

APRIL, 1872.

The monthly evening meeting of the Society, was held on Tuesday, the 9th April. M. Allport, Esq., in the chair.

In addition to the members of the Society, the following visitors from Victoria, were present, viz. :—Messrs. Wanliss, of Ballarat, and Lewes, of Geelong.

E. C. Nowell, Esq., who had previously been put in nomination, was after a ballot, declared duly elected a Fellow of the Society.

The Secretary brought under notice the usual monthly returns, viz. :—

1. Visitors to Museum during March, 1075.
2. Ditto to Gardens ditto, 1813.
3. Plants and seeds sent from Gardens ; to Botanic Gardens, Adelaide, 66 plants ; to Botanic Gardens, Cape Town, Cape of Good Hope, 20 packets seeds ; to Mr. Wilson, St. George's Park, Port Elizabeth, 25 packets seeds ; to Dr. Hooker, Royal Gardens, Kew, 60 packets seeds.
4. Plants received at Society's Gardens—From Mr. Salier, one case plants from Howe's Island.

Meteorological Returns—

1. Hobart Town, from F. Abbott, Esq., Table, &c., for March.
2. Port Arthur, from A. H. Boyd, Esq., ditto.
3. Westbury, from F. Belstead, Esq., ditto for February.
4. Sydney, from the Government Observer, printed Tables for December, 1871, January, 1872.

The Secretary read the usual "Analysis of the Observatory Records, with a Health Report for the Month," by Dr. E. S. Hall.

The presentations to the Museum were as follow :—

1. From Mr. R. Gatenby, Macquarie River :—A small "Tiger Snake," (*Hoplocephalus curtus*) ; a "Grass Snake." (Probably a young specimen of *Hoplocephalus curtus*) ; forty-eight eggs taken from a Black Snake (*Hoplocephalus curtus*), eggs of so called "Iguana" of Tasmania (*Cyclodus nigroluteus*), two Lizards (Tasmanian), one ditto from Kemp's Lake, two Rock Lizards, a Lizard (*Gecko*) from Ballarat, tongue of Echidna, round worm (*Ascaris* sp.) from intestines of Kangaroo, a deformed Kitten, chrysalis of Moth, Centipedes and Scorpions from Ballarat.
2. From C. M. S. Chichester, Esq.—A specimen of the recently discovered species of Volute (*Voluta Elliotti*) from Western Australia.
3. From Mr. W. Peacock, Sorell.—A Pelican (*Pelecanus conspicillatus*).
4. From Mr. J. G. Kroskel.—A Brazilian silver coin (Mille reis.)
5. From Mr. Niels C. F. Solomon.—Five Danish coins, (3 copper, 2 bronze.) A fossil Echinus, and Flint Arrow Head from Denmark.
6. From Mr. G. Taylor, Valley Field.—A White Hawk, (*Leucosia a Nova Hollandie*).
7. From Mr. Littlechild, Lindisfern.—4 Spine-tailed Swifts, (*Acanthylis caudacuta*).
8. From Mrs. Hebblewhite.—A portrait of Dr. Leichardt, framed and glazed.
9. From J. W. Graves, Esq.—A freshwater Crayfish, from Gordon River, Macquarie Harbour.
10. From Mr. F. Ellwell.—Sample of Copper Ore, partially smelted in a blast furnace. Probably from Adelaide.
11. From Mr. W. Legrand.—Specimen of the rare spotted Irish Slug (*Geomalacus maculosus*.)
12. From Mr. O. H. Hedberg.—The Atlas of a Sperm Whale.

The Chairman remarked that he had received the following very

interesting communication on Pisciculture in Tasmania from Judge Francis, who would be recognised by all as an authority on the subject, and he had much pleasure in bringing it under the notice of the meeting :—

“MY DEAR SIR,— You know how fully I have shared your wishes and hopes with regard to Tasmanian pisciculture. I have now seen a good deal of its very satisfactory results, and am sure you will listen favourably to a few suggestions for rendering its success even more brilliant.”

“As regards two of the fish now thoroughly naturalised, the tench and the perch, everything seems to have been done to establish them in their appropriate waters. Only I think some pains should be taken to make the people of this island aware that they are not summer fish. I have heard several persons complain that specimens which they have tried have not been good fish for the table. They catch them, say in December, when lank and sickly after spawning, and then wonder to find them soft and flabby. It would be wonderful were they otherwise. Reckoning by analogy from their respective times in England the perch ought to spawn in October, and the tench towards the end of November. The tench “comes round” I think the quicker of the two, and I have little doubt that both of them, for various reasons which your own better knowledge will supply, recover flavour and firmness quicker here than at home. Still, March should be regarded as the earliest month in which either can be really in season, and both will be at their best during the winter months. Perch-fishing *in the deeps* from May to August ought to give excellent sport followed by a no less excellent repast. Tench I have caught chiefly in soft cloudy spring days ; they are good about up to their spawning time. If caught in a muddy water they should be kept a week or a fortnight—the longer as their colour is darker—in the clearest water obtainable a hoop-net or rabbit-hutch makes a good purgatory.

“We come now to the trout. These are doing remarkably well in point of size, and fairly, though very unequally, as regards number. In accounting for this difference, I should say generally that I think the stock have been placed too much in the lower and heavier reaches of the rivers, and not supplied liberally enough to the upper, fleetier, waters, where the best spawning beds are mostly found. No doubt this is in a measure remedied by the ascending instinct of the fish towards breeding-time ; but this rarely carries them far, and is weakest in the case of heavy, well-fed fish like those of the Derwent pools. I have no doubt, for instance, that a vast deal of unproductive spawn has been deposited in coarse stony gravels in the lower reaches of the Derwent, Ouse and Clyde. In all these, the deeps—those of the Derwent especially—contain very large trout, but there are no small trout, or next to none, on the shallows where they ought, by this time, to be swarming. On the other hand, the fish turned out in the upper waters of the Clyde have multiplied greatly. So have those in the Russell’s Falls stream, which affords fleet water and good breeding ground from its very mouth. I know also one or two rivulets where they are doing well. On these grounds I would strongly recommend that of the next disposable stock a supply should be sent : First to the neighbourhood of Dunrobin Bridge, and that of the fine gravel beds near the mouth of the Styx. Secondly, to the Ouse, say a mile and a half above Cawood. Thirdly, to the Russell’s Fall stream, some way about the Fenton Forest dam. The ford, where the road crosses about $4\frac{1}{2}$ miles from Fenton Forest, would be an excellent place. If more should be available then, turn some out as far as may be above the ‘Cataract,’ which is passable for salmon, but not for trout. You know all about Lake St. Clair, and

I will merely remind you that the roughness of a road is the greatest possible help towards conveying trout alive. As long as the tubs or cans containing them are well jolted about the water will be constantly aerated, and the fish kept in health. If any be carried up to that noble lake they should be turned out on the gravels at the upper end where the feeder enters, that they may be near their spawning ground. A few hundred fish would I think be well bestowed on the Lachlan above the point whence the supply for New Norfolk is dammed off. They have bred below, but the bed is too stony and the waters too hungry for any great results—there is much better feeding as well as breeding water above the fall. Four or five miles up the Styx is another likely place.

“I must again urge what I pointed out before, the importance of having—not necessarily at the Plenty, but somewhere—a feeding-pond for the stock-fish, where they may be nursed till they are 4 or 5 inches long; large enough to be safe from all finned enemies, especially from those abominable sand-fish. This plan would also, I am convinced, save them a year by bringing them earlier up to the breeding point. I will not here enter into details as to such a pond, but should much like to talk the matter over with you and some other earnest *ichthyotrophists* (?)”

“Before quitting the trout question, I wish to say a few words as to the Plenty, which has had great advantages in being early and well stocked, and will always be the stream resorted to by visitors who long to kill a trout and have but few days to spare. That stream—I speak advisedly—was most abominably poached last season, and large captures made with the silver hook after the stream had been plundered. I believe the evil has much abated during the season now drawing to a close, but still the show of fins is not what it ought to be, especially on the upper waters. Better watch ought to be kept, and some of the long shaded pools, fit only for the night-line, ought to be carefully staked, a process with which I am practically familiar. But beyond this, it ought, I think, owing to its peculiar history, to be kept distinctly as a sportsman’s river, and fished only with the artificial fly. This restriction, once established, and the stream well looked after, there will be fish for the fair angler any day and every day throughout the season, which in that river at least ought to close with the 31st of March. I hear it said that such a rule could not be enforced, I can only reply, that it is enforced without difficulty in many English streams, and that sundry visitors to the Plenty have expressed their regret and surprise at its absence. The long deep below the bridge, which is in effect a part of the Derwent, might still be left for the grasshopper. I take this opportunity of assuring you from my own experience that large fish—larger than the Plenty (which is not a first-rate feeding-water) can ever bring to perfection—may be caught with the fly in Tasmanian streams; the lakes are yet untried, but fly-fishing in these is always comparatively simple.

“There is nothing at present to be said about the sea trout. Whenever they become pretty numerous they will make themselves seen and felt. But with regard to the salmon, I am very anxious to see something done, and that speedily. There may be some in the river even now; any day may bring news of a capture. But having never seen or heard of a parr or a smolt, and having in vain looked long and often for the break of a ‘fish,’ I cannot think that salmon are numerous, or have bred freely. Surely it could do no harm to make assurance doubly sure by a fresh importation of ova for two or three years in succession. This would not only render the successful acclimatisation of that noble fish a certainty, but would afford an opportunity for trying with *salmo salar* the same experiment of breeding in confinement which has proved so brilliantly successful in the case of *salmo trutta marina*. With the larger

as with the smaller migratory species constant feeding may prove an effective substitute (as far as propagative vigour is concerned) for migration to sea-water. To establish this principle, and reap all the practical advantages of its application, would be a great triumph for Tasmanian pisciculture. And I cannot but think that so near the salt-water the experiment might be aided by supplying the detained fish with shrimps and other marine diet.

"I fully admit that the question is mainly one of pounds shillings and pence. A sum of not less than £500 should be raised by private subscription before any further call is made on the public revenue. The amount sounds large, but I feel sure it could be raised if the right men were appealed to in the right way. In the course of a little casual canvassing for this object, I have met with a great deal of encouragement from Tasmanians, and am convinced that many who like myself have derived health and enjoyment from their occasional visits to the island will also gladly become subscribers. Indeed, I believe that on the one hand the requisite funds will be forthcoming if the enterprise be purely Tasmanian, while on the other hand Melbourne would gladly join in the enterprise should her co-operation be invited. And it should be remembered that the repetition of a process which has twice been carried through with perfect success will be neither so costly nor so difficult as the original experiment. The great point will be to set the subscription on foot without delay, and to communicate with England if possible by the next mail. There should I think be two subscription lists, one for residents and another for visitors; the latter class of subscribers may else be discouraged by the large amounts which some Tasmanians will, I know, contribute. Before quitting the salmon question, I wish it to be clearly understood that I still believe there are some salmon, though but a few, in the tideway and the river. But this, as I have already said, is no reason in a matter so important why we should not "make assurance doubly sure;" and accelerate a result which if in course of attainment is still being arrived at very slowly.

"And now let me revert to our friends the trout. Generally, I would urge that with any stock-fish turned out hereafter, the neighbourhood of good gravel beds should be especially attended to. Had the fish thus far been placed where they could have bred as freely as they have fed they would have been swarming. The fishing season should, I think, also be modified. For a year or two to come, it might with advantage be limited to the 5 months from November 1st to April 1st; after that, October 10th to April 10th, would be a reasonable extension for all streams but the Plenty, which, as long as it continues the headquarters of the establishment, should be exceptionally restricted. By the way, it would be an excellent thing if mullet fishing were also stopped from April 1st until, say, September 1st. These delicious fish are now reappearing, and will again, the trout notwithstanding, become numerous throughout the island if treated fairly and not killed wholesale when spawning or "shotten."

It would much raise the general estimate of your naturalised fish if people knew when they are in season (of which I have spoken already) and also how to cook them. The trout served up at the farewell dinner to the late Governor were left soaking in cold water for hours after they were gutted; a blunder worse than many crimes. No fresh water fish—a trout least of all—should be washed after opening. They should be wiped out with care, and if boiled, be plunged at once into boiling water pretty strong of salt. Fish up to 1½ lbs. may be fried or boiled; above that size, boiled or baked. A large trout is much improved for the table by crimping the instant he is killed. A very large one may be cooked in thick slices like a salmon. If people will have sauce, caper

sauce, or a very little anchovy sauce, in cream, suits the trout best. But I must pull up here, especially if my remarks are to come before a learned body! Seriously, I ought to apologise for a very loose and rambling scrawl; but the fact is, that I can write but half-an-hour at a time, and I find it difficult to keep any order in my remarks. Perhaps, however, they may still contain something useful; if so, pray deal with them in any way you please. Should any active steps be taken in the matter of the salmon ova, I will be a subscriber and canvasser in my small way. Forgive me if I have tried your patience, and believe me, my dear Sir,

“Yours very faithfully,

“H. R. FRANCIS.

“Morton Allport, Esq.

“P.S.—I still am strongly of opinion that the man who should import the larvæ of the Green Drake, and also those of some of the larger English *Phryganix* (e.g., the Stone-fly and Alder-fly) would deserve well of Tasmanian pisciculture. All the *Ephemera* I have seen here have been very small; *Phryganix*, none. They could be brought in an aquarium without difficulty—they both retain their aquatic state very long.”

Conversation ensued, in which many of the Fellows present, as well as the visitors from the neighbouring colony, took part. As to a fresh importation of salmon ova the general opinion was that it would be impracticable at present to raise the amount of money required, and Mr. M. Allport thought that the introduction of *Ephemera* on a scale to be of practicable benefit was accompanied with so many chances of failure that it was not likely to be undertaken.

A suggestion, which met general approval, was made to the effect that the introduction of ova to stock one of our large rivers—the Huon, Gordon, or Davey—might be undertaken by an English company, if the sole right of fishing such river or rivers was secured to them.

Mr. Justice DOBSON, after referring to the value of some of the presentations, and to the interest attached to the paper which had been under discussion, proposed the usual vote of thanks. This having been carried the meeting terminated.