With over 260 species, *Berosus* Leach, 1817 is the largest genus of hydrophilids (Hansen 1999). About half of the known species are from the New World, and in South America alone there are over 80 species. Regardless of this diversity, very few descriptions of Neotropical *Berosus* larvae are available, with only three species having described larvae. Spangler (1966) published the description of an unidentified South American larva from Peru; Archangelsky (1999) described the larvae of two Argentine species: *B. aulus* Orchymont, 1941 and *B. auriceps* Boheman, 1859. The remaining larval descriptions of New World *Berosus* are from the Nearctic region (Richmond 1920, Wilson 1923, Van Tassell 1966, Archangelsky 1994, 1997).

In this paper the larvae and egg cases of *B. toxacanthus* Oliva, 1989, *B. coptogonus* Jensen-Haarup, 1910 and *B. cornicinus* Knisch, 1922, are described; the pupa of *B. auriceps* is also described. Comparative notes on first and third instar larvae, and information on their biology is included. Morphological characters that differentiate third instar larvae of these three species from other known Argentine *Berosus* larvae are tabulated.

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Key words. – Hydrophilidae; *Berosus*; larvae; biology, Neotropical.
Material and methods

All larvae and pupae were reared from adults collected in the field and brought alive to the laboratory. Adults were kept in small plastic aquaria (20 cm long x 10 cm wide x 8 cm high) with gravel, small pieces of wood, and some aquatic plants or algae found in collecting sites. Adults fed on both plant material and commercial fish food which was provided twice a week (this added some protein to the diet).

Egg cases were constructed below the water’s surface either on small rocks or on the vegetation. After hatching, larvae were transferred to small, individual containers (in order to avoid cannibalism); tissue culture plates with 12 cells (for first and second instars) and six cells (for third instars) were used. Each cell had some sand and a pair of small sticks (for the larvae to cling on); the depth of the water was kept between 5 and 8 mm, and was changed every other day. Larvae were fed chironomid larvae, small oligochaetes, ostracods and other small invertebrates. Pupae could be obtained only for B. auriceps, to accomplish this prepupae were placed in small, inclined, petri dishes with sand on the upper half and water on lower one. Pre-pupae were left there for several days until they dug a pupal chamber, water was added every other day in order to prevent the sand from drying.

The specimens were fixed with boiling water and stored in 75% ethyl alcohol. Larvae were cleared in lactic acid, dissected and mounted on slides for observation and description; the medium used was Hoyser’s. Pupae were punctured under the wing pads after fixation in order to avoid swelling. Drawings were done using a Leica DML compound microscope with camera lucida; the drawings were scanned and the plates were put together with the use of Adobe Photoshop(r) and Adobe Illustrator(r).

Adult specimens were identified using the keys by Oliva (1989, 1993).

Descriptions

Berosus toxacanthus Oliva, 1989
(figs. 1-9)

Material studied. – Argentina, Córdoba province, Salinas Grandes, ditch at intersection of Road 60 and dirt road to Totoralejos, 185 m, 29° 37’ 26” S, 64° 50’ 23” W, pH 9.5-9.9, 13.III.1999.

Egg case. – Size: 1.15-1.30 mm long, without mast (n = 3). Whitish, attached to algae or stems of aquatic plants in the aquarium, rarely at the bottom. Made of two layers, first one laid on substrate, second one covering eggs, light brown in color. Final shape elliptical (fig. 9), length of mast variable, one to two times the