

## DESCRIPTIONS OF THREE NEW HYDROPHILIDAE FROM INDIA.

By A. D'ORCHYMONT, *Brussels.*

### **Helochares (Agraphydrus) exedis**, sp. nov.

*Type* : No.  $\frac{3802}{H4}$ . In the Zoological Survey of India (Indian Museum), Calcutta. Bombay Presidency, Poona District, Khandala, alt. ca. 2,500 feet ; 6-10.iii.1918 ; among damp algae on cliff at edge of waterfall (Annandale), ♂,  $2 \times 1$  mm.

*Paratypes* : Nos.  $\frac{3803-3805}{H4}$ . Same locality ; same collector ; a few specimens.

Distinguished from all previously described *Agraphydrus* by its unpolished, somewhat eroded, nearly unpunctate upper surface. Under a very high power, however, it is possible to detect very fine and small punctures, separated from one another by about five times their diameter. The eroded appearance of the upper surface (head, prothorax, scutellum and wing cases) is due to an extremely fine, microscopical reticulation, which is difficult to see even under the microscope.

Of an obscure testaceous colour, obscured on the labrum, middle of forehead, between the eyes faint and indefinite in places, apparently owing to transparency, upon the disc of prothorax, very faintly on the disc of elytra. On the head the Y-suture is blackish with a row of coarser punctures behind the anterior branches of the Y. Eyes small. Antennae 9-jointed, joints 4 and 5 very short. Palpi entirely yellow.

Anterior and posterior angles of prothorax rounded, posterior ones more so ; anterior margin narrower than the posterior, anterior and postero-lateral systematic series distinct, composed of moderately coarse punctures.

Elytra not  $1\frac{1}{2}$  times as long as wide, suture very narrowly blackish, systematic series of coarser punctures not well developed but there are two basal punctures on each side of scutellum.

Mentum shining, with some very minute punctures on the side and a semi-circular shining excavation in the middle of anterior margin. Mesosternum minutely protuberant in the middle before intermediate coxae. Emargination of the last ventral segment very shallow and wide. All femora except the knees pubescent. Tibiae very spinulose. Tarsi yellow.

Aedeagus at its end V-shaped ; the parameres being widened at their apex to an oblique foot-like appendage, which is minutely toothed or hooked at its outer and anterior edge ; at their apices the appendages are rounded. The median lobe is not protruding but embedded in between the two parameres, shorter and much narrower, parallel-sided and rounded at the apex.

### **Pelthydrus similis**, sp. nov.

*Type* : No.  $\frac{3806}{H4}$ . In the Zoological Survey of India (Indian Museum), Calcutta. Nerbudda Survey, sta. 56, Rewa State, Machrar Nala

tributary at Chapra, 2,625 feet ; March 1927 (H. S. Pruthi) ;  $2.6 \times 1.3$  mm.

*Paratypes* : Nos.  $\frac{3807-3811}{H4}$ . Same locality, date, altitude and collector ; sta. 51, same Survey, the river opposite the camp at Kachratola, 2,625 feet ; March 1927 (H. S. Pruthi) ; a few. Sta. 38, the river about 3 miles (east) from Koilari, Rewa State ; February 1927 (H. S. Pruthi) ; a single specimen.

This is the 12th *Pelthydrus* discovered ; it comes very near *vitalisi* d'Orchymont, being of about the same size (2.5-2.6 mm.), 8-jointed antennae, not punctate-seriate elytra, not very small eyes, carinate prosternum, in the middle of body not much widened and not of navicular shape, with also close and coarse punctation on the wing cases. The colouration of the upper surface is the same : deep blackish, with the disc of prothorax and elytra bordered more widely with clearer brown or even yellow. The palpi are uniformly reddish as also the feet with only the tibiae more or less infuscate. The anterior side of the forehead is widely and more deeply emarginate, as in *vitalisi*, with the outer angles more sharply protruding. The prothorax is moderately convex, very distinctly narrowed behind with the posterior margin distinctly narrower than the anterior (in *vitalisi* more convex and nearly of same width before and behind). The anterior angles are entirely rounded. The sculpture of the prothorax is also somewhat different : under a high power the large punctures seem preceded by a much finer one which has a tendency to coalesce in the longitudinal direction, so that the punctures seem more distinctly geminate than in *vitalisi*. The elytra are more parallel-sided, less attenuate posteriorly and less convex than in that species, without the faintest trace of a serial arrangement of some of the otherwise nearly as dense and strong punctures.

On the under side the mesosternal process is not arrow-head shaped as in *vitalisi*, but the longitudinal carina is only limited before by a half circular and obscurely raised line. Seen from the side the process is not so protuberant before as in *vitalisi*. The first ventral segment is, therefore, less distinctly carinate.

#### ***Berosus (Enoplurus) fallax*, sp. nov.**

*Type* : No.  $\frac{3812}{H4}$ . In the Zoological Survey of India (Indian Museum), Calcutta. Nerbudda Survey, Central Provinces, sta. 83 ; small pools near the river channel at Mandla ; ♂,  $4.9 \times 2$  mm. ; November 1927 (H. S. Pruthi).

*Paratypes* : Nos.  $\frac{3813-3819}{H4}$  Same locality, date and collector ; ♂♂♀♀. Same Survey, the Taba tributary at Babai, Central Provinces, sta. 103 ; 17th December 1927 ; still water ; 1 ♂ (H. S. Pruthi) ; the river at Hoshangabad (Central Provinces), sta. 104 ; December 1927, 1 ♀ (H. S. Pruthi).

Nearest to *fairmairei* but on an average somewhat smaller and more coarsely sculptured, with the elytral striae, especially at base and along suture, deeper impressed and the interspaces more densely and more coarsely punctured, the sutural angle of elytra of ♂ more produced than in the ♀, the parameres of aedeagus very long, rounded at extremity

(very acutely pointed in *fairmairei*) and the median lobe not abruptly widened at the end, which is coated with dense, very short, microscopical setae; median orifice distal (median lobe in *fairmairei* strongly arcuate but only in one direction—convexity ventral—the end abruptly widened, coated also with very short setae and with median orifice nearly distal).

Upper side of a yellow testaceous colour, very obscurely darkened by brown spot-like markings: two on the postfrons, sometimes two geminated ones towards the anterior side of prothorax, one along the suture of elytra beyond the middle and two others more exterior ones before and another behind the sutural one. These elytral markings are rather darkenings of a short portion of the 2nd to 4th, 7th to 9th and 5th to 7th striae.

Head and prothorax more densely and more regularly punctured than in *fairmairei*, otherwise very similar in general form and disposition. Each elytral puncture of interstices bears a short yellow procumbent hair. Exterior spine long and slender, a trifle more so than in *fairmairei*.

Mesosternum with a low median elevated carina. Metasternal median process triangular and advanced towards posterior coxae and deeply unifoveolate below. First ventral segment obscurely carinate at base. Fifth abdominal segment with a wide and very shallow emargination, not toothed at the bottom, inconspicuously more abrupt at the sides as in *fairmairei*. Claws of tarsi long as in that species.

♂. Anterior tarsi tetramerous, the basal joints enlarged, elytral interspaces not reticulate between punctures. Fifth ventral segment with a shallow emargination as remarked above, nearly 4 or 5 times as wide as deep.

♀. Anterior tarsi pentamerous, basal joints not enlarged, elytral interspaces very distinctly reticulate, 5th abdominal segment not emarginate at the end but widely and inconspicuously truncate at the end, the truncate portion being nearly twice as wide as the emargination of ♂.