere dispersion, and occupation of territory; for this little lichen has planted more colonies, reared more and larger generations, and endured more than our noble English stock.

The particular species I have named has a near relative, more dwarfed still,—one which crouches

down closely to the surface of rock, or bark, to which the winds have carried its spore (seed), and on which the rain has nourished its growing tissue. Almost anything, living or dead, serves as a starting-point for its humble life. I have it from the moss-banks of Unalaska, from the trees of Massachusetts and New Brunswick, from the bones of some unfortunate sailor, whose remains were found bleaching on the shores of the Arctic Ocean, and from the wreck of the cedar boat which lay by his side. I have gathered this same species where it grew more than two hundred feet up in air, on the stones in the spire of the Strasburg Cathedral, in Southern Germany. Let me ask, What is the purpose in creation of this lichen, so widely diffused, thriving under circumstances so different, resisting the intense glare of the sun on the one hand, and the cold of the polar winter on the other? Evolutionist that I am, I can see in development nothing which contravenes Divine intention. Say, if you will, that I am sodden in sentiment; yet, I will still confess that I never see these rough, slow-growing things without wishing to sit down and question them on their own history and on the history of men that has been

enacted around them. Lichens though they be, humble, repulsive, rejected by men, for all that, they have sensibilities so refined that amid the atmospheric impurities where factory chimneys pour forth their black volumes they produce less fruit than where sunshine, shower, and clouds take the place of smoke.

These and the larger plant-wanderers we can trace by the unassisted vision; but there exists a class so small as to defy our poor eyesight,—germs, microscopic in size, that float in the air, nestle on and in living or dead plants, penetrate into our lungs, or find their way into our very blood and marrow, there to breed disease which may decimate a community. These are the true cosmopolites of the vegetable kingdom. Strange that the smallest, apparently most delicate, living things should be most ubiquitous, and actually the most hardy!

It is a strange, dual life that lichens possess. Cut them through, making a section so thin as to be transparent, and when you have placed this under a microscope you will see two distinct anatomical elements in their structure,—first, a set of colorless, branching, hollow threads;

and second, some round green bodies, whose size might be stated as about the one-thousandth of an inch in diameter. There is concerning each of these elements a long history: on the one part, a tale of theft, and on the other, one of servitude.* The colorless threads are almost identical with those which we find making the mould on our bread and cheese, or with those which in a more compact form make up the ordinary mushroom. These green bodies are just such as one may find on cold, damp brick walls, or occasionally forming a green scum on the surface of stagnant pools. It is a strange marriage, this, between the colorless threads and the green bodies, but certainly, so far as the threads are concerned, it is a union for life. As a rule, only such parts of plants as possess green color are capable of making their own food out of the inorganic elements around them. The threads must be helpless but for the green bodies to which they unite themselves, and from which they draw their sustenance.

Hence it appears that these fungal-like threads

* In giving this version of lichen life, I am not ignorant of Mink's researches, but do not adopt them, because I cannot set aside so easily the observations of Schwendener and Stahl.

cannot live without the green algæ, for such the round bodies are, though the latter are quite capable of an independent existence. When did these algæ begin their life on this globe? It must have been in early geological time,—so long ago that when we attempt to reduce the intervening period between then and now to years, the mind staggers under the effort to grasp the vast interval. Probably we never shall know when they first came. Their tender tissues are so poorly adapted to preservation that they might have existed from all time and never have left a trace among the fossils to testify as to their being. If one is ever found here or there among the pages of the rocky record, it will be simply by rare good luck. That they began life exclusively as water-plants there can be no doubt. Now they are, in one form or another, present everywhere in places where sunlight and dampness exist. Often either the mature alga or its spore is caught up by the wind and carried away to a pond, or, it may be, to the limb of a tree, or possibly to a damp wall. It is often of small importance to the plant on which of these places the wind drops it. The chances are that it will grow, though to a certain extent the character of

its growth, its final shape, may depend on the location which accident has given it. Freedom in a flowing stream, or even space on a damp wall, may allow it to grow into a chain of small cells, which at least serves to illustrate the first steps toward a complicated organism; but let the fungal threads seize upon that stray cell or spore, cramp its energy, and dwarf its growth, and throughout its whole career it may remain in the simplest form,—that of a single cell. Fed upon by a parasite, nothing can become so great or noble as when master of its own resources. Still, there is even for the imprisoned alga one honor: it does the best possible under the circumstances, and by yielding to an inexorable fate, produces the lichen which in its own way serves many useful purposes. More than once the lichens of Arctic regions have furnished food to starving men. And habitually they are the staple food of the Laplanders' reindeer in winter. There is much more which one might say even of so inconspicuous a group of plants as the lichens, all of which, too, would be suggested by the yellow-capped specimen we found on the trees by the bay-side; but this is not a treatise on botany.

The vessels seen on the Delaware are as characteristic of their work as any vehicles seen on land can be. You may recognize the oyster-boats not more by the large black figures on their mainsails, than by their shoal, sharp character. Then, here and there you meet one of the canal schooners with short bowsprit and with masts made to lower. They have high, straight sides, but little shoulder, and are about as hideous models as one can see anywhere. Besides this, they are dangerous in heavy weather. There still linger a few of the sloops built thirty years ago as freighters. They have great beam, light draught, and immense spars, with not a trace of the clipper-bow. The type seems to be disappearing very fast, only lingering in the form of sloops destined to carry stones or other equally heavy material. The hay-vessel, when you see her loaded, is a phenomenon. The illustration shows one I found lying alongside a "Jersey marsh." A person might well ask whether those who sailed in her had any remembrance of what "centre of gravity" meant. Two days after the picture was taken she passed down Maurice River. Her deck-load of hay was then so high that the boom and sail could just clear it,—

HAY SLOOP AND "JERSEY MARSH."

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that is, the hay was about twice as high as the picture shows. It was a threatening evening when she went out into the bay. Fortunately she found a quiet bit of water behind the Egg Island light, and there awaited calmer weather. I have seen these great masses out where the water was so rough that I could hardly help inquiring whether the law of gravitation was suspended in their favor; if it was not, then what force kept them from capsizing? The disparity in size between the hay and the vessel was so great as to call to mind the Hindoo notion that the earth was carried on the back of a tortoise.

These large three-masted schooners which are now so common, but a few years back were almost a novelty. Coasting appears to be their chief occupation, not because they are unable to undertake longer voyages,—for they could circumnavigate the globe,—but because the increased coastwise trade of the nation has grown enough to give occupation to that large and enterprising fleet. At the same time, too, our railroads have largely increased their own tonnage. Day after day, as we lay in, or near Salem Creek, we could see the Reading steam colliers passing up and down.

Probably there were on the average daily two each way that passed in the day-time. Besides them, however, there was a fleet of these large schooners engaged also in coal-carrying. Ten years ago a schooner of over three hundred tons was regarded as a large vessel; now it is not unusual to find one three times that size. In fact, it is said to be hardly worth while for a vessel of less than five hundred tons to attempt to compete in the carrying trade to any important port.

So far as we could see, the American Line (proper) of four ships were the only steamers going to Europe that carried the American flag. Not a day passed, however, that several large foreign steamers, bound in, or out, did not go by. They were mostly of that unpopular class known to sailors as "ocean tramps,"—that is, they belonged to no regular line, and were bound to no regular port, but took whatever offered and to whatever destination it was consigned, providing it paid. Of course, they were mainly English.

There is, in the abstract, something very fascinating in the idea of "ocean tramping,"—that is, in going where one wills, as a citizen of the world.

But looked at from a practical, patriotic, or selfish stand-point, those same tramps are, or ought to be, to every American the objects of utter abomination.

Their large aggregate tonnage represents just so much of our own products taken hence by others, when we should carry most of it in our own vessels. They represent fearful odds against ourselves in any contest we might have with a foreign power. They indicate how many seamen some other nation has, and how few we soon will have, if we continue to extend all aid and comfort to foreign vessels. They tell of our decline as a naval power, and of all that is implied in possible marine dominion.

Aside from the direct importance as a means of living to a considerable portion of our population, foreign trading in our own ships is still, and always has been, justly regarded as furnishing a school where, in time of peace, we should train and encourage those who were to uphold the honor of the flag on the high seas in time of war. Even yet, in an emergency, just a few such characters as Paul Jones might be sharp thorns in an enemy's side that would require a good many

vessels to be kept in the safe shelter of home waters by a foe.

Finding fault is a sorry feature in any book. Still, it may not be regarded as unpardonable to ask how long before the assembled wisdom of the nation, meeting in Washington, can devise some means of encouraging home maritime enterprise? The lost industry and the lost revenue should be restored to us. It is probably a safe political principle to act upon, that every productive interest or business should be made as large and as permanent as possible. Passing up and down the Delaware, I see the great ship-yard of Roach, at Chester. It alone has, since 1871, turned out over one hundred and sixty-seven thousand tons of carrying capacity in the vessels built there. What would be the effect upon the nation, if this and the other well-known yards along the same stream were furnished constant employment in building vessels for our own sailors to carry our own produce to foreign marts?

Without indorsing or denying the validity of the arguments, I insert the following from the *New York Herald* of December 28th, 1883. If the *facts* are as stated, they alone should awaken

the most serious thought, whatever be the *remedy* required:

In pursuance of the same subject the following is a passage from the interview with Mr. Grace:

"What influence has the tariff on American shipping?"

"It has done all in its power to destroy it. In 1855, 75 per cent. of our carrying trade was done in our own ships. I have not a dollar invested in shipping, and cannot therefore be accused of partiality in the matter. Well, when our civil war broke out our merchants in self-defence sold out or put their ships under foreign flags. When the war closed we found ourselves under a law forbidding us to buy our ships back, or to have any ships whatever except such as we built here ourselves. Our commerce then began to dwindle. In 1867 we had but 34 per cent. of the carrying trade, in 1878 we had 22 per cent., in 1880 we had 17 per cent., in 1881 we had 16 per cent., and if we keep on as we have begun we will soon have to hire foreign vessels to display an American ensign for us, in order to assure the world that there was once an American flag upon the high seas."

"Do you think we can ever build ships here?"

"Yes, and iron ones, too, if you will only abolish the duties on all the materials that enter into a ship. It may surprise you to know that at this moment I have on hand a contract to have a couple of American steamers built for South American rivers. Now, we cannot build these steamers as cheaply as they can on the Clyde. Everything we use is taxed so highly that it would be absurd to hope to do so. The duty on hemp and tow, for instance, is $20 a ton; the duties on chemicals and stuffs that go into paints are from 20 to 25 per cent.; iron is taxed from 60 to 75 per cent.;

steel, 45 per cent. now; machinery and tools pay a duty of 45 per cent.; copper pays nearly $90 a ton duty. In short, if you run over a ship from truck to keelson, you can hardly touch an article that is not made dearer by our protective tariff." *

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* This abstract is reliable beyond question, and comes from the *American* of January 26th, 1884. The tonnage list from 1874 down makes a sad showing.

Among the details furnished by the report from the Bureau of Statistics upon the commerce and navigation of the United States for 1883 are those relating to the ship-building of the country last year. They show that there were constructed in all 1268 vessels of all sorts, with a tonnage of 265,429.91 tons. Of this number, 829 were sailing- and 439 steam-vessels; 881 were built on the Atlantic and Gulf coasts, 91 on the Pacific coast, 171 on the Northern lakes, and 125 on the Western rivers. The comparison made by this showing with that of other years is presented in the following table. It gives the number and tonnage of vessels of all classes, both sail and steam, built in the United States in the years stated:

Years.	Number.	Tonnage.
1874	2147	432,725
1875	1301	297,638
1876	1112	203,585
1877	1029	176,591
1878	1258	235,503
1879	1132	193,030
1880	902	157,409
1881	1108	280,458
1882	1371	282,269
1883	1268	265,429

What we want first of all is a hearing of the facts throughout the land; their statement should not be limited to Washington. The sooner they are everywhere known, the sooner will a remedy grow out of public pressure. "The power behind the throne" is here, if anywhere, "mightier than the throne." This much is clear, that when there are so many foreign vessels engaged in our trade, and so few of our own, something is wrong which should be made right.

Aside from this legitimate discontent with the existing condition, on the nation's account, Philadelphians might be pardoned for much dissatisfaction on their own account. Granting the fact that New York's easy access to the ocean has placed her ahead of all competition as the chief port of the nation, yet as a great manufacturing city, whose growth and prosperity will be largely measured by the condition of the Delaware River, Philadelphia can hardly be long contented with

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The whole number of iron vessels built in the United States in 1883 was 35, of which only one was a sailing-vessel. These were nearly all built at the yards along the Delaware,—twenty-three at Philadelphia and Chester, eight at Wilmington,—the others coming, one from Baltimore, one from Buffalo, and two from New York.

the wretched channels in the stream between herself and the ocean. A better idea of Philadelphia's claims in this respect may be had on remembering that the last (tenth) census places her invested manufacturing capital at $187,148,857, yielding a product to the value of $324,342,955. The only classes who can in any way be content with such narrow water-ways are pilots and tug-boat owners, and we are willing to credit them with an honest desire to see wider and deeper channels. Besides the other evident signs of suffering which Philadelphia's commerce shows, comes (at latest hour) the rumor that several of her tug-boats are to be taken (for want of remunerative employment in the Delaware) to New York. It should also be said (in an undertone) that so long as our government is willing to leave New York Harbor in its present defenceless condition, so open to foes, it should be the more unwilling to leave the next important sea-port so difficult of access by friends.

There was, but a few years ago, a righteous indignation throughout the country over the vast sum squandered in improving inland, unnavigable streams. The fault lay, not in the sum appro-

priated, so much, as in the use to be made of it. There are scores of places in the Delaware where it would, in the long run, be a true economy to expend more than the most liberal Congress has ever granted for it.

The wrecks inside, or in sight of, the Delaware Breakwater are eloquent witnesses to the insufficiency of what has been done there. The next generation will wonder that it was reserved for it to afford at that point something better than a snare for the storm-stayed mariner. Shoals and wrecks have often gone too long unbuoyed. In Maurice River Cove, for a long time, a wreck, which was covered at high-water and partly uncovered at low-water, was left without anything to mark the spot. Yet, during all that time, it was a danger to the small "strange craft" that might be in that neighborhood. That no lives or vessels were lost (if there were none) on that wreck was less by the grace of the government than by the grace of God. It is now buoyed.

Then, again, take the channel for small craft, which exists close by Egg Island light, into Maurice River Cove; there is nothing to mark that. To assume, which is true, that but few

strangers use the channel, hardly diminishes the responsibility of the government, for more would use it, if it were marked, and in heavy weather it is often more than a convenient short-cut into Maurice River harbor. Our charts are drawn up too largely without regard to the wants of small craft. The entrances to unimportant harbors should be laid down more clearly and more frequently than they are. It is true that, from choice, such places are seldom visited by strangers; yet it is also just as true that they would be much more frequently utilized in times of danger if the stranger were sure how much water the channel of entrance afforded. Those blocked by shifting bars could easily be indicated.

I am radical enough to wish that the most eloquent opposer of liberal appropriations in behalf of life-saving stations, and of harbor opening and buoying, might find himself, in some one of the many wild December nights, out with the crew of a small trading-vessel off the shore between the mouths of the Delaware and Chesapeake Bays; I should like, then and there, to have his candid opinion as to whether Machipongo, Wachapreague, Matomkin, Gargathy, and Chincoteague

Inlets should not be watched, lighted, and buoyed in the best and most efficient manner known to modern science. Furthermore, after his conversion, I should like, if he were an honest man, to hear him make his plea in Washington in behalf of such and many other inlets along the coast into which small craft might "creep" and be safe. The statement that the channels leading to these inlets shift with every storm, instead of relieving our authorities of the responsibility of establishing an efficient watch, only adds weight to it.

It may be a mere visionary notion, but I am convinced that among the many, now unthought-of, applications which the next generation will make of our newly-acquired knowledge of electricity will be to have buoys lighted by electric lights, which will mark the way into every such harbor on the coast, making their entrance thus as easy by night as by day. If so, in a better sense than we have yet understood the phrase, "the sea will give up its dead."

CHAPTER V.

WHO SHOULD GO CRUISING.

THERE are many very hopeful signs now in our social life. It is the custom to look at the gloomy rather than the bright side of things; but, with all this, our pessimist friends must admit that as a nation we are a larger, more influential, and probably a better, people, than one hundred years ago. As to individuals, the average longevity has increased notably during the same period. These are very hopeful indications.

Somehow, along with these changes, we can find other notable ones in social and in moral ideas. In fact, an idea must have something more than the savor of antiquity to make it venerable now. If it has outlived its usefulness, we cease to venerate it. Social ideas and political creeds have come to be looked at very much from the same standpoint,—as good things to threaten the existence of, as soon as they get strong enough to domineer.

I hold it to be an element of Christian faith that a man should care for his physical well-being, and can never think of those old ideas which led men to wrong the body, to benefit the soul, except as being monstrous. Henry Ward Beecher is said to have attributed his success in life to the fact that he was a good animal. If he ever made the remark, it was among the very wisest of his utterances. Emerson had hit upon the same expression. Herbert Spencer, in the most absolute cold-blood, engendered by his philosophy, puts the idea in still more distinct and telling shape: "We hear a great deal about the 'vile body;' and many are encouraged by the phrase to transgress the laws of health. But Nature quietly suppresses those who treat thus disrespectfully one of her highest products, and leaves the world to be peopled by the descendants of those who are not so foolish." Surely the above opinions come from a most unorthodox trio, so far as matters of faith could have been judged by the creeds of twenty years back. But just now these men are most respectable because they were among the pioneers in the special ruts in which our higher culture and civilization are running. During June, July, and

August I have been upon the water, loitering here and there, as the wind and weather made necessary, or as my whims suggested. It was not simply waste time, but time devoted to search for physical vigor. And the result justified my course. In my boyhood, however, the most familiar moral maxim concerned the work which an unpopular individual, once an angel, found for idle hands to do.

The cooler nights, as well as the matured corn-blades, which were yellow and dry, attested that the vacation was over, and that the work of a new college year must begin. All that remains is to take my boat to her winter-quarters. But before doing this, let us inquire,—

WHO SHOULD GO CRUISING? There is a constantly-increasing number of young and middle-aged men who, under the exactions of daily duty, find themselves each spring physically below par. Many of them cannot afford the cost of a prolonged trip by the ordinary means of travel, even if it be undertaken in the interest of health. Indeed, it is by no means certain that such a vacation would yield the largest return, for the simple reason that there is nothing for the individual to do, save to pay his bills and be taken care of. Thus

the stimulus of personal activity and of responsibility is missed, and with it, also, that complete change in mental occupation which a cruise is sure to afford, if it be such as I have tried to describe.

The essential substratum upon which health must rest is muscular exertion. Muscular fibre comes only when earned. However valuable as aids, I doubt whether all the tonics of the shops, alone, ever created an ounce of muscle. Cruising affords not only the incentive to, but the opportunity for, healthful exercise.

The trips I have described were made in a small vessel (six tons). A party of, say, four congenial companions could make such, or more distant ones, in a larger boat, spending a month in doing so, and, after paying for the vessel, hiring a captain and a cook, purchasing the provisions, still find that the expense for each man did not exceed fifty dollars for the whole trip. They could do this, I have said, if they were congenial companions. If they were not, the first week would probably end the cruise. Is there any other way in which so much health and pleasure could be had for so small a sum?

Probably this never would have been written

but from the fact that no one here has yet tried to write up a cruise as the author of "Rob Roy on the Jordan" has done for England. That it was needed in that water-loving land, and that it was acceptable, is shown from the fact that the book speedily passed through several editions. No such success is anticipated for this effort. It will have accomplished its work if it stimulates some one else to do better.

WHO SHOULD NOT GO CRUISING? First, those who expect nothing but comfort, and who cannot endure plain living, or those to whom monotonous drifting one day, with possibly a tempest-tossing the next, is a greater annoyance than a week of pleasant sailing and free, open-air life can compensate for. Second, those *whose education has been so neglected* that they have never been taught to enjoy exposure for the manhood which it brings. This feeling is to some a natural gift, or, if you prefer, an unconquerable longing; to others it must be an acquisition. Physicians know that a very great trouble they have in dealing with ailing ones is, that to order them to a camp or to a cruise, would be to make life so intolerable that no good could come of it. Hence, then, in the

interest of health, it is part of a liberal education to love the winds and the waves, as well as the mountain-glens. The most profound thinker of this age says, when in one of his lighter moods, "Exclusive devotion to work has the result that amusements cease to please; and, when relaxation becomes imperative, life becomes dreary from lack of its sole interest,—the interest in business. Life is not for learning, nor is life for working, but learning and working are for life." An early and a retained fondness for yachting and for angling has prolonged, no one knows how many years, Herbert Spencer's active, useful career.

There is a third class who should not go cruising. I mean such as enjoy being weak,—those creatures to whom bronzed skins and excessive vitality are an abomination. To such we would say, Stay at home, by all means! In the whole world out of doors there is no place for you.

> "Still breathe we this high air with rapture, still
> See earth dilated to a palace large,
> Roofed with blue bravery of the cloud-sailed sky."

A fourth class should be named as unfit for cruising,—those who are confirmed invalids, who

have passed the point at which they can make strength faster than such a vacation, or such an occupation, would use it. To advise these to leave comfortable homes is a moral wrong which admits of no justification.

Within a few years "the canoe" has awakened a profound interest in the United States. The constantly-increasing number of those who yield each summer to the fascination of the paddle shows that there must be, as we know there is, infinite pleasure in skimming our inland waters. Nothing that has been written in advocacy of yachting is to be construed as against "canoeing." They belong together as forms of the same recreation, each having its sphere, and each yielding a full return for the time and money expended, providing discretion rules the individual.

Caution: *Cruising in fresh water, remember your quinine-bottle. In the South, whether on fresh or salt water, keep in mind the same injunction.*

CHAPTER VI.

TO WINTER-QUARTERS IN THE CHOPTANK.

NOTHING more clearly indicates the unsettled character of the human mind than that we tire of our pleasures. Nothing shows more strongly the discipline of life than the patience with which well-ordered minds toil on, until the hour comes when they may fairly enjoy the freedom of doing as they will. I had waited and worked for my vacation. I enjoyed the pleasure it brought until, sated, I longed again for work.

Salt air and water, physical labor and mental rest, had done much towards renewing my youth, and promised to do more. Even a yachtsman may realize that life has duties more important than cruising. Autumn was approaching, as the russet blades of corn plainly indicated. This meant work.

On August 27th, when the tide began to ebb,

we heaved our anchor up and hoisted sail. The wind was as fair and as strong as we could wish. In an hour the sister-cities of Camden and Philadelphia were receding from view. There appears to be a spell associated with the river from Camden to Chester, so far as my sailing is concerned. Save once, I do not remember ever to have had a fair wind for the whole distance; on all previous occasions, it either died away entirely, or changed its direction. On the trip I now write of, it became weaker, then baffling, coming first from one quarter, and then from another. Four hours were consumed in reaching Chester. So we drifted with the tide until what was ebb, and in our favor, changed to flood, and opposed us. With this change there came just enough of wind, and from such a direction, as to keep hope alive, by setting us forward very slowly. It was ten o'clock at night before we were fairly inside of the canal at Delaware City.

Tired and hungry and sleepy, after a very hastily-prepared supper, the crew of the "Martha" laid down to await daylight. Nothing of ordinary gravity could have awakened us. In fact, it was not until next day, when we saw how roughly the

little boat had been used, that we realized the force with which a large schooner ran into the yacht, while we slept.

Accepting it as inevitable, I was glad to have my boat in the canal again, and on her way to the Chesapeake waters. This time we fared rather better than when we came through *en route* for the Delaware Bay; though, where so much was changed, I was rather surprised to find the bad condition the canal was in at one point. Still, to do them the fullest measure of justice now, I am bound to say the employés were at work dredging near where my boat found less water and more rock than safe navigation required. There is one set of men employed on the canal of whom I can speak, without any reserve, as being kind and disposed to render any service they could: I mean those on the tug-boats. Such, at least, is the statement I must make so far as my three trips entitle me to have an opinion.

I think in early autumn a trip through the canal is far from uninteresting. Between locks—that is, when not too busy—there was much to interest an observer. The air of comfort and of prosperity about the farm-houses was very marked. The

dykes and embankments on the eastern end suggested Holland, save that the Dutch had not covered it with red-roofed houses and lazy, long-armed windmills. The well-tilled corn-fields attested a vigorous, pushing community, just as strongly as the large peach-orchards suggested late frosts and high prices for their fruit each returning season. The canal itself was well filled with a thrifty growth of eel-grass. I have already alluded to its somewhat strange way of having the female flowers fertilized by the floating male flowers. This plant was in full bloom at the time of my previous trip. Its graceful, waving leaves are an interesting study as you see them in a moderately swift current.

Out of the water, as well as in it, were sources of enjoyment. After passing Saint George's the country became more hilly. Two centuries of cultivation had only changed the surface, removing the trees and leaves, but substituting smaller growths and a dense sward. Save here and there, two feet below the surface, everything was exactly as left by natural forces. The cuts made by the canal revealed great deposits of gravel, with occasional large, water-worn stones.

The very first glance told plainly enough that neither of these was made there, but that both had come as immigrants from remote parts. So far as their presence is concerned, there is no accepted hypothesis which is not wonderful enough. The first chapters of their wandering were written far back in the past, and they were separated from their birth-place with labor-throes, under which the whole region must have groaned. This may have been long before man appeared on earth. Whether they were carried to the spot where we now find them by single icebergs, floating over what is now dry land, or whether they were carried by the great glacial mass, which it is supposed once overspread the Northern United States, is a question geologists must determine. Probably if one could remove the water from the Banks of Newfoundland, we should find just such rocks and gravel. These are supposed to have been carried there by bergs from the Arctic Ocean, and thawed loose when the ice came into the water warmed by the Gulf Stream. Humboldt has said "the forces of nature are practically illimitable." Nothing illustrates this more strikingly than an attempt to conceive of the power implied by

glacial movement, when, over hill and down dale, the vast ice-fields, pressed upon from the north swept resistlessly and directly forward without regard to the trend of the hills which they ground under their weight. At all events, be the explanation of the present position of the rocks and gravel on the line of the canal what it may, one thing is sure: they suggest travel, cold, and long-ago.

There has been no frost since the peach-trees blossomed in early spring, yet we found the leaves were changing color in advance of the coming cold. They were a study, each having its own characteristic hue, and they have left to this hour the impressions then produced, photographed in my mind. The leaves have fallen, and their tender tissues are in decay, but the mental image is as fresh as ever. Thoughts often outlive the causes which produced them. Hence one might well suppose that such "things of beauty" are naturally enough intended to be "a joy forever," and that the pleasures of the mind are equal in value to, and as legitimate as, those which spring from the product of the mint. What besides them do we take with us at last?

The Liquidambar, or sweet-gum, foliage, was

red-brown, the sassafras was orange-red, and the tupelo was scarlet. Other shades, as those of the red oak and scarlet maple, and Ampelopsis, were appearing and blending with the more pronounced ones already named, to complete a perfect picture. Botanists do partly divest this of interest, when they remind us these bright colors are caused by simply a worthless residuum in the leaf, after all the important living colors have been removed. This may suggest that the summer's work is past, but then fancy only stretches forward to another spring, when warmth and shower will deck the same trees again, after the rest which autumn colors promise. I do not care to reduce life to mere chemical and vital force. It robs being of love, of poetry, of personal protection, and substitutes simply the chilling reign of objective law. After all, in whatsoever new channel of evolution we start, or however far we drive back the bars which shut out the sunlight of ultimate truth, we do inevitably come at last to the unknowable and the infinite. If men are content with the comfort they derive from considering these in terms of physical force, I can find no fault with them, though I can claim that my dim notion of

that power as a spirit is no less real than theirs, which regards it as force.

The flowering fern (*Osmunda regalis*), or, as it is better called, royal fern, mingled its delicate, peerless foliage with that of the wild grape as they grew along the narrow line where land and water met. The vegetation on the canal banks taught me some lessons of interest concerning the distribution of plants. *Quercus falcata*, or Spanish oak, was no longer rare, though in Chester County (in Pennsylvania), but a few miles to the north, it is not common. The Liquidambar told the same tale. Larger generalizations still, come to light, when we read the history of the Scotch broom (*Cytisus*). This plant is a native of the sandy woods of Western Europe. How came it here? Clearly, it was introduced by human agency along the lines of human traffic. It is a low, dark-green shrub, with a profusion of angular, slender, wiry branches, which compensate for lack of leaves. Its chief glory is the mass of large, bright-yellow flowers, which spring out from slender foot-stalks. On the southern bank of the canal it grew in all its rugged luxuriance. At Yorktown, too, it was about all that remained of British origin after

Cornwallis left. It is, however, too firmly fixed on the dry, gravel hill-sides there, ever to abandon the position. Again I saw it flourishing on the gravel banks where the railroad cuts had been made above Chester, in Pennsylvania. In all these places it has come to remain, and to win, by its superior hardiness, a victory over our native plants. It is one of the naturally-selected which succeed in the struggle for existence. Just so, too, the wild carrot and the ox-eye daisy have done. But there is some principle of justice in the retribution our American weeds, such as the common fleabane (*Erigeron*), are wreaking in European soil.

There is, however, a broader meaning than appears on the surface in these plant colonies, which become so strong in new soil as to crowd out the original flora. Its resemblance to human migration and conquest is too plain to escape notice. Races of men and plants both are invigorated by change of home. Rotation of crops and rotation of races are associated in thoughtful minds.

One might be expected to moralize when out on the Chesapeake, for there is inspiration in the region; but think of ethics, or equity, or anything

else good or grand, rising out of the muddy waters of a canal! It is absurd.

No excuse is needed for introducing the barometer again, as those who go down in small ships cannot be too well prepared, or too fully warned. When we left Philadelphia on Monday morning it stood in the cabin of the "Martha" at 30.35 inches. On Tuesday morning, as we left the canal at Chesapeake City, it registered 30.25. The wind, which for a few hours had blown from the east, became again unsettled,—more so, even, than on the previous day. We did succeed in getting down Back Creek into Elk River, but with much difficulty. What was surprising enough was that in the open water, as we approached the bay, the wind was more baffling than in the river. Most of the time it came from the northeast. In an instant our sails would be taken "aback" by a westerly wind. For two hours we sailed, first, "on the wind," then free; then we had to trim our sails to meet the wind as it "bounced out upon us" from some new quarter. At one P.M. we were off Sassafras River. The barometer was still lower than in the morning. It now was beyond doubt that a storm was brewing. Still Pond and Worton Creek

were soon passed, both tempting harbors; but we were sailing against time, and desirous of making as speedy a trip as possible.

The wind was now strong, steady, and from the east, or possibly east-northeast. Hence, I made up my mind to follow the eastern shore down, and to abandon the idea of going into Magothy harbor for the night. So long as we had an off-shore wind, it was of small moment how hard it blew. By the time we reached Colchester Beach two large schooners that had been chasing us all day passed us, on their way south. They were carrying sail enough to crowd their scuppers under. My own little boat was fairly staggering from the canvas we made her carry. She never showed to better advantage. Every boat, like every man, has an individuality. I had become acquainted with mine, and whatever was in her I was by this time able to get out. Night caught us as we crossed the mouth of Chester River, and the wind then had moved more towards the south, so that we were obliged to take in some of the sheet. This, with the rough water in the mouth of the river, delayed us greatly. But we held our course down the eastern shore. By nine P.M. Kent Island

light became visible, and then we had a safe guide. It furnished a striking illustration of the rotundity of the earth: when we stood up, it was plainly visible; when we sat down, the light could not be seen. Clearly, then, the height of a man made the difference by removing the intervening obstacle. Two hours later Sharp's Island light furnished another illustration of the same thing.

From Kent Island light we had a tedious beat in, over the bar and "sunken island," to a comfortable harbor near Poplar Island. We had to feel our way through the intense darkness, and it was well towards midnight before we came to anchor. In daytime this harbor is easily reached, and I am surprised that so few of our yachtsmen in light-draught boats frequent it. I have always found it a safe harbor in any weather.

Our run for the day, after leaving the canal, was about seventy miles.

By five A.M. we were up and off. The fog was as dense as it well could be. Fortunately, we had our bearings, and ran through the narrow channel between the mainland and the island without trouble. The tide at first was against us, but it turned as we entered the Choptank. It was, how-

ever, a clear "beat" from the mouth of the river up to Cambridge, which we reached about one P.M. The barometer then stood at 30.15.

Hardly were our sails down and everything made snug before the threatened storm burst. It reached us mainly as rain; elsewhere it came as wind.

Here, then, is the lesson so well known to meteorologists, but which I wish more and more to impress on my amateur friends, that whether above or below the mean, at the sea-shore, *when it starts to go down rapidly, a "falling barometer" means atmospheric disturbance, either wind or rain.*

This storm was general. And I here insert two newspaper notices to show it. The first is taken from the Philadelphia *Public Ledger* of September 1st:

THE LATEST NEWS.

There was a violent storm on the Great Banks of Newfoundland, on Sunday last, which drove hundreds of dories away from their trawls. It is estimated that 100 dories and 80 men were lost. Scores of the dories were capsized, and the ocean was strewn with wreckage.

The second extract is from the Philadelphia *Evening Bulletin* of August 30th:

FIERCE WINDS.

THE EXPERIENCES OF A STEAMER IN A CYCLONE.

The New York *Tribune* of this morning says: "The steamer 'Britannia,' Captain Jauffret, from Marseilles, with a cargo of fruit to Seager Brothers, arrived at Prentice's stores, Brooklyn, yesterday, with her sails and sail-covering carried away and her boats badly damaged, in consequence of a cyclone which struck the vessel on August 25th, in latitude 38 deg. 15 min., longitude 63 deg. 10 min. Captain Jauffret said of his experience,—

"'I never before encountered such a storm. At 8 P.M. on August 24th the atmosphere was calm, though heavy, and the barometer stood at 30.2. The wind was southwest, but towards morning it shifted to south. I ordered all sails set, as I did not anticipate danger. At 6 A.M. the next day the sky began to darken, and the barometer at 7 A.M. had fallen to 29.4. Half an hour later a terrific gale suddenly struck us with the force of a vast volume of steam suddenly let loose, carrying the sails away and badly damaging the boats. The sky became black, and the heavens and the water seemed to mingle together. We could not see ten feet. We were thrown into a pitchy night in almost a moment of time. The men lashed themselves to the ship, and the 35 passengers awaited the result in comparative calm. Indeed, officers and passengers both acted with wonderful coolness. The vessel was placed under full steam, but this had no effect. She was completely at the mercy of the elements. The wind seemed to come from every direction at will, the water swirled over us, and the steamer was carried around with them. There was a terrific rumbling at the same time, which did not resemble anything I had heard before. In the mean time the rain fell in tor-

rents. Indeed, it seemed as if all the powers of earth and air had combined to produce the most disastrous effect. The lightning flashed vividly and appeared to leap from the waters to the clouds in a most erratic manner. The cyclone passed away as suddenly as it had come, the sky began to brighten, and the heavy sea fell away. In the height of the storm one of the marble slabs of the sideboard in the saloon was detached, and this struck Joseph Modul, the chief steward, inflicting injuries from which he died on the next day. He was buried at sea. The boatswain had two of his ribs broken, but is about now. The rest of the voyage was uneventful.'

"The 'Britannia' is of 1838 net tons burden, and she has a double bottom and double sides. For this reason Seager Brothers account for her standing the storm so well. She had 6000 boxes of fruit as cargo, and was only in ballast trim."

August 29th will long be remembered at Atlantic City as the date of a fearfully destructive tidal-wave.

During our fastest sailing at night, on our way down, we would occasionally run over a jelly-fish, which became, under the irritation, a beautiful ball of phosphorescent light. It is well known that this light, which is so striking, depends upon a variety of animals. Among the most perfect producers of it are the so-called Noctilucæ,—microscopic animals which, when the

water is agitated by an oar, will leave behind the blade a blue or silver streak, or reveal themselves in bright drops of the same color, as they fall from the lifted oar. In the waters about Cape Cod I have often seen this condition of the water more marked than I ever observed it in Chesapeake Bay. As a rule, the phosphorescence of the water is greater in warm than in cold latitudes, which fact Darwin attributes to the greater abundance of life in the tropical than in the polar seas. In some instances, however, he thought it came from particles of decaying organic matter, and that the ocean was thus purifying its waters. The words of Humboldt combine truth with poetry: " . . . So also in the torrid zones, between the tropics, the ocean simultaneously develops light over a space of many thousand square miles. Here the magical effect of light is due to the forces of organic nature. Foaming with light, the eddying waves flash in phosphorescent sparks over the wide expanse of waters where every scintillation is the vital manifestation of an invisible animal world."

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This ended the cruising of the "Martha" for

the season. The stanch little sloop, now laid up for the winter in Cambridge harbor, awaits new duties in the coming season,—1884.

Who that reads Tam o' Shanter can fail to see an overflowing genius in every line? Burns must have been placed among the poets, though he had written nothing save,—

> "But pleasures are like poppies spread,
> You seize the flow'r, its bloom is shed;
> Or like the snow falls in the river,
> A moment white, then melts forever;
> Or like the borealis race,
> That flit ere you can point their place;
> Or like the rainbow's lovely form
> Evanishing amid the storm."

Though every idea there is a genuine reflection from nature which inspired the poet, still, when I look back over my three months of quiet cruising, those glowing lines do not express the facts to me. True, the pleasures departed with the days, but the memory of them remains as part of me; and is as truly a mental treasure to me, as if derived from the pages of any author.

Far more real and full is the stately verse of Tennyson,—

> "But in my spirit will I dwell,
> And dream my dream, and hold it true;
> For tho' my lips may breath 'Adieu!'
> I cannot think the thing 'Farewell!"

THE END.