

506

PROCEEDINGS

OF THE

CALIFORNIA ACADEMY

OF

SCIENCES.

VOLUME VII.

~~PART I.~~

1876.

SAN FRANCISCO:

SPAULDING & BARTO, STEAM BOOK AND JOB PRINTERS,

414 Clay Street, below Sansome.

1877.

antennæ longer than its peduncle. Body narrow in front, gradually increasing in width towards the tail.

Peduncle of caudal appendages more than half the length of the terminal filaments.

Length, $\frac{6}{25}$ inch.

This interesting little Isopod was recently obtained by Mr. W. N. Lockington while collecting at Tomales Bay and vicinity, and is, so far as I am aware, the first example of the genus found on this Coast. In that excellent work, "British Sessile Eyed Crustacea" (Bates & Westwood), two species are accredited to N. A., but we find no mention of them by any American author we have applied to, and it is most probable that they were from the eastern part of the continent. We therefore venture to offer this as new. A single specimen only was found, although several casts of the net were made. It would seem, therefore, very uncommon in that locality. We hope, however, that by diligently searching the fresh water ponds and streams along our Coast it may be found in greater numbers, with, possibly, other species of the genus. I hope that collectors will carefully examine our fresh waters for this Crustacean, thereby enhancing the value of our cabinet, and aiding students in acquiring a knowledge of these very interesting little creatures.

W. N. Lockington read the following description of a new genus and species of Decapod Crustacean and the male of *Phyllodurus abdominalis*:

Description of a New Genus and Species of Decapod Crustacean.

BY W. N. LOCKINGTON.

Family PINNOTHERIDÆ.

Tubicola. nov. gen.

Carapace extremely broad; fourth pair of legs much elongated, fifth pair rudimentary.

Habitat, the inside of the tube of an annelid.

Tubicola longipes. nov. sp.

Carapace broad, transverse, more than twice as wide as long; front occupying about one-third of the width of the carapace; antero-lateral margins broadly rounded; postero-lateral somewhat concave, the two meeting at an acute angle in the middle of the side of the body; posterior margin straight.

Branchial regions largely developed, tumid; a long transverse depression in the carapace behind the gastric region; antero-lateral margin bordered by a fringe of setæ.

Third joint of external maxillipeds very small; second joint stout and large.

First pair of legs short, with short carpus and flattened elongated manus having a fringe of setæ on its upper border.

Second and third pairs of legs sub-equal, longer than the first, slender, ending in a sharp claw; the third pair slightly longer than the second.

Fourth pair immensely developed, exceeding in length the width of the carapace, terminating in a stout claw.

Fifth pair shortest, reaching to about the middle of the third joint of the fourth pair; usually held in an elevated position over the posterior portion of the carapace.

Width of carapace a little less than $\frac{1}{4}$ inch; length, $\frac{1}{8}$ inch.

Total length from claw to claw at fourth pair, $\frac{3}{4}$ inch.

Habitat, the sand-constructed tube of an annelid.

I found this curious little crustacean on the tube of an annelid common on the sandy flats left bare at low tide in Tomales Bay. While digging for those sand-excavating lobsters, the *Gebie* and *Callianassa*, I found in abundance the sandy tubes of an annelid about six inches long, with numerous joints or nodes, each of which was surrounded by a circlet of setae, by whose action the creature propelled itself at pleasure up and down the tube.

Believing the worm to be a new species, I gathered some, and while pulling the tube to pieces, and admiring the rich brownish red tint conspicuous at each node of my new prize, I was surprised to see a long narrow creature move out, as I believed, head first; but a nearer inspection showed me that the motion was sideways, and that the new-comer was no fourteen-legged amphipod or isopod, but a true decapod crustacean.

The short cheke, extremely lengthened fourth pair of legs, and short, broad body, are so many adaptations to the mode of life of this creature, which finds an ample dwelling-place in the space intervening between the body of the annelid and the inside of the tube; up and down which it moves with its long fourth pair stretched out in such a manner as to give it the elongated appearance of a *Caprella*.

The width of *Tubicola longipes* from end to end of the fourth pair of legs is eight times greater than its length from front to back.

This is, so far as I am aware, the only instance known of a decapod crustacean becoming the guest or commensal of an annelid, for although the species of the family *Pinnotheride* are all commensals, most of them reside between the folds of the mantle of large bivalve mollusks, such as mussels or clams (thus the *Fabia subquadrata* lives within the mantle of *Pachydesma crassutelloides*, a large clam of this Coast), and a few live within the tests of *Echini*, close to the anal aperture.

It is most probable that this worm and its commensal may occur in many other places besides Tomales Bay, possibly in San Francisco Bay, and I should be much obliged if some of our friends who may go out on a fishing excursion would bring me specimens, in alcohol, of the worm and its tubes, that I may find whether the crab is its constant companion in all localities.

The worm is one which is frequently used for bait.

On April 20th, the females of this interesting little crustacean was loaded with spawn.