

9. On a supposed Hybrid between the Pilchard (*Clupea pilchardus*) and the Herring (*C. harengus*), and on a specimen of *Salmo purpuratus*. By F. DAY, C.I.E.

[Received February 1, 1887.]

(Plate XV.)

In the month of September, 1886, I received from Mr. Dunn, of Mevagissey, in Cornwall, a hybrid Pilchard, and in December a second; also the information that he had seen several, but that the scales had been injured in the remainder. The great interest in these fishes is that, although to a great extent the head most nearly resembles the Pilchard, the scales on the sides of the body show most remarkable differences—in the example which I propose describing consisting of 32 rows along the body and 8 rows in depth on the right side, whereas those along the left side are 51 in number and 10 rows in depth.

Hybrids among the British Clupeidæ have been observed; thus the *Alosa squamopinnata* of Couch has been considered by Dr. Günther to be a cross between the Pilchard and one of the Shads.

A cross between a Pilchard and a Herring would apparently be rather remarkable, as Mr. Dunn found the eggs of the former floating; however, I was informed by Professor Steindachner that those of the Sardine sink; and as these are generally accepted as varieties of one species, it still seems doubtful whether the eggs float or sink. While, looking at the form of the head, it may be that the male Pilchard element had been prepotent in both fishes.

The specimen figured (Plate XV.) has the following characters, and closely agrees with the second example, which is slightly longer, except that the size of the scales is reversed on the two sides of the body, being largest on the left side in the latter.

D. 17. P. 15. V. 8. C. 23. L. l. right side 32;
left side 51. L. tr. right side 8; left side 10.

	inches.
Entire length.....	8·5
Length of head.....	1·7
Length of caudal fin.....	1·5
Length of pectoral fin.....	1·0
Height of body.....	1·7

Eyes: diameter 0·4 of an inch, 0·5 inch from end of snout, and 0·35 inch apart. The head is very similar to that of the Pilchard on the right side, while on the left the raised ridges on the opercles, although very distinct, are not so well marked as upon the opposite side. The form of the body is that of the Pilchard. *Gill-rakers*: 61 in the lower branch of the outer branchial arch, the longest being 0·35 inch, or not so long as the orbit. In a Herring the number of gill-rakers in the same position was found to be 48, and

two thirds as long as the eye; in a Sprat 35, also two thirds as long as the orbit; and in a Pilchard 71, longer than the eye. Thus these appendages in number in the hybrid (61) were less than in the Pilchard (71), but more than in the Herring (48) or in the Sprat (35); while their length did not quite equal that of a normal Pilchard. As to the character of these gill-rakers in the Pilchard, Sprat, and Herring: in the first the lateral denticulations are very minute, a little larger in the Sprat, and largest in the Herring; to which last those in the hybrid had the greatest affinity. *Fins.*—In the hybrid the distance from the end of the snout to the commencement of the dorsal fin was 3·4 inches, the entire extent of the base of the fin being inserted midway between the snout and the root of the caudal fin; lower lobe of the caudal the longer; anal rays almost hidden by the scales. *Scales.*—The number of scutes 22 before and 14 behind the base of the ventral fin; they are weak. As regards the scales, two large rows exist just behind the head on the left side, and the remainder resemble to a great extent those of the Herring, but with the semicircular striæ of the Pilchard. The scales on the right side are similar to those normally seen in the Pilchard. The number of scales along the body in Pilchards is from 29 to 30, in about 8 vertical rows, 17–18 scutes before the ventral fin and 14 behind it; in the Sprat 47 scales along the body in 13 rows, 21–23 strong scutes before the ventral fin and 11–12 behind it; in the Herring the numbers of rows of scales along the body vary from 53–60, and there are 13 scutes behind the ventral fin. *Colours.*—On the left side was seen the beautiful purplish-golden hues of the Herring, but on the right side were the silvery colours of the Pilchard.

SALMO PURPURATUS.

This specimen, which is 8·5 inches long, died at South Kensington in August 1885. It was one of the fishes raised from the eggs brought over from Canada by Mr. Wilmot in 1883, which were described in the Society's 'Proceedings' for 1884, p. 24. Originally imported as supposed eggs of the Salmon, the edge of the adipose dorsal fin in the fry showed the orange tints of a Trout, while the par-bands were from 7 to 10 and averaged $8\frac{1}{4}$. It is interesting, because specimens have been turned into the Thames, and were asserted to be *Land-locked Salmon*, which is an error of identification.

10. Notes on the *Peripatus* of British Guiana.

By W. L. SCLATER, B.A., F.Z.S.

[Received January 31, 1887.]

During my recent stay in Demerara I was fortunate enough to procure a considerable number of specimens of a species of *Peripatus*. This singular form was first discovered in British Guiana by Mr. im Thurn, who sent examples home to Prof. Moseley. But the bottle containing the specimens was broken before arriving in England, and



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