nicht genau in der Mittellinie, heraushing. Das Bein war augenscheinlich nur mit der Haut des Körpers verwachsen; man konnte es, ohne Widerstand zu finden, ein wenig in die Höhe ziehen, denn die Haut gab ja leicht in der Zugrichtung nach. Man beobachtete ein gut entwickeltes Skelet, das von sehr wenig Muskulatur bedeckt war; ein Integument fehlte. Ich hatte den Eindruck, als wenn das Bein von den andern in der Kultur befindlichen Tieren benagt worden war, woraus man dann mit Sicherheit den Schluß ziehen kann, daß keine Nerven darin enthalten waren.

Die drei besprochenen Fälle beweisen jedenfalls, daß Mißbildungen der erwähnten Art in großen Kulturen keine übermäßig große Seltenheit sind, und wenn Forscher, die dazu Gelegenheit haben, ihre Aufmerksamkeit auf diesen Gegenstand richten, so wird die von W. Woodland und mir begonnene Sammlung bald eine gewisse Vollständigkeit erreichen.

6. A new species of Cirolana from a fresh-water spring in the Algerian Sahara.

By Robert Gurney, Sutton Broad Laboratory.

(With 5 figures.)

eingeg. 3. Januar 1908.

Cirolana fontis n. sp.

Body about four times as long as it is broad, nearly parallel-sided, and somewhat flattened (fig. 1). The chitin over the greater part of the body and legs has a peculiar marking resembling small overlapping scales (fig. 2). The segments of the thorax are not very convex, and are of unequal size; the first about as long as the head, the next three short and the succeeding segments progressively longer. The epimera are rather small, narrow and rounded posteriorly.

The first segment of the abdomen is about as long as the three succeeding segments together and the fifth segment is partly covered by the fourth. The last segment is large and triangular, the breadth of the base about equal to the length, and the apex rounded and slightly crenulate (fig. 3).

The head is narrow in front without any trace of eyes. The lamina frontalis is elongated and very narrow, but slightly expanded at either end. The clypeus is triangular, broader than the labrum.

The first pair of antennae are as long as the peduncle of the second pair, with a peduncle of three joints and a short flagellum of about seven joints.

The second pair of antennae reach to the end of the fifth thoracic

segment. The peduncle consists of five segments of which the proportions are 1 : 1 : 2 : 2, 7 : 3. The flagellum consists of 18—26 joints.

In the mandible (fig. 4) the acies is long, with three teeth; the lacinia mobilis reduced and the pars molaris large and prominent. The maxillipedes are long and stout, the third joint of the palp somewhat broader than long, and much larger than the fourth joint.

The legs are slightly spinous, but almost without setae. The first

Fig. 1.

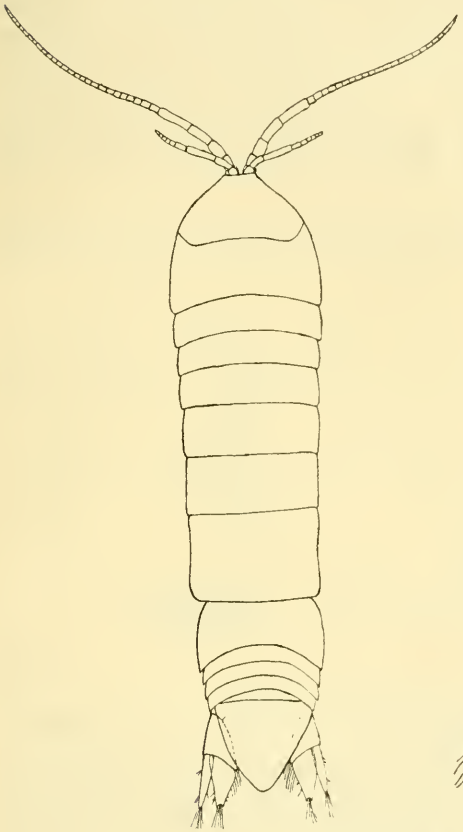

Fig. 2.

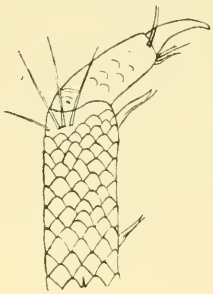

Fig. 3.

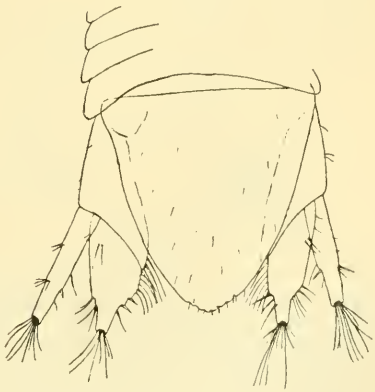

Fig. 1. *Cirolana fontis*, dorsal view.
Fig. 2. Terminal Joints of one of the fifth pair of legs. $\times$ 175.
Fig. 3. Telson and Uropoda. $\times$ 25.

pair are short and strong prehensile appendages (fig. 5). The second and third pairs are short, slender and equal, the succeeding pairs of increasing length, the last being very long and slender.

The outer ramus of the first two pairs of pleopoda is narrow and almost rectangular. The uropoda have the rami unequal, the outer one

narrow lanceolate, the inner broad at the base and sharply contracted at the apex.

Colour white. Length (of largest specimen) 7,5 mm.

The above description has been prepared from three specimens only, possibly not fully mature, so that it is probably imperfect in some respects. However I think there is no doubt that the species is distinct from any hitherto described.

These specimens were found on Feb. 23. 1906 hidden beneath stones at the mouth of the spring known as Aïn el-Hadjar about 10 km west of Biskra. This spring rises from a calcareous rock at a temperature of 27° C, with an output of 1800 litres a minute. The water is perfectly clear, rather sulphurous to taste and smell, but quite potable. This is one of several springs whose water, collected in a narrow artificial channel, supplies the Oasis of Oumach about 12 kilometres to the South East.

The species is evidently of subterranean origin and is of great

Fig. 4.

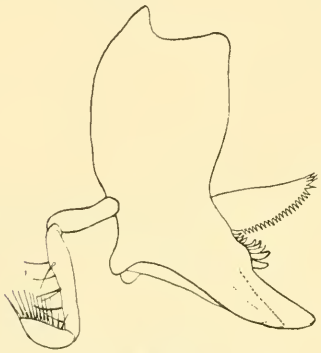

Fig. 4. Mandible. × 65.

Fig. 5.

Fig. 5. A Leg of the first pair. × 25.

interest as belonging to a group which is most characteristically marine. The close relationship existing between many subterranean Crustacea and certain marine and sometimes deep-sea, forms has been noticed by several authors, and it has been supposed that the subterranean Crustacean fauna has been derived, not so much from the surface, as directly from the sea itself. The discovery, in recent years, in spring waters, of such obviously marine forms as *Cirolana cubensis* Hay, *Typhlocirolana moraguesi* Racovitza, *Cirolanides texanus* Benedict etc. lends much support to this view. Such a direct origin from the sea does not seem to present any insuperable difficulties. There must, in many cases, be submarine access to the outflow of subterranean water, and it seems to be still undecided whether the so-called tidal wells of Australia and

South Africa owe some part of their periodicity to a direct connection with the sea. The obstacles to a colonisation of such waters would consist only in apparent scarcity of food and difference of salinity. Scarcity of food cannot have much influence, as the fact that animals do live in these situations shows that food is there. The difference of salinity is, I believe, of less importance as a barrier to the colonisation of fresh water than differences and fluctuations of temperature and pressure. Experiments hitherto made on the acclimatisation of marine animals to lowered salinity are not of very great weight in this connection, since it is important to know, not what degree of salinity an animal can be exposed to without dying, but what it can live and reproduce in. In Northern countries few marine species have established themselves in fresh water and these, (e. g. *Mysis relicta*) inhabit deep lakes almost exclusively, whereas, in tropical countries, a large number of such species are found both in lakes and rivers. The difference of salinity must be the same, but the fluctuations of temperature would be less in tropical regions. In passing from a marine habitat, below the reach of the tide, to a subterranean fresh water habitat, a Crustacean would be entering a medium subject to a very uniform temperature and rather high pressure, similar, in these respects, to that in which it was accustomed to live, and having the advantage of being in a region of slight competition. This Algerian species may perhaps be supposed to have arisen from some deep water Mediterranean species such as *Cirolana caeca* Dollfus.

7. Über eine neue Blattidengattung, aufgefunden in Südwestafrika.

Von H. Karny, Wien.

eingeg. 4. Januar 1908.

Genus ***Pseudogynopeltis*** m.

Genus nov. vic. *Gynopeltis* Gerst.

Vertex obtectus. Pronotum margine postico truncato. Mares complete alati, elytris alisque ad marginem anticum ante apicem macula opaca, non pellucida ornata. Feminae apterae vel rudimentis elytrorum lobiformibus, mesonotum vix superantibus. Femora omnia mutica. Tibiae longe spinosae; posticae supra triseriatim spinosae. Tarsi longi, graciles; metatarsus posticus articulis reliquis simul sumptis longior. Cerci ♂ graciles, laminam supraanalem superantes, ♀ brevissimi.

Die neue Gattung, die mir in mehreren Arten vorliegt, ist dadurch interessant, daß sie eine Mittelstellung zwischen *Gynopeltis* und der indischen *Glyptopeltis* einnimmt. Die Unterschiede von diesen beiden Gattungen sind aus der gegebenen Beschreibung leicht zu ersehen. Die