

THE AMERICAN FISHCULTURAL ASSOCIATION.

PROCEEDINGS ELEVENTH ANNUAL MEETING.

THE PRESIDENT called on Col. McDonald to state what had been done in the way of retarding shad eggs with a view to transportation across the ocean.

COL. McDONALD.—The results of the experiments have shown that retardation cannot be carried beyond six days, in the case of shad eggs. In connection with Prof. Ryder I undertook to retard them by keeping them at a constant temperature, but it was late in the season and the water was up to 75deg. We found that at 60deg. we could secure a better development in from seven to eight days, but when the temperature was below that figure the development was abnormal, and the result was only a period of eight days, not enough to take them across. Eggs had been taken from the fish at a temperature of 75deg. and then kept in water at a temperature of 60deg. for seven and eight days, and healthy fish hatched. When kept for a longer period, or at a lower temperature, the fish were invariably unhealthy. It had been proved by experiment that eggs kept in wet flannels in a damp atmosphere at a temperature of 60deg. for forty-three hours could be successfully hatched. The problem of successful hatching while the eggs were en route has now been solved by the use of closed hatching apparatus. This consists simply of a jar of about five quarts capacity, with two tubes leading into it. One of these, at the bottom, furnishes a constant supply of fresh water, and the other, at the top, carries off the impure water. As this water is forced into and carried out of the jar under pressure, and as the 75,000 eggs which the jar would contain in a solid mass at the bottom, the motion of a train or rolling of a vessel would not affect the spawn. If we cannot retard the hatching until reaching the other side we might at least delay it so far that the fish would reach there before requiring food. This closed apparatus has an advantage over the open ones for ocean travel, in the fact that the eggs are not displaced by motion as in the closed jars, the rolling of a ship would not affect the eggs in the least; they would lie as quietly as on a laboratory table. All that we would need is a water supply, or a means of securing purity to the water by circulation. With this apparatus shad spawn might be carried to Europe as safely and successfully as they are now transported to the rivers of California, Colorado and Texas. The only question that a practical culturist is now required to answer is as to the ability to keep a supply of pure water to feed these closed jars while a vessel was en route. It has been known to fish culturists for years that the eggs of the salmonidae could be transported out of the water without injury, but not until very recently that the same thing could be done with the eggs of the shad. This discovery was the result of an accident. I had been thinking of transporting shad eggs for some time, and had constructed an apparatus for carrying 400,000 in a man's hand, when we were suddenly called upon to use it. The Fish Commission had a lot of eggs in water on board of a steam launch on the way from the spawning grounds on the Potomac to the hatchery in the Navy Yard. I filled my box and took it in my hand to Washington, where they hatched after being fifteen hours out of water and proved to be a very strong lot of fish. This accidental discovery has resulted in a great saving in the expense of artificial propagation, and has made possible the establishment of a central hatching station, at which the Government will hereafter hatch all the impregnated spawn taken in the Potomac and Susquehanna rivers. Men will have buckets and take the eggs from the grounds to the hatchery in the armory at Washington.

THE PRESIDENT—Who invented this apparatus?
COL. McDONALD—It was not a new invention. It was the same system used in transporting salmon eggs on flannel trays, but it had not been tried with shad, and it has generally been believed that shad eggs are too delicate to transport in this way.

THE PRESIDENT—What has been done in the hatching of cod eggs?

COL. McDONALD.—The eggs of the cod, Spanish mackerel, sea mackerel, bonita, and other fish whose eggs float on the water, cannot be hatched in the closed apparatus used for propagating shad eggs. Just how to hatch them while being transported is a question that the Fish Commission is now trying to solve. The trouble is that the eggs are so buoyant that they will follow the current and pile up against the screens and clog them. A series of experiments is being made with a funnel-shaped apparatus which is fed from the bottom with pure salt water. To carry off the impure water a syphon is used, the arm inserted in the upper portion of the apparatus being long enough to reach below the mass of floating eggs. The experiments have proved partially successful, and it is expected that they can be made wholly so. The transportation of the eggs of the cod from this city to the Washington hatching-houses is a problem which still awaits solution. An attempt was made last fall by the use of hermetically sealed jars. The eggs were taken at the Fulton Market slip and impregnated, and their development retarded by placing them in water at a temperature of 34deg. In attempting to hatch them artificial sea water was used, and the failure of the attempt, it is thought, was due to that fact.

MR. BLACKFORD.—The possibilities of cod hatching at Fulton Market are simply immense. I wrote to Prof. Baird, the U. S. Fish Commissioner, this winter, and offered, on behalf of the Fulton Market Fishmongers' Association, the use of the ripe cod brought alive in the wells of the fishing-smacks, and offered to give all assistance possible. Prof. Baird sent two experts and Prof. Ryder, who wished to study their embryology. The first lot of eggs sent on trays and in kettles from the market to Washington was a failure. The second shipment went in glass fruit-jars half full of eggs and filled with salt water, and arrived safely, which proves that they can be sent that distance. Whatever failure occurred afterward was due to bad water. I have suggested to Prof. Baird that next fall the steamer Fish Hawk, with its appliances for hatching, be sent here, and offered, if this was done, to furnish 100,000,000 eggs per diem for hatching purposes. This could easily be done, as a large cod will strip 8,000,000 good eggs. This method will save the expense of sending out a special steamer to catch fish with ripe eggs, and will save a great waste of both fish and eggs.

The following gentlemen were elected members of the association: Charles W. Smiley, Smithsonian Institution, Washington, D. C.; Lieut. Henry B. Mansfield, United States Navy; Prof. Alfred Mayer, Stevens Institute of Technology, Hoboken, N. J.; Col. M. McDonald, Fish Commissioner of Virginia; W. L. Gilbert, Plymouth, Mass.; H. P. Schuyler, Troy, N. Y.; Erasmus Corning, Albany, N. Y.; John T. Agnew, Charles Banks, and Benjamin Wood, New York city. A recess taken until 2 P. M.

Upon again assembling an election of officers for the following year was then declared in order, the first being that of president.

MR. MILLER nominated Mr. George Shepard Page for President. No other name was proposed and he was balloted for and elected.

MR. BLACKFORD recounted the services of Mr. Page to fishculture and stated that it was from his suggestion that the United States Commission on Fish and Fisheries had sprung, and other facts which are matters of record.

MR. MATHER then named Mr. James Benckard for Vice-President, and his election followed.

MR. PAGE alluded to the fact that the South Side Sportsmen's Club, of Long Island, of which Mr. Benckard is President, would market four thousand pounds of brook trout this year, bringing the handsome sum of \$3,000. He mentioned this because it has been asserted that this fish cannot be successfully raised for market, an error that the club is slowly correcting.

MR. BLACKFORD named Mr. Charles B. Evarts for Treasurer. Mr. Annin named Mr. E. G. Blackford; upon ballot Mr. Blackford was elected and Mr. Evarts moved that it be made unanimous; carried.

MR. EVARTS named Barnet Phillips for Corresponding Secretary; elected.

MR. BLACKFORD named James Annin, Jr., for Recording Secretary; elected.

An Executive Committee, whose names are given below, was then elected. The officers of the Association for 1882-3 now are:

- GEORGE SHEPARD PAGE, New York, President.
- JAMES BENCKARD, South Side Club, Vice-President.
- EUGENE G. BLACKFORD, New York, Treasurer.
- BARNET PHILLIPS, Brooklyn, Corresponding Secretary.
- JAMES ANNIN, JR., Calcutta, N. Y., Recording Secretary.

EXECUTIVE COMMITTEE.

- FRED MATHER, FOREST AND STREAM, (Chairman).
- G. BROWN GOODE, Smithsonian Institute, Washington, D. C.
- SETH WEEKS, COPY, Pa.
- BENJ. W. WEST, Fulton Market, New York.
- T. B. FRINGSOON, Washington, D. C.
- CHAS. B. EVARTS, Windsor, Vt.
- DR. W. M. HUDSON, Hartford, Conn.

[By an oversight the first paper, read by Mr. McGovern, was omitted from our last issue. It will be given in our next issue.]

BULL TROUT AND POMPAÑO.

IN your issue of March 23 I find a note on the "Bull Trout" of Lake Cœur d'Alene, Idaho, in which the statements are made, on the authority of Drum Major Lattes, that this bull trout is a "charr," that it is identical with the charr of the lakes of Scotland and Ireland, and that it was first described by Dr. Richardson as the "hood charr" (*Salmo hoodii*).

I have examined specimens of this bull trout sent by Capt. Bendire to the National Museum. It is the species which we call *Salvelinus namaycush*, the "Dolly Varden trout," first described as *Salmo malina* by Walbaum in 1792. It is a "charr," and not a "trout," as those words are used in England, although not quite the same as the charr of Scotland. It is not the "hood charr" of Richardson. I have examined Richardson's specimens in the British Museum. One of these specimens, considered by Dr. Gunther the type, is a lake trout (*Salvelinus namaycush*), the others are common brook trout (*Salvelinus fontinalis*). The *Salvelinus hoodii* is therefore to be suppressed from our lists.

The large "pompano" referred to by correspondents in the same issue belongs, as you suggest, to the "African pompano," or "permit" (*Trachynotus goodei*), a species not rare in southern Florida, and possibly simply the adult form of the round pompano (*T. oceanus*). If anybody ever heard the pompano called "pompanose" at New Orleans, it would be a gratification to have him speak up, or else for ever after hold his peace and let us drop that atrocity from our list of "common names."

BLOOMINGTON, Ind.

DAVID S. JORDAN.

"J. R., Jr.," RISES TO EXPLAIN.

Editor Forest and Stream:

When I wrote the article "How is Your Fishing Tackle?" which appeared in your issue of March 30, I had little idea of getting Ned Buntline into my wool; had such a dreadful alternative been before my eyes, I doubt if the article had ever seen the light; and now let me tell why.

I remember the time, long years ago, when Ned Buntline commenced the publication of "Ned Buntline's Own," in an office on Spruce street—I was a boy then, and well do I remember him as he appeared on the streets in those days; we boys looked up to him as a perfect hero, one who cared for neither man nor beast—who dared do anything—and I can recall how anxiously we watched for each number of his paper as it was issued, and how eagerly we devoured his tough yarns with the keenest relish; but woe to me if my good father found in my pocket a copy of the aforesaid paper. He, a true blue Presbyterian, could not tolerate that kind of literature—I could. In later years I have heard terrible stories about Ned, with rifle in hand and fire in his eye, chasing Alvah Dunning around the Raquette Lake region, and again of Alvah chasing Ned. Both alive at last accounts, however.

With all this in mind, well might I dread the thought of crossing swords with our worthy friend; but as it happens to be only pens that are crossed this time I guess the affair will not hang crape on very many doors.

My article was made up from actual experience either of myself, or of some others of my fishermen friends. * * * One of the keenest fishers I ever traveled with, was one of the most careless men with his tackle. I had him in mind when I wrote of the tangled mess of rusty hooks, etc.

When we went to the Saranac Region he had his fishing tackle in a large tin box. On our arrival at Martin's the box was opened and he began to get out a rig to go twilling with, and it took most of an afternoon to get things into decent shape, and then it was a miserable apology for an outfit; and he is not the only one of the kind that I could name.

The flybook alluded to was one made for the purpose, with leaves of parchment alternating with leaves of cloth into which the flies were hooked, and when opened the collection of flies were the most forlorn my eyes ever lit upon. Scarcely a perfect one left—the moths had gone through the whole business in a business-like way.

Now, in regard to the kingfish which were credited to "Old Reliable Rod." In the waters of New York Bay I have taken at various times several fish that have always been

called, by those that pretend to know, "kingfish." I have also bought them from fish dealers, and they gave them the same name. The fish in shape somewhat resembled a trout, and in length was from ten to fifteen inches; color, if my memory does not fail me, dark yellowish brown, with some little marking on the sides. Those I have taken have always been on weakish grounds. Webster's dictionary gives an engraving of the Southern "kingfish or opah"; this is NOT the fish I referred to.

I thank Ned Buntline for the kindly manner in which he has overhauled my article; it shows that he is in search of light; hope he got some. J. R., Jr.

TROUT IN THE ADIRONDACKS.—Enclosed find a slip from the Chateaugay Record of March 24, 1882. The statement is wholly true, and much more might be added to it, for while on a flying trip to the lake (Upper Chateaugay) one day last week I saw five salmon trout, the smallest weighing six pounds, and the largest eight and one-quarter pounds, all taken from one hole through the ice. Our "shad," or white fish, (a delicious fish by the way) are being taken in the same way. The speckled trout I am glad to say are saving their strength for the fly. All the fishermen and guides that I have come in contact with from different parts of the Adirondacks within the past six months speak of last season as being an "off year," but that the "signs of the times," and the extraordinary way in which the fish are now taking bait indicate that the coming season will be one of unusual success in that direction. The slip from the Record says: "As a result of the efforts of Messrs. Humphrey and Boomhower, and other gentlemen who have caused many thousands of lake and salmon trout to be placed in the waters of Upper Chateaugay Lake, the fishermen are now catching with sunk bait many pounds of as fine fish as were ever taken from those waters, and one gentleman, who is good authority, declares that the Chateaugay Lakes are to-day as well stocked with lake and salmon trout as any body of water of the size in the State of New York." Ralph's, the popular summer hotel, has been enlarged this last winter to three times its former capacity, and many of the old guests have already engaged rooms there.—Jno.

THE CONNECTICUT RIVER has flowed a much larger body of water this season than the spring of last year. In consequence thereof the catch of shad and alewives promises to be first rate. Already the Douglass Brothers have caught several bushels of "whops" and one shad, besides a considerable quantity of suckers, perch, and dace. In their pot, which they set close to the shore every spring, they caught, last Saturday morning, a fine muscalonge, which weighed an ounce less than eight pounds when taken from the water. The beauty was presented to Mr. E. M. Reed, Vice-President of the New York, New Haven and Hartford Railroad. Just what the effect will be with the shad because of the closing up of the Enfield dam, four miles above this place, last summer, as regards their going any further up the river, remains to be seen. We think that the fishway is sufficient, because the dam is so low, but others think differently.—LOWER BUNK.

TENNESSEE.—Nashville, April 8. There were a great many jackfish in our market this morning, varying in size from two to twenty pounds weight. Within the last few days we have gentle warm rains, and the streams are now in excellent condition for angling. A party of gentlemen returned from White Oak last Friday. They had unusually good luck and a delightful trip. Fish in that noted stream are not only abundant, but large and of most delicious flavor. Jim Palmer, Colonel Griffith, Hermann Buckholz and Jack Bentley are making grand preparations for an expedition to Buffalo. When that team do start, they are indefatigable, and do things up in the best of style. Carp about here are reported to be spawning; if they turn out as well as is desired for them, by this time a twelve month there will be millions of them in the State.—J. D. H.

MOUNTAIN THOUT IN SOUTHWEST VIRGINIA.—Under the shadow of White Top, Washington Co., Va., April 1882.—It has occurred to me that the closing sentence in my last note to the FOREST AND STREAM may mislead some enthusiastic fisherman, who might suppose from the simple statement of the abundance of trout, and their ignorance of the dangers of rod and fly, that the situation was adapted to the use of the fly. The creek is upon an average scarce twenty feet wide, and its banks are lined with laurel and rhododendron. Though I am no fisherman I should imagine it next to impossible to cast a fly there, and as a matter of fact, people fish with a line from a rod five feet long, and catch with almost any sort of bait. The fish themselves are speckled beauties indeed and in great numbers.—DENBIGH.

A SPOT FOR BIG BASS.—A few miles south of Wilmington on the upper Potomac River is a rare spot for black bass, namely, Chambersburg, Pa. Rod fisherman camp there during the summer and take them in numbers. Dr. Hoke, now of Philadelphia, formerly of Chambersburg, speaks of the place as his choice over all others, and will spend his vacation intent upon the capture of big fish. Your correspondent is told that both the minnow and the little toad are taking baits at this point on the Potomac, and has been invited to join the "canvass party" that will tarry a week there.—HOMO.

TIM POND AND THE SEVEN PONDS.—We understand that several of the gentlemen who were at Tim Pond, Maine, last year, are going there again this summer. The accommodations are to be enlarged.

MAINE.—Parties who desire some excellent spring fishing would do well to visit Enfield, Me. All particulars in relation to it may be obtained by addressing A. J. Darling, Enfield, Me.—J. F. S.

PUBLISHER'S DEPARTMENT.

THE SEMI-HAMMERLESS.—Attention is called to the semi-hammerless gun, manufactured and sold by the American Arms Company, the well-known makers of the Fox gun. The semi-hammerless is just such a gun as many demands have been made for.

We have received the elegant catalogue published by Messrs. J. Palmer O'Neil & Co. of Pittsburgh, Pa., the well-known dealers in fine guns and all sportsmen's supplies. The catalogue is admirably illustrated and does credit to the house, whose advertisement will be found elsewhere.

TRAINING vs. BREAKING.—In book form, with two sketches, entitled "My Old Dog Trim" and "The One-Eyed Grout of Maple Run," by S. T. Hammond—"Shadow"—now ready.