

A NEW SPECIES OF *HYPERASPIS* REDTENBACHER (COLEOPTERA: COCCINELLIDAE) AND NOTES ABOUT THE LIFE HABITS¹

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Abstract

Hyperaspis delicata, new species (Coccinellidae), from Brazil, is described and illustrated. Brief biological information on the species is provided.

Adults of a new species of *Hyperaspis* Redtenbacher were collected on "araçazeiro," *Psidium cattleianum* Sabine (Myrtaceae) in Piraquara and Colombo, Paraná, Brazil. An agreement was established in 1991 between the "Universidade Federal do Paraná", Curitiba, Paraná, Brazil, and Hawaii University, Manoa, Hawaii, to study the potential of associated insects for biological control of this plant. Ensuing study revealed many galls formed by a species of Homoptera that was attacked by a species of *Hyperaspis*.

Most of the Brazilian species of "*Hyperaspis*" were described by Mulsant (1850) and Crotch (1874) with essentially no taxonomic research on the Neotropical members of this large group since. *Hyperaspis* is distributed worldwide, but the largest number of species occur in the Neotropical Region. Gordon (1985) revised the 103 species and subspecies occurring in America north of Mexico to provide the only modern study of the genus in the Western Hemisphere.

In this paper a new member of the genus *Hyperaspis* is described and compared to other species of the genus. Comments on its biology are included.

Hyperaspis delicata, new species

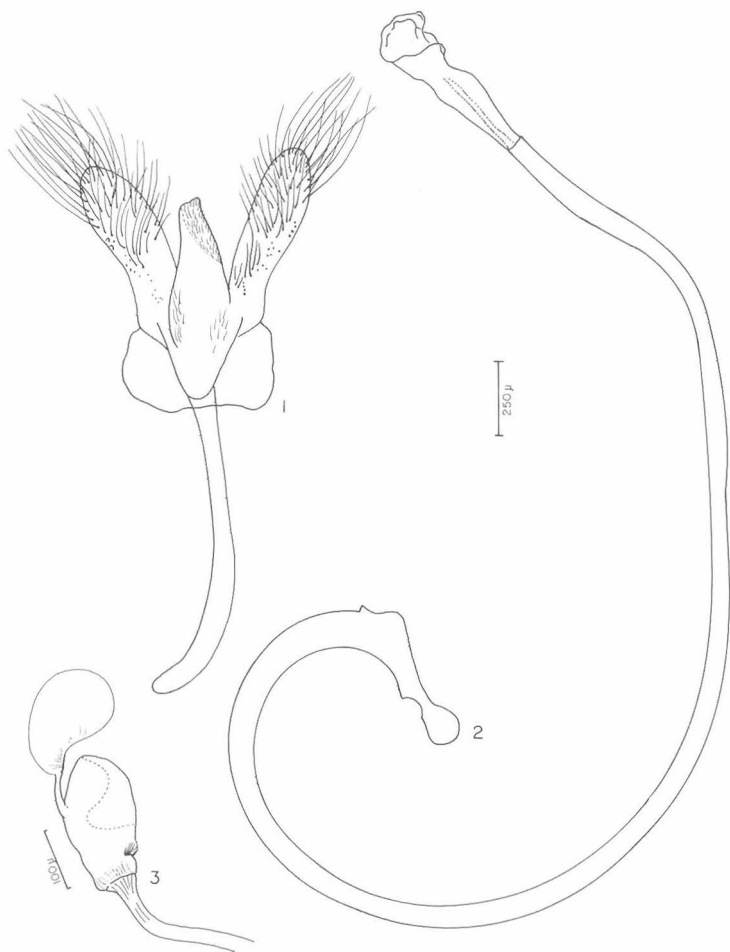
Figs. 1-4

Male. Length 2.92 mm, width 2.16 mm. Form oval, color predominantly black; mesosternum, metasternum, abdomen and femur black, with lateral parts of abdomen and apical tibia and tarsomeres yellow. Head and mouth parts yellow; labrum short, barely visible beyond clypeal apex. Antenna II—segmented. Pronotum with two yellow spots near lateral margin; punctation thin. Each elytron with one yellow spot at apex; punctation on elytron thick (Fig. 4). Abdomen with postcoxal lines incomplete, curved, not quite reaching posterior margin of first abdominal sternum. Genitalia with basal lobe asymmetrical; apex obliquely truncate with small hairs; abruptly cut; parameres large, with long hairs (Fig. 1); siphon broadly curved (Fig. 2).

Female. Similar to male except the head which is black, and the sexual characters. Spermathecal capsule short compound, with basal portion with appendix, very large (Fig. 3).

Type Series. Holotype male, Piraquara, Paraná, Brasil; 02/XII/1992, M. D.

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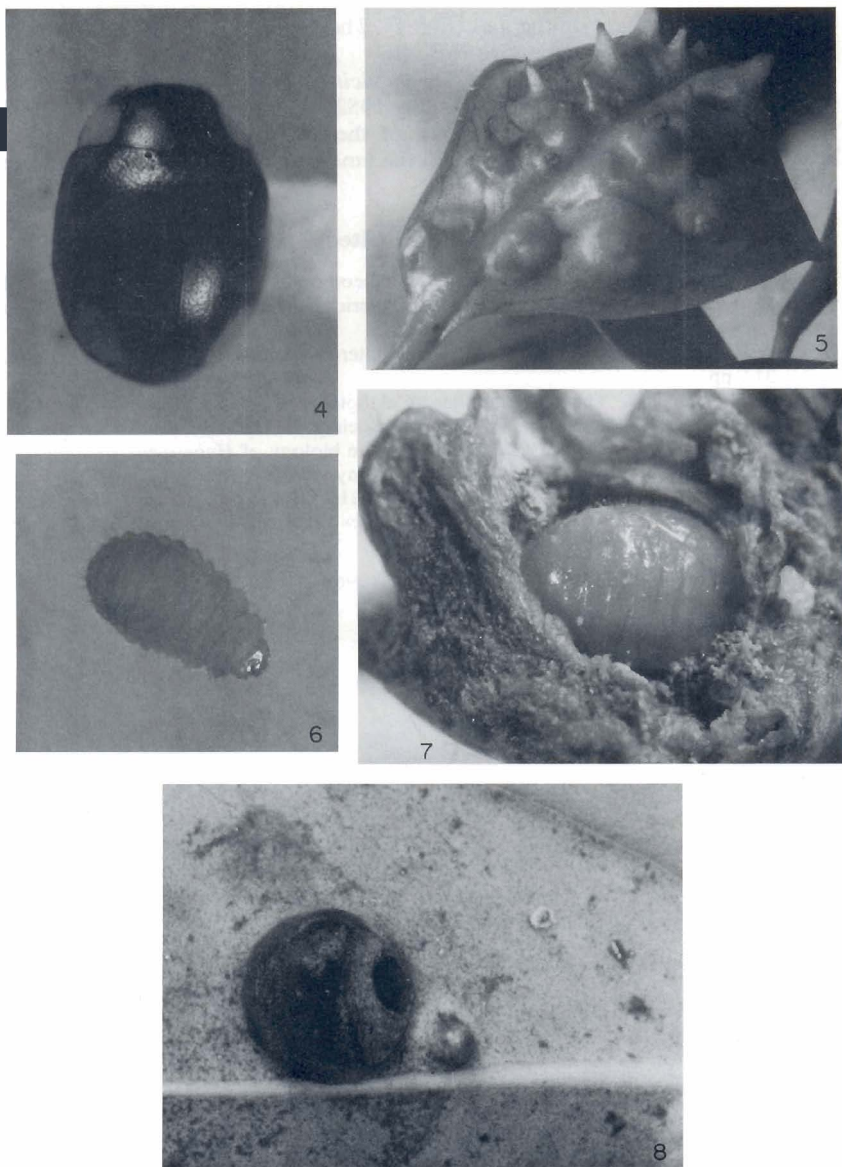
Figs. 1–3. *Hyperaspis delicata*. 1, basal lobe; 2, siphus; 3, spermatheca.

Vitorino, *Coleção de Entomologia* Pe. J. S. Moure, Departamento de Zoologia, Universidade Federal do Paraná (DZUP); Paratypes, same data as holotype: 2 males, 3 females (DZUP); Colombo, Paraná, Brasil, 13/II/1993, M. D. Vitorino, 1 male, 2 females (DZUP).

Variation. Male. Length 2.56–2.92 mm; width 1.86–2.16 mm. Female. Length 2.88–3.20 mm; width 1.96–2.44 mm.

Relationships. This species is related to Gordon's (1985) "*binotata* group" because of the black elytron with one yellow spot, the 11-segmented antennae, and the male genitalia with the apex of the basal lobe obliquely truncate.

Biological Data. According to Gordon (1985) "host records indicate that species of *Hyperaspis* prey only on families of Homoptera, and that many families within that order serve as hosts". *Hyperaspis delicata* specimens (Fig. 4) were collected on galls produced by *Tectococcus ovatus* Hempel (Homop-



Figs. 4-8. *Hyperaspis delicata*. 4, habitus; 5, gall on leaf of araçazeiro; 6, larvae; 7, pupa; 8, adult emergence hole on leaf.

tera: Eriococcidae) on the leaf of araçazeiro (Fig. 5). The female of *Hyperaspis* lays only one egg inside the gall. The eggs were found in October, and the larvae and pupae in January and February, in Piraquara and Colombo, Paraná State. The larvae are small (Fig. 6) and feed on the Eriococcidae. The pupae

finish the development on the gall (Fig. 7). The adult emerges through a small hole on the leaf of the *araçazeiro* (Fig. 8).

Adults, larvae and pupae of *Hyperaspis vinciguerrae* Capra, prefer eggs and young nymphs to eat (Hafez and El-Ziady 1952). The same data were observed for *H. delicata*. The mode of feeding of the larvae was impossible to see because of the internal habits, but with the emergence of the pupae there were no eggs or nymphs in the gall.

Literature Cited

- Blackwelder, R. E. 1945.** Checklist of the coleopterous insects of Mexico, Central America, the West Indies, and South America. United States National Museum Bulletin 185(3):343–550.
- Crotch, G. R. 1874.** A Revision of the Coleopterous Family Coccinellidae. London, 311 pp.
- Gordon, R. D. 1985.** The Coccinellidae (Coleoptera) of America North of Mexico. Journal of the New York Entomological Society 93(1):1–912.
- Hafez, M., and S. El-Ziady. 1952.** Studies on the biology of *Hyperaspis vinciguerrae* Capra, with a full description of the anatomy of the fourth stage larva. Bulletin de la Société Fouad 1er d'Entomologie 36:211–246.
- Mulsant, E. 1850.** Species de Coléoptères trimères sécuripalpes. Annales des Sciences Physiques et Naturelles de Lyon 2:1–1104.

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