

about fishes, which, though no doubt familiar enough to naturalists, were not commonly known. The herring and the pilchard, he said, were so closely allied that the external resemblance might deceive an expert, yet they differed widely in their habits. The herring glued her ova to stone and seaweed at the bottom, where it hatched; but the pilchard discharged hers in the open water, to float to the surface and be hatched by the sun. The fishes themselves were so much alike that the usual test was to balance doubtful fish by the dorsal fin. If the head went up it was a pilchard, if the tail went up it was a herring. Pilchards were abundant off our coasts, but New Zealand had no herring. The flat fishes, he explained, started in life symmetrical and swimming upright, like other fishes. While still young they took to deeper waters, sunk, and lay at the bottom, turning to one side or the other. Deformation gradually set in, the upper side darkened, the eye underneath, being useless in its place, forced itself through the skull and came out on the upper side. A distinction between the sole and flounder tribe was that the sole lay with the left side and the flounder with the right side uppermost. A curious distinction between the English and New Zealand mackerel was that the southern fish was provided with a swim-bladder, which was absent in the English species. But the distinction was not a matter altogether of northern and southern distribution, for the only other mackerel besides that of New Zealand possessing the swim-bladder was found in the Black Sea.

A letter was received from Mr. J. T. Stewart calling attention to the fact that in boring in the Wanganui district for artesian water the water was obtained from below the papa rock. (*Transactions*, p. 451.)

Sir James Hector remarked that if this was the case it was a most important thing for the whole district.

Sir James Hector exhibited a preparation of the head and beak of a great octopus.

This was taken from a specimen captured at Island Bay, being the second specimen of the species found in that locality. The biggest of these could sweep into his ravenous maw any living creature within a circle a chain in diameter.

Specimens of some large Fiji chestnuts, about which very little is known, were exhibited.

THIRD MEETING: 5th November, 1901.

Mr. G. V. Hudson, President, in the chair.

New Member.—Mr. T. L. Buick.

Mr. Martin Chapman was renominated to represent the Society on the Board of the New Zealand Institute.

A letter was read from the Secretary of the Canterbury Institute inviting members of the Wellington Philosophical Society to attend a garden party now being arranged to welcome the members of the British Antarctic expedition on their arrival in Lyttelton.