

*meoo-woos* or magistrate, and a separation is instantaneously effected on their compliance with the rules laid down for observance in such cases. If the wife objects to remain any longer with her husband, and he shall be found to have repeatedly ill treated her, she is at liberty to depart, receiving from him the whole of her property, as well as the children (both male and female), that may have been born to her. The children are, in maturer years, allowed to reside with either parent as choice directs. If, on the contrary, the wife shall be found to have behaved ill, she pays a certain sum of money (generally about 25 or 30 rupees), to her husband, who also retains possession of the male children; the wife receiving no part whatever of the property. In cases where no criminality is attached to either party, and both desire to be separated, a fair division of property is made, each receiving what he or she may have possessed before marriage, with an equal share of the produce of their united labours; the husband retaining the boys, and the wife the girls. The case being investigated and decided upon, a *pawa* is broken into two pieces, one of which is given to each as the emblem of separation. This done, the divorce has been effected, and they are both at liberty to contract any new alliance.

[To be continued.]

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III.—Description of the (so called) Mountain Trout of Kemaon. By Dr. J. M'CLELLAND, Assistant Surgeon, 30th Regt. N. I.

From among the treasures of natural history of Kemaon that have not hitherto been indicated, the following notice of a new species of fish, which affords a plentiful article of food to those who reside in the vicinity of small rocky streams, may not be uninteresting. From the appearance of this species, it has commonly been considered by Europeans to whom it is familiar as a common mountain trout; a closer examination however, soon detects the mistake, and except that it belongs to the class of abdominal fishes and inhabits fresh-water streams, there is no natural connexion between this fish and the species to which it was supposed to belong. The following are its distinguishing characters.

Body compressed; mouth situated under the head, lunate, retractile, toothless. Dorsal fin consisting of eight rays. Two ventral fins situated on the centre of the abdomen, caudal fin bifid.

The colour of the back is bluish-black, diminishing in intensity on the sides, which are each marked as usual with a lateral line, and the belly is pale bluish-white. The scales are so small as to be scarcely perceptible, and there is a slight golden lustre or iridescence about the head; the length is from three inches to nine.

The habits of this fish are so peculiar as to deserve to be mentioned. It derives its food from the green slime or moss that collects on the surface of rocks under water, and which is removed with considerable difficulty with the finger; but so well has nature provided the creature with the means of procuring its peculiar sustenance, that the object is fulfilled with ease and apparent enjoyment. When feeding on the upper surface of a stone, the animal glides forward with sufficient force, and at the same time depresses the under lip, with which it scrapes the slime off the rock as it passes over it, leaving a streak behind like the scratch of a stick. If the food is to be derived from the side of a rock, the creature accommodates itself accordingly; and if from the under surface of a projecting ledge, it throws itself on its back and darts forward with the most wonderful agility.

From observing these peculiarities of character it became necessary to examine the anatomical structure of the mouth and digestive organs of the animal, and the following is the result.

The under jaw or rather the under lip (for it cannot be said to have any jaws, and in this respect it resembles the sturgeon and loricaria), is composed of three small bones, the two outer are articulated at their bases to the inferior angles of the ossa malarum or cheek bones, (*a* fig. 3. Pl. I.) and the centre one is in like manner attached to the sternum (*b*), these bones (1, 2, 3,) have hinge joints by which the lip may be depressed at its free extremity, and they are attached laterally to each other by strong ligaments.

On the inner side of the bones of the lip is situated a strong muscular mass (*a* fig. 4,) whose fibres originate on the inner side of the sternum, and are inserted into the upper extremities of the bones and ligaments of the lip, while that part of the organ which is used for collecting food in the manner above described, is at once protected and adapted to the performance of its singular function by a thick cartilaginous covering. Whether we contemplate the peculiar figure of the ossa malarum, the sternum, or of the muscles, nothing can be more simple or complete than the means resorted to by Providence in adapting the lip of this creature to the peculiar office it is destined to perform.

From the unyielding nature of the abutments to which the lip is attached in order to enable it to resist the pressure it is exposed to, as well as from the peculiar nature of the joint, it is incapable of any other action than that of being depressed; but owing to its great strength and necessary thickness, this motion alone would not be enough to open the mouth sufficiently for the admission of food, and this brings us to another contrivance still more curious.

There is a small bone (*c* fig. 3.) loosely attached to what may be named the nasal process of the frontal bone, by a hinge joint which

Fig. 1.



Fig. 2.

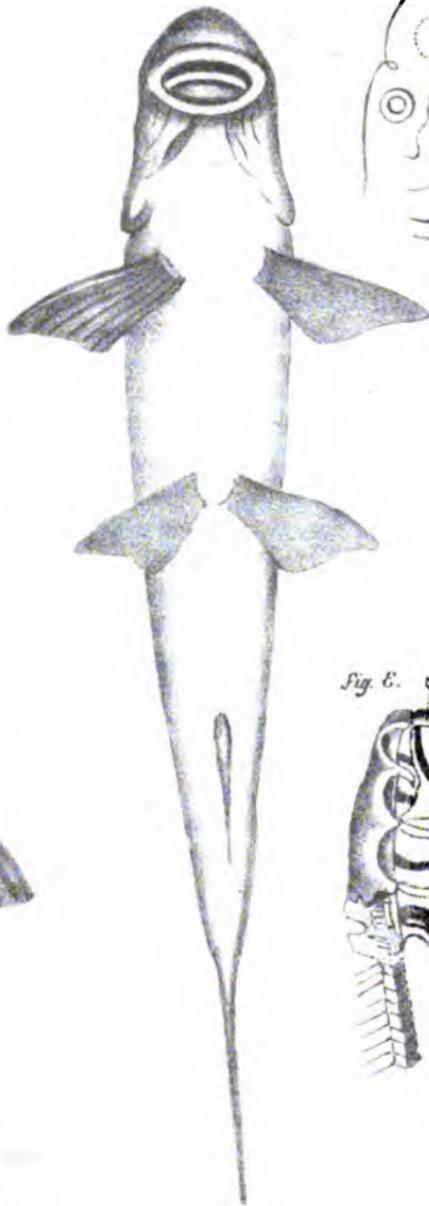
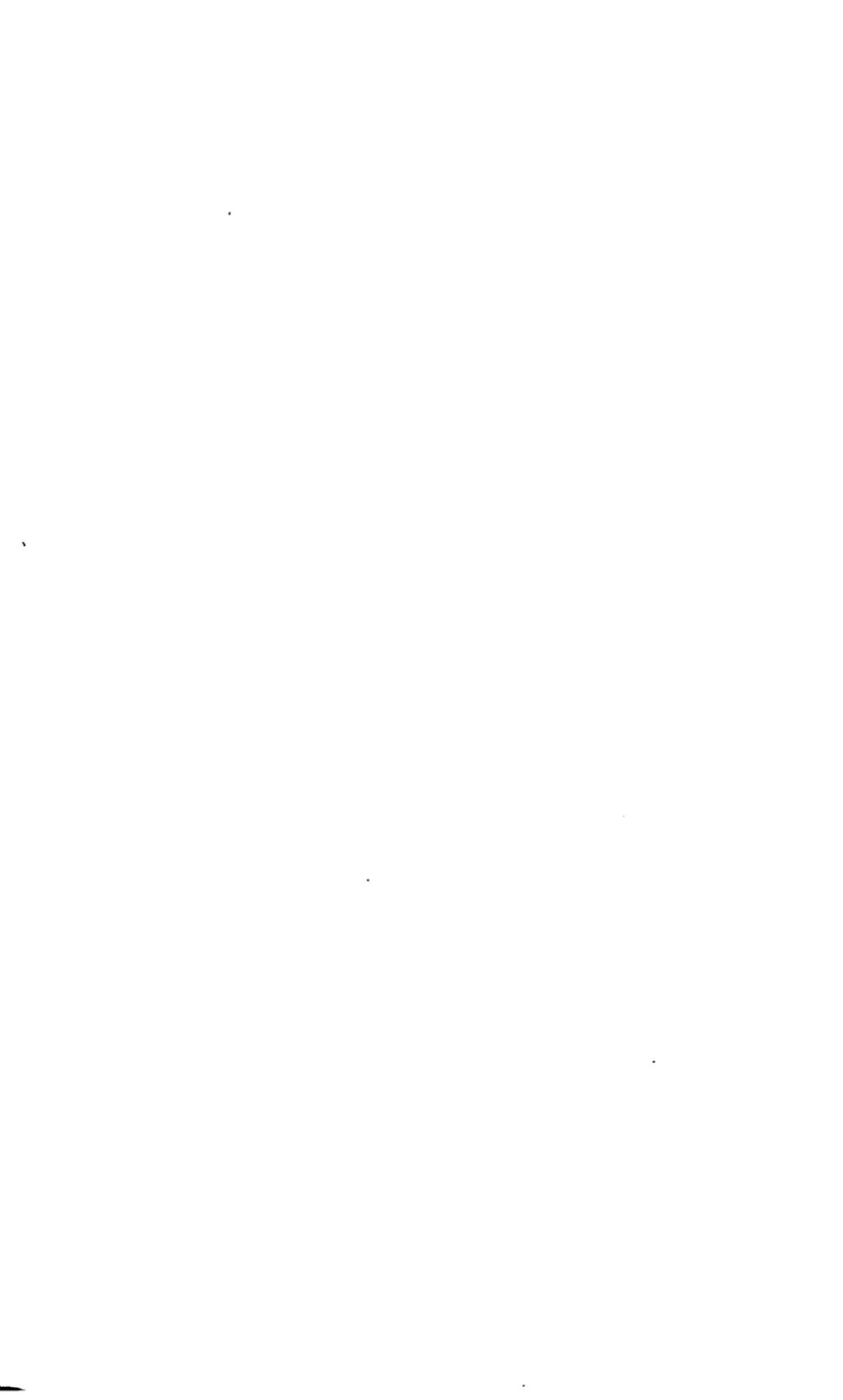


Fig. 4



Fig. 5.





enables it to swing freely backwards and forwards, and to the lower end of this there is fixed a cartilaginous rim which forms the anterior boundary of the mouth (*d*), and by the muscular structure of the snout and palate the anterior boundary of the mouth is drawn forward or retracted at pleasure. It is probable from the consideration of these parts that they do not serve merely for opening the mouth, but also assist in collecting or sucking food into it, by means of the vacuum consequent on the enlargement of its cavity, the opercula being compressed on the apertura branchialis.

From the soft pulpy nature of the food mastication would be useless, accordingly there are no teeth: the tongue is short and cartilaginous. The last remarkable circumstance in the anatomy of this fish which I shall mention is, the great length of the intestinal canal, it being eight times that of the body, the stomach alone extending the whole length of the abdominal cavity. These circumstances indicate either the innutritious nature of the food, or the strong digestive powers that are requisite: the latter would appear to be the case from the muscular strength of the stomach, which is displayed to the naked eye by the numerous white bands of longitudinal fibres which may be observed passing thus in a zigzag form  Magnified.

The whole length of the canal was loaded in the specimen examined with the peculiar slimy food already mentioned.

During the warm season these fish are seen sporting and feeding at all hours, but in winter they spend their time chiefly under rocks and stones, where they probably deposit their spawn, only coming out to feed as the sun ascends in the meridian, and again retiring in the afternoon; or on being frightened, they rush into their hiding places, from which they can easily be taken with the hand, and in this way the native fisherman in a few minutes secures as many of them as he wishes. Conceiving them to be trout every attempt has been made to catch them in the usual way with fly and bait, and though every device has been resorted to, instances of success are so rare that they may be almost referred to chance. A less refined but more successful method of fishing (as I have been assured by an intelligent friend who has seen it) is practised in the vicinity of Lohooghat by the blacksmiths during periods of relaxation from their more legitimate calling: these persons, aware of the disposition of the fish to spend certain seasons under stones, pursue the beds of the rivers, striking such loose stones with their sledge-hammers as they may suspect to conceal fish, which they thus kill by concussion.

#### IV.—*Discovery of the Genuine Tea Plant in Upper Assam.*

[The following official correspondence of the Tea Committee has been obligingly handed to us for publication. We hasten to present it to our readers in its original shape rather than attempt to make an abstract of its contents, because the curiosity of the public is much raised, and they will naturally wish to follow the whole train of the discovery, and give the credit thereof where it is due.—ED.]

*Letter from the Committee of Tea Culture to W. H. MACNAGHTEN, Esq.  
Secretary to the Government of India, in the Revenue Department.*

SIR,

We request that you will have the goodness to submit to the Right Honorable the Governor General of India in Council the enclosed copies of the reports, which we have received from Captain JENKINS, dated the 7th and 19th May, and from Lieut. CHARLTON, dated the 17th May; also a subsequent communication from Lieut. CHARLTON, dated the 5th of last month, together with the samples of the fruit and leaves of the tea plant of Upper Assam, which accompanied it, and some specimens of the leaves previously received.

2. It is with feelings of the highest possible satisfaction that we are enabled to announce to his Lordship in Council, that the tea shrub is beyond all doubt indigenous in Upper Assam, being found there through an extent of country of one month's march within the Honorable Company's territories, from Sadiya and Beesa, to the Chinese frontier province of Yunnan, where the shrub is cultivated for the sake of its leaf. We have no hesitation in declaring this discovery, which is due to the indefatigable researches of Capt. JENKINS and Lieut. CHARLTON, to be by far the most important and valuable that has ever been made in matters connected with the agricultural or commercial resources of this empire. We are perfectly confident that the tea plant which has been brought to light, will be found capable, under proper management, of being cultivated with complete success for commercial purposes, and that consequently the object of our labors may be before long fully realised.

3. It is proper to observe, that we were not altogether unprepared for this highly interesting event. We were acquainted with the fact that so far back as 1826, the late ingenious Mr. DAVID SCOTT, sent down from Muni-pore specimens of the leaves of a shrub, which he insisted upon was a real tea; and it will be seen from the enclosed reports from the agent to the Governor General on the north-eastern frontier and his assistant, that a similar assertion was strongly urged in regard to the existence of the tea in Upper Assam. Still we felt ourselves bound to suspend our decision on the subject until we should be in possession of the fruit of the reputed shrub, the only test which ought to guide us. We knew that several species of *Camellia* were natives of the mountains of Hindustan, and that two of these were