

clination of the plates to the beam the colours can be changed at pleasure.

In this form the experiment is well suited for class illustration; care is necessary to avoid irregular reflection at the edges of the plates; we covered ours with ordinary gum paper.

B. A. SMITH.

Working Men's College, Melbourne, October 10.

#### Mutual Aid among Animals.

RECENT discussion of this subject has recalled my attention to an observation made some time ago, while studying the animals of Casco Bay, on the coast of Maine.

Among the specimens brought back from one excursion were four of the common Echini (*E. drobachiensis*). The last one taken had been left exposed to the sun some time before it was noticed and properly cared for.

These four animals were placed alone in a small aquarium, and, as we wished to study the action of the ambulacræ, each was turned mouth up. Soon the action began, with which every naturalist is familiar, and three of the captives slowly rose on edge, and then deliberately lowered themselves into the normal position. The fourth, the injured one, made much less rapid progress: all it could achieve was a slight tipping of its disk. The two nearest Echini, from six to eight inches distant, now moved up and stationed themselves on opposite sides of their disabled comrade.

Fastening their tentacles for a pull, they steadily raised the helpless urchin in the direction in which it had started. As soon as it was possible, one of the helpers moved underneath the edge of the disk on the aboral side, and, when the half-turn was accomplished, the other took station on the oral side, gradually moving back as the object of so much solicitude was very gently lowered to the position nature had made most convenient.

This is the best instance of "giving a lift" I have ever met with among animals of so low a grade. It may not be without interest to others.

WM. ELDER.

Colby University, Waterville, Maine, U.S.A.

#### The Chrysanthemum.

THIS being the centenary year of the introduction of the Chrysanthemum into England, a word on the subject from its native place, Peking, may not be out of place. It is not generally known that the Chinese grow the Chrysanthemum as a standard tree especially for selling. They graft them on to a stalk of *Artemisia*. There is a species of *Artemisia* that grows wild and covers the waste ground round Peking; it springs from seed every year, and by the autumn attains to a tree 8 or 10 feet high with a stem  $1\frac{1}{2}$  inch thick. The Chinese cut it down, and, after drying it, use it as fuel; the small twigs and seeds are twisted into a rope, which is lighted and hung up in a room to smoulder for hours; the pungent smell of the smoke drives out the mosquitoes. This plant, after being potted, is cut down to about 3 feet and used as the stock, the twigs of Chrysanthemum are grafted round the top, and it quickly makes a fine tree, the flowers grow and open, and as the stock soon withers the whole tree dies, and folks say, "another ingenious fraud of the Chinamen."

A favourite style of growing Chrysanthemums is in the shape of a fan, with eight or ten flowers in different parts of it. If the flowers are not grown on the plant, they are tied on, which also does for selling.

The winters in Peking are very cold, and last about four months, and having no glass houses the Chinese gardeners do not have the chance of producing such a variety of such fine flowers as their European brethren, but in the case of Chrysanthemums they have many curious and beautiful varieties.

THOS. CHILD.

#### Dispersal of Freshwater Shells.

I AM putting together such instances as I can find of dispersal of freshwater bivalves by closure of their shells so as to cling to the toes of birds, amphibia, water-beetles, &c., and of univalves by adhesion to the wing-cases of water-beetles, &c., and venture to ask for co-operation. Any notes or references which your readers may have the kindness to send to the undermentioned address will be welcomed and carefully acknowledged.

H. WALLIS KEW.

5 Giesbach Road, Upper Holloway, N.

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#### The Common Sole.

THE post-larval flat-fish obtained in 80 fathoms off the west of Ireland, which in *NATURE* (vol. xlii. p. 520) I referred to as common sole, have turned out, on closer examination to be the fry of *Pleuronectes cynoglossus*, called "white sole" in the Dublin markets.

I shall feel obliged by your finding space for this correction.  
Dublin, November 15. W. SPOTSWOOD GREEN.

#### The Scientific Investigations of the Fishery Board for Scotland.

IN the review of the "Eighth Report of the Fishery Board for Scotland," which appeared in *NATURE* (vol. xlii. p. 653), the reviewer, misled by the private information to which he refers, makes an inaccurate and baseless statement, reflecting upon me personally, and which I therefore crave leave at once to correct. In dealing with my report on immature fish, which, by the courtesy of the Secretary for Scotland, was placed in the hands of the delegates of the recent International Fisheries Conference, and which has already been referred to in your columns by Prof. McIntosh, F.R.S., the reviewer states: "We have certain information that the original discoveries which led to this report were made" by Mr. T. Scott; and that "it is only fair that the credit which is Mr. T. Scott's due, and which is denied him there, should be acknowledged here."

Had your reviewer disregarded his private information, and looked at p. 161 of the paper which he has reviewed, he would have found there the following footnote to the statement that "nearly 13,000 food-fishes" had been "carefully measured, and the condition of the reproductive organ registered," viz., "This has been mainly done by Mr. Thomas Scott, F.L.S., one of the naturalists of the Fishery Board, and partly by Mr. Peter Jamieson, assistant naturalist."

What Mr. Scott and Mr. Jamieson did was precisely what is stated—namely, to measure the length of the fish and record on the form provided whether the milt or roe was mature or not. The subjoined note from Mr. Thomas Scott, which I request you to publish along with this, shows that he considers this acknowledgment sufficient. The study and elaboration of these daily records, nearly 13,000 in number, mainly in my private time, was only a part, and a small part, of many months of labour bestowed on my report on immature fish; and the results occupy less than three pages of the fifty-four devoted to the subject. No other person had any part or share whatever in the conception or composition of that report, and this attempt to deprive me of the credit of my work, solely on the strength of private and erroneous information, is not, I think, either usual or creditable.

The reviewer is equally in error as to what I wrote in the Report for 1887, and which he only partially quotes. The entire sentence is as follows: "We have organized a series of extensive and systematic inquiries into the condition of the reproductive organs of the various kinds of fish throughout the year, with particulars as to their sizes, the nature of their food, &c., which will help to clear up the hitherto obscure problems as to the minimum size of sexually mature individuals, the commencement and duration of the reproductive period, the spawning places, and many other points of great interest." If the reviewer will now peruse p. 8 of the Seventh Report, he will find it there stated that these inquiries were "devised by Dr. Wemyss Fulton" (in 1887), which is the fact.

T. WEMYSS FULTON.

20 Royal Crescent, Edinburgh, November 3.

14 Lorne Street, Leith, November 1.

DEAR SIR,—I have read the article in *NATURE* of October 30, and desire to say that I consider the footnote at p. 161 of part iii. of the Board's Report for 1889 a sufficient acknowledgment of my work in connection with the immature fish investigation.

You have always from the first acted towards me in a very friendly manner, and would be the last to detract from any credit belonging to me.

THOMAS SCOTT.

Dr. T. Wemyss Fulton, Secretary Scientific Investigations.

#### Araucaria Cones.

HAVING been away from home, I have only now seen the Duke of Argyll's letter in *NATURE* of November 6 (p. 8), relating to the cones of *Araucaria*. Doubtless before this some of your correspondents have answered the Duke's inquiry.