

- Jaques, H. E. 1947. How to Know the Insects. Wm. C. Brown Co. Dubuque, Iowa.
- Jordan, David Starr. 1908. American Food and Game Fishes. Doubleday, Page & Co. New York.
- Kendall, H. M., Glendinning, R. M., and MacFadden, C. H. 1951. Introduction to Geography. Harcourt, Brace and Co.
- Kudo, Richard R. 1946. Protozoology. Charles C. Thomas. Springfield, Ill.
- Needham, James G. and Needham, Paul R. 1955. A Guide to the Study of Fresh-water Biology. Comstock Publishing Associates. Ithaca, N. Y.
- Pope, Clifford H. 1949. Turtles of the United States and Canada. Alfred A. Knopf. New York.
- Rodgers, John. 1953. Geologic Map of East Tennessee. Tennessee Division of Geology. Bulletin 58, Part II.
- Schultz, Vincent. 1952. A Limnological Study of an Ohio Farm Pond. The Ohio Journal of Science. 52 (5):267.
- Small, John K. 1933. Manual of the Southeastern Flora. New York Botanical Garden. New York.
- Smith, Gilbert M. 1950. The Fresh-water Algae of the United States. McGraw-Hill Book Co. New York.
- Ward, H. B. and Whipple, G. C. 1948. Freshwater Biology. John Wiley and Sons, Inc. New York.
- Welch, Paul S. 1948. Limnological Methods. The Blakiston Co. Philadelphia.
- Welch, Paul S. 1952. Limnology. McGraw-Hill Book Co. New York.

**A NEW CAVE BEETLE OF THE GENUS  
PTOMAPHAGUS (CATIOPIDAE)  
FROM DEKALB COUNTY, TENNESSEE**

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In southwestern DeKalb County, Tennessee, an extensive series of large caves is developed in the Cannon limestone (Ordovician), especially in the valley of Dry Creek, a tributary of Smith Fork, near Dowelltown and Liberty. These caves are inhabited by a rich fauna, a conspicuous member of which is the species described below.

*Ptomaphagus (Adelops) hubrichti* n. sp.

*Type series:* Holotype male, allotype female, and fourteen paratypes, Cripps's Mill Cave, 5 miles southwest of Smithville near the juncture of Bloomington Creek and Dry Creek, DeKalb Co., Tennessee, Dec. 27, 1956, C. E. Farrell, Catherine K. Barr, and T. C. Barr, Jr. One paratype from Cripps's Mill Cave, Oct. 9, 1954, T. C. B. Additional paratypes from DeKalb County caves as follows: Nine from Gin Bluff Cave, 1 mile west of Dowelltown, Aug. 18, 1956, T. C. B.; twenty from Avant (Lindsay Williams) Cave, 1.5 miles east of Dowelltown, Dec. 23, 1956, Leslie Hubricht and T. C. B. Holotype and allotype deposited in the American Museum of Natural History.

*Description:* Length 2.3 - 2.7 mm; width 1.2 - 1.4 mm. Color reddish, slightly testaceous. Form oblong, convex, narrowing posteriorly. Eyes reduced to a small, pale areola. Antennae long, extending back the anterior third of the elytra; segment I longer and wider than II and III, which

are subequal; IV, V, and VI subequal, conical, a little shorter than II and III; VII quite large and conical, half as wide as long; VIII small and subquadrate, not transverse; X almost as wide as long, IX somewhat longer; XI longer than IX and X, longer than wide, narrowed in the apical third. Pronotum subequal in width to elytra, widest in the basal fourth, two-thirds as long as wide; hind angles rather blunt, not produced, almost rectangular; base only very slightly concave, essentially perpendicular in its middle portion to the elytral suture. Elytra elongate, subparallel, tapering gradually to the apex, nearly three times the length of the pronotum; apex evenly rounded to the suture in males; elytra a little longer and more abruptly attenuate in females; striae oblique.

*Remarks:* The discovery of this species raises to six the number of known troglobious (i.e., eyeless, depigmented, exclusively cavernicolous) members of the *cavernicola* group from Tennessee and Alabama caves. *Pt. hubrichti* is readily distinguished from *Pt. lodingi* Hatch and *Pt. valentinei* Jeannel by having the II and III antennal segments subequal; from *P. hatchi* Jeannel by the larger size, the oblong form, the longer antennae, and the less concave base of the pronotum; from *Pt. henroti* Jeannel by the deeper reddish color (more testaceous in *henroti*), the much wider body, the larger VII and VIII antennal segments, and the blunter posterior pronotal angles. The writer has not seen *Pt. laticornis* Jeannel, a species known only from a single female from Scott Cave, Madison Co., Alabama, but according to Jeannel's (1949) description the structure of the antenna in *laticornis* is quite different from that of *hubrichti* or any of the other known species of the group.

*Pt. hubrichti* is found in very damp situations in the caves. In Cripps's Mill Cave it was collected under rocks beside rimstone pools in the spacious entrance room of the Goat Cave section, near a tremendous pile of bat guano. In Avant Cave the beetles were taken on raccoon dung in both branches of the cave, always in wet places. In the cave in Gin Bluff the species occurred on a dead bat in a large chamber reached only by crawling for 400 feet through the cave stream.

This species is named in honor of Mr. Leslie Hubricht, who has assisted the writer in the collection of this and many other species of cave coleoptera.

#### REFERENCE CITED

- Jeannel, R. 1949. Notes Biospeologiques, Mus. Nat. d'Hist. Nat. Paris, Fasc. IV, p. 102.