

AFFINITIES

Larvae of several European cave-dwelling trechines have been described. The larva of *Trichaphaenops* (*Arctaphaenops*) *gaudini* Jeannel, inhabiting caves in the department of Hautes-Alpes at 1700 m altitude (Jeannel, 1952), differs from *D. mayae* as follows: Cephalic appendages slightly more elongate; nasale more produced and with angles of adnasale less obtuse; maxillary stipites proportionally longer, palpi 4- instead of 5-segmented; ligula ciliate and acutely produced.

Decou (*loc. cit.*) has described the larva of *Duvalius* (*Duvaliotes*) *spiessi* Jeannel, from caves in the Transylvanian Alps of Roumania, at 500 m altitude. His very fine illustrations provide the best possible comparison. Chaetotaxy appears to be almost identical, and the only obvious differences are in the conformation of the nasale and retinaculum.

Uéno has described larvae of *Trechiana pluto* Uéno (1958a) and *Rakan-trechus* (*Uozumitrechus*) *etoi* Uéno (1958b), from caves in Japan, again with clear diagrams for comparison. *T. pluto* most nearly approaches *D. mayae* in size and conformation but differs considerably in chaetotaxy of the labium and legs. *R. etoi* is much smaller (5.0 mm), the nasale and submentum are differently shaped, the head and pronotum more quadrate, but the chaetotaxy is very similar.

These four holarctic species possess only 2 internal macrochaetae on the stipites, whereas *D. mayae* has an additional seta placed slightly ventrad.

Uéno (1956) has recorded that all important adult characters of *Duvaliomimus* are also present in the Japanese *Thalassoduvalius* Uéno. Larval comparison with this genus would be of extreme interest.

The question arises as to how much of the close structural similarity of these geographically widely separated species is due to parallel evolution and how much to genetic stability. If stability is accepted as the main factor, there may be links, as yet undiscovered, in the Australia-New Guinea areas.

REFERENCES

- BRITTON, E. B., 1958. The New Zealand Genus *Duvaliomimus* Jeannel (Coleoptera: Carabidae). *Proc. R. ent. Soc. Lond (B)* 27: 183-188.
- COIFFAIT, H., 1951. Note sur les Premiers Etats de *Geotrechus orpheus consorranus* et sur la Biologie Larvaire de ce Coléoptère. *Vie et Milieu fasc. 4 No. 11*.
- DECOU, V. G., 1961. Nouvelle Contribution a l'Etude des Coléoptères Cavernicoles des Carpathes Meridionales, Imagos et Larves. *Ann. Spel. fasc. 2*. Publ. C. Nat. Rec. Sci. Paris No. 16: 199-215.
- JEANNEL, K., 1952. Coléoptères Cavernicoles du Dévoluy (Hautes-Alpes). *Notes biosp.* Publ. C. Nat. Rec. Sci. Paris fasc. 7: 35-39.
- UÉNO, S., 1956. New Halophilous Trechids of Japan (Coleoptera, Harpalidae). *Mem. Coll. Sci. Kyoto (Ser. B)* 23 (1): 61-68.
- 1958a. The Cave Beetles from Akiyoshi-dai Karst and its Vicinities—I. A New Species of the Genus *Trechiana*. *Mem. Coll. Sci. Kyoto (Ser. B)* 25 (1): 41-48.
- 1958b. The Cave Beetles from Akiyoshi-dai Karst and its Vicinities—II. *Uozumitrechus*, a New Group of the Genus *Rakan-trechus*. *Mem. Coll. Sci. Kyoto (Ser. B)* 25 (1): 49-61.

MRS BRENDA M. MAY,
Entomology Division,
C/o. Plant Diseases Division,
Private Bag, Auckland.