which overlap on the middle line. The endopodite of the first abdominal appendage of the male is shown in Pl. X. fig. 12. It is very much smaller than the exopodite, triangular, and as wide as long. The inner lobe *b* of the terminal joint is very small, nearly circular, and separated by a suture from the broad triangular outer lobe *a*. The movable limb of the petasma is long, nearly straight, and armed on its outer edge, near the base, with an acute spine, while the fixed limb is very short and without a hook at the tip, which is rounded, as is the case in *Lysiosquilla maculata*. The sexes of this species are quite different from each other, and it seems probable that secondary sexual differences may occur in all the flat loosely articulated Stomatopods.

The character of the difference between the sexes is however quite different from what we find in *Lysiosquilla maculata*. In the latter species the sexes are alike in size and colour, and they differ in structural features, while in this species there are no structural differences except those which are concerned in reproduction, but the female is much larger than the male, and of an opaque olive brown, almost black colour, while the male is of a transparent grey.

Habits.—As our information regarding the habits of the Stomatopoda is very scanty, I give all that I have been able to learn of the habits of this species. It is found in the sand of the ocean beach just below low-tide mark, where it is exposed to the full force of the ocean swell, and it inhabits a very deep cylindrical burrow which is nearly vertical and goes down for several feet. While watching for its prey the animal stations itself at the mouth of the burrow, which is arched over with sand, so that only the tips of the eyes are exposed. The food consists of small Crustacea, fishes and other small animals, and when one approaches within reach the *Coronis* darts out of the burrow, knocking away the loose sand, and seizing it in its raptorial claw it darts backwards with it and retreats to the bottom of the burrow. When hungry it often captures prey at a distance of six or eight inches, but, as a rule, it waits until it is near enough to be caught without leaving the opening. The food which is captured is usually stored away at the bottom of the burrow, and the animal returns to the mouth and resumes its watch. In excavating its burrow the animal begins by stretching its body out on the sand, which is then swept away from under it by the action of the abdominal appendages, until all of the body except the eyes and telson are buried. It then forces its head into the loose sand which has been stirred up by the action of the abdominal appendages, and dragging its body down it quickly becomes buried vertically, head downwards, and it continues to burrow until it reaches the hard undisturbed sand, when it bends upon itself, and passing the head up on the ventral side of the swimmerets it reverses its position and works upwards to the surface, hardening and compressing the sand by the pressure of the dorsal surface. After the upper end of the burrow is thus rendered firm and circular it again doubles upon itself, and going to the bottom gathers an armful of sand, which is clasped against the ventral surface of the body between the large second maxillipeds, where it is