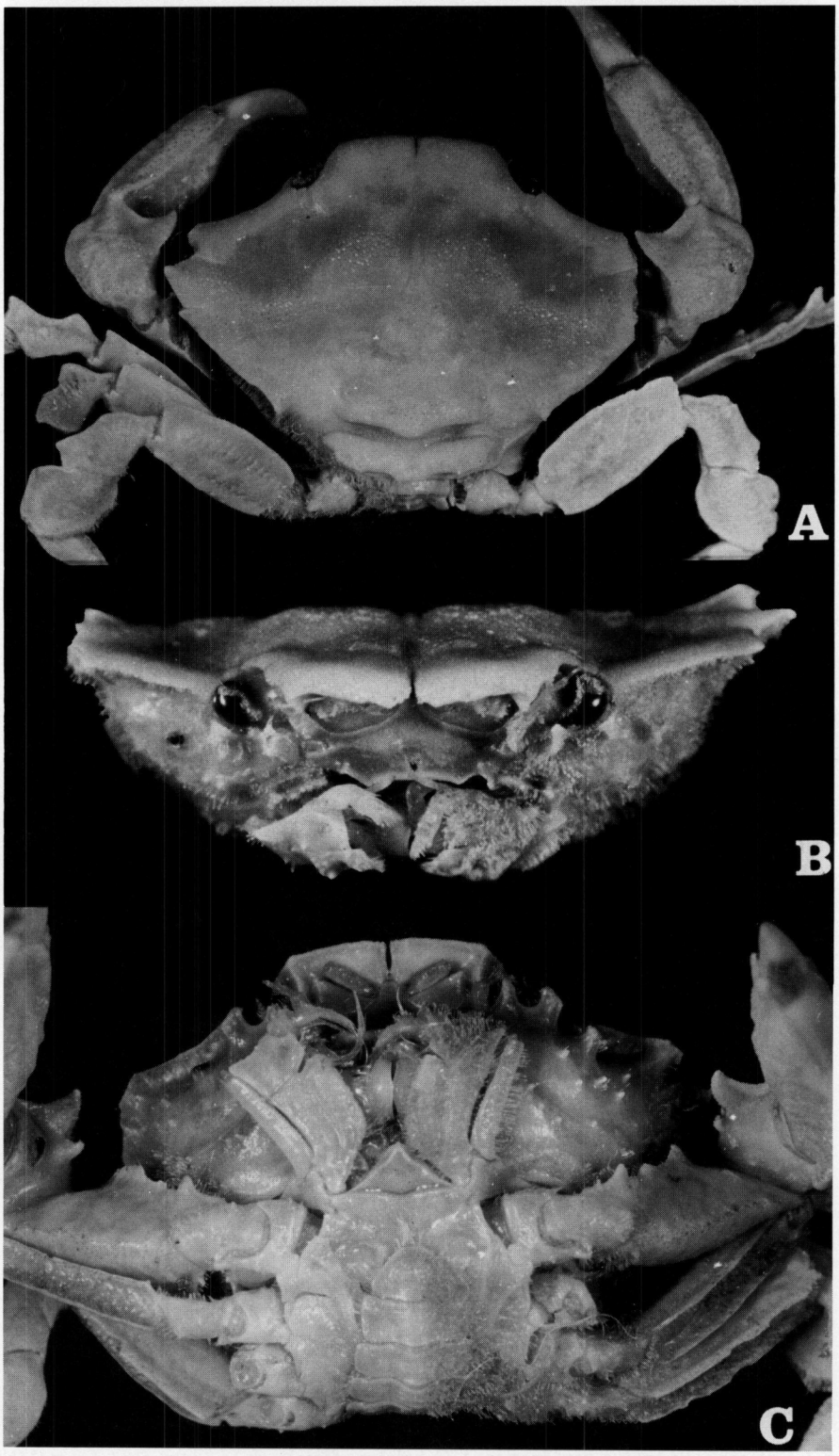

Fig. 7. *Glyptocarcinus politus*, new species. Holotype female, cb 15.3 mm, cl 11.4 mm (MNHN). A, dorsal view; B, frontal view; C, ventral view.

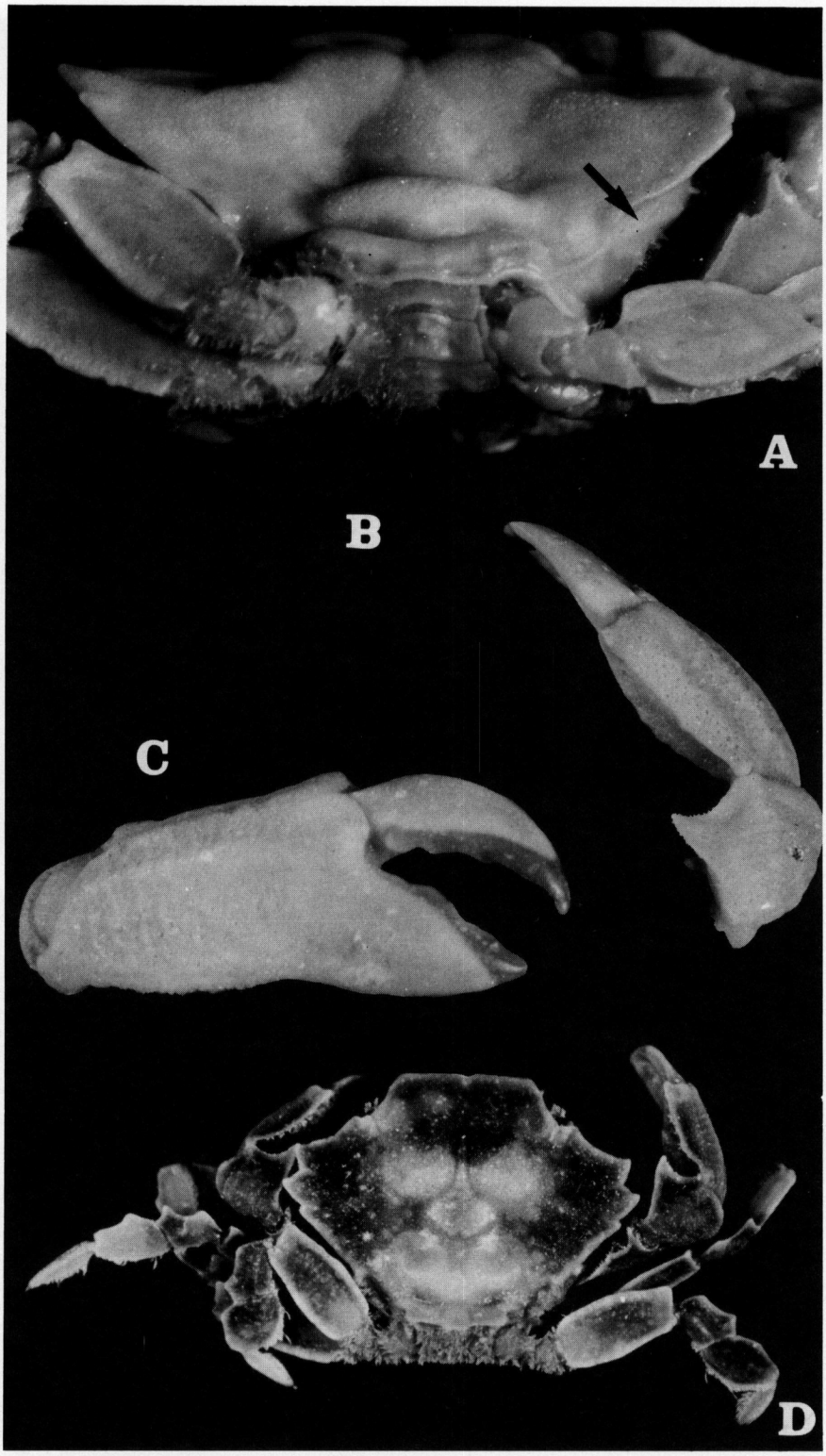

Fig. 8. *Glyptocarcinus politus*, new species. A-C, holotype female, cb 15.3 mm, cl 11.4 mm (MNHN); D, Paratype female, cb 8.2 mm, cl 5.9 mm (ZRC). A, posterior view of carapace showing postero-sub-branchial channel (arrows); B, dorso-marginal view of cheliped; C, front view of right chela.

with strong, gently outwardly curving tooth at inner distal angle, base of posterior part with small blunt tooth; margins of both teeth lined with small but distinct granules. Outer surface of chela rugose, with 3 low, uneven longitudinal ridges on proximal two-thirds; inner surface raised, median part forming a low but distinct longitudinal ridge but no teeth or spines. Fingers shorter than palm, stout, surfaces rounded, smooth, only distal part and cutting edges pigmented brown; cutting edge of dactylus of larger chela with large rounded, inwardly-directed tooth, cutting edge of pollex with denticles; cutting edges of fingers of smaller chela uneven, blade-like for most of length, with several small denticles towards distal part.

Ambulatory legs short, first and second pair longest. Coxa with blunt tubercle on outer distal angle; basis and ischium fused, basis with sharp median tubercle on ventral margin; ischium with 2 small median tubercles on ventral margin; merus broad, cristate, dorsal margin with high crest which slightly folds inwards, ventral margin with 2 parallel crests forming

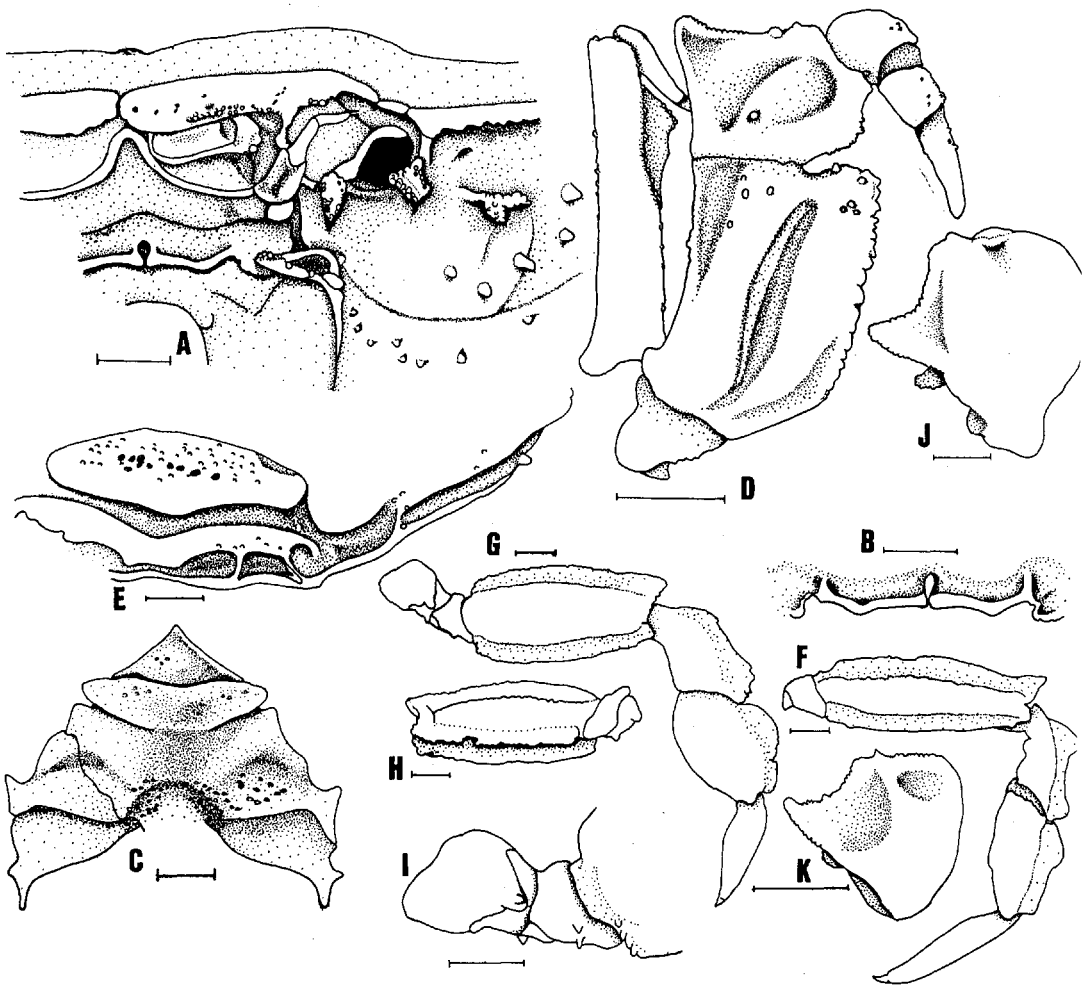

Fig. 9. *Glyptocarcinus politus*, new species. A-J, holotype female, cb 15.3 mm, cl 11.4 mm (MNHN); K, paratype female, cb 8.2 mm, cl 5.9 mm (ZRC). A, face of carapace; B, posterior margin of epistome; C, anterior sternites; D, right third maxilliped; E, posterior part of carapace (dorsal view); F, third ambulatory leg; G, fourth ambulatory leg; H, subventral margin of merus of third ambulatory leg; I, coxa of third ambulatory leg; J, K, carpus of right cheliped. Scales = 1.0 mm.

deep trough between them, margins of crests gently serrated to entire; ventral part of proximal edge with 3-5 tubercles. Carpus with very high, uneven crest on dorsal margin, crest uneven to entire, sometimes medially indented, appearing bilobed. Propodus short, with high median dorsal crest, margin entire or clefted. Dactylus relatively short, laterally flattened, blade-like, tip hooked, corneous.

Suture between sternites 1 and 2 absent, suture between sternites 2 and 3 deep, lined with small granules; suture between sternites 3 and 4 shallow, interrupted medially, lateral clefts deep; sternite 4 with distinctly depressed median part. Abdomen 7-segmented, all segments free, movable, covering about half of sternum; pleopods setose, fully developed.

Paratype. - The paratype female is small and juvenile and differs from the holotype female in having a darker live coloration, a more squarish carapace which is slightly more punctate, and having the cardio-intestinal groove shallower. The sub-basal tooth on the inner distal angle of the carpus of the cheliped is also small and indistinct from dorsal view. In other non-sexual aspects, it agrees well with the holotype female.

Colour. - In the adult holotype, the anterior part of the carapace and chelipeds are dark orangish- to brick-red, the posterior parts and legs being mottled red and white (Fig. 10B). In the smaller paratype female, the carapace is basically maroon with more distinct patches of white, the mottled effect being less striking (Fig. 10C).

Etymology. - The name is derived from the Latin "politus" for smooth, alluding to the smooth surfaces of the carapace.

Remarks. - This species is very close to *G. lophopus* but differs in several aspects of the sculpture on the carapace surface, form of the anterolateral margins, cardiac regions, intestinal regions, structure of the carpus of the cheliped and proportions of the ambulatory merus (see Table 2).

General biology. - The substrate where the specimens were collected from was very rough, with rocks and gravel. The area had several active submerged volcanoes. Nothing else is known about its biology.

Cyrtocarcinus, new genus

Harrovia - Rathbun, 1906: 886; Edmondson, 1951: 217; Serène *et al.*, 1958: 196 (*partim*); Serène, 1968: 63 (*partim*); Sakai, 1974: 86 (*partim*) Sakai, 1976: 299 (*partim*); Takeda, 1976: 105 (*partim*) (*nec* Adams & White, 1849).
Glyptocarcinus - Takeda, 1979: 68 (*partim*); Števčić *et al.*, 1988: 1311 (*partim*).

Type species. - *Harrovia truncata* Rathbun, 1906, by present designation.

Diagnosis. - Carapace transverse, distinctly broader than long; regions poorly developed; front prominent, distinctly bilobed, with deep median fissure, no supraorbital lobe or tooth discernible; cardiac region swollen, posterior part expanded to form cardiac fold which covers very deep, cardio-intestinal groove from dorsal view, posterior part of cardiac fold subtruncate in shape; intestinal region distinctly depressed, sloping anteriorly towards cardio-intestinal groove; posterior margin of carapace distinctly sunken below margin of last abdominal segment; anterolateral margin strongly lamelliform and plate-like from frontal view, with 3

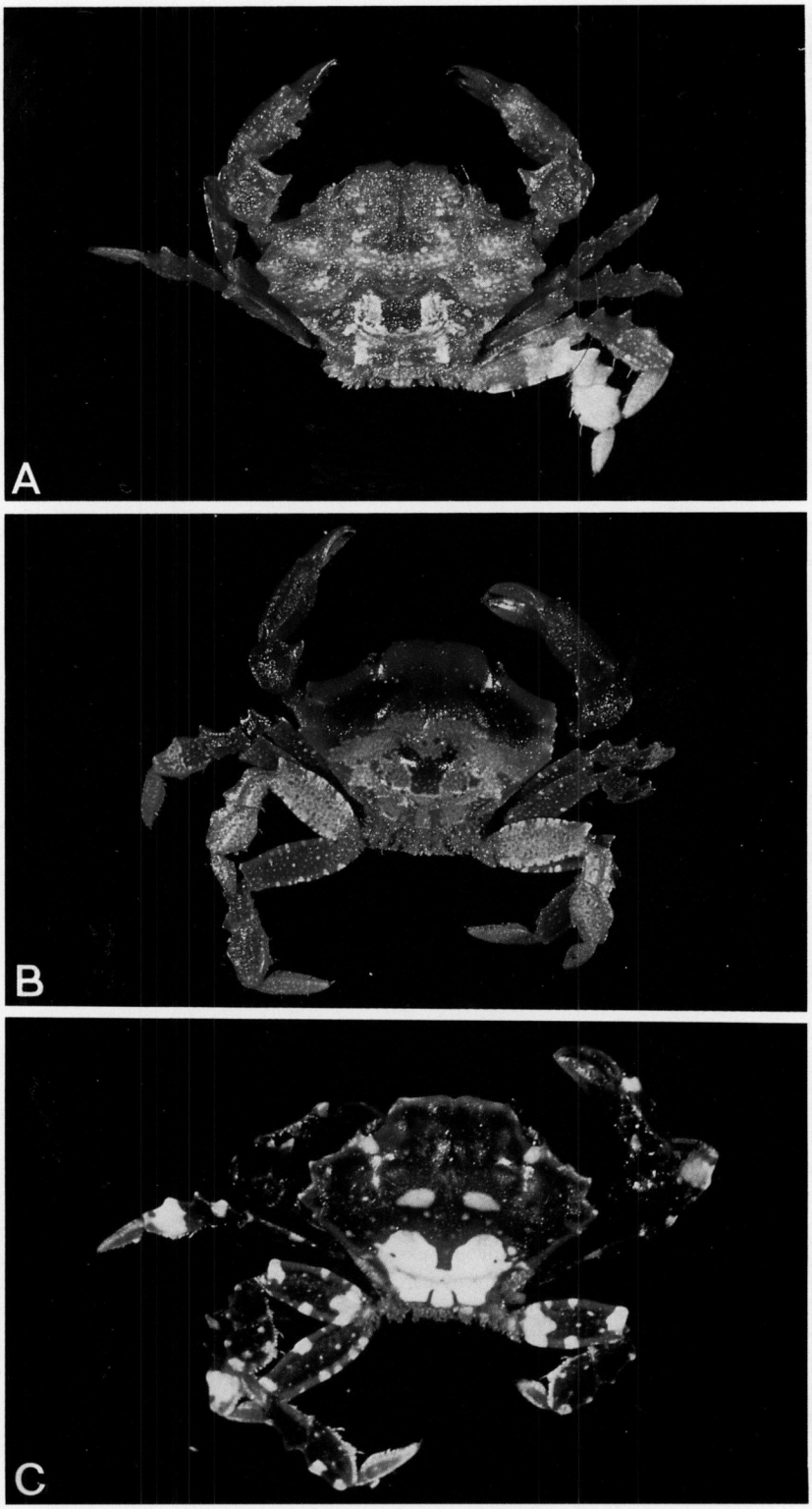

Fig. 10. A, *Antrocarcinus petrosus*, new genus and species; holotype male, cb 12.0 mm, cl 8.8 mm (MNHN). B-C, *Glyptocarcinus politus*, new species; B, holotype female, cb 15.3 mm, cl 11.4 mm (MNHN); C, paratype female, cb 8.2 mm, cl 5.9 mm (ZRC).

sharp lobiform teeth, the anterior 2 large, last much smaller; posterolateral margin distinctly converging, not continuous, anterior two-thirds straight, then curving sharply into metabranchial region. Posterior margin of epistome truncate, median lobes separated by deep grooves, not fused. Ischium of third maxilliped distinctly rectangular, width ca. 63% length; antero-external angle of merus distinctly auriculiform. Carpus of chelipeds with one large tooth on inner distal angle; dorsal margin of chela rounded, not cristate, median part strongly swollen, appearing bulbous, without spines or teeth. Suture between sternites 2 and 3 prominent, lined with small granules; suture between sternites 3 and 4 interrupted medially, lateral clefts very deep; sternite 4 with very high transverse median ridge, with anterior part sloping forwards very sharply. Male abdomen 7-segmented, with sutures between segments 3-5 distinct on the external surface but incomplete internally, segments being partially to completely ankylosed and immovable; surfaces of all male abdominal segments smooth, without large swellings. First male pleopod relatively slender, C-shaped, distal margins lined with short, strong spines; second male pleopod short, distal segment ca. 28% length of basal segment.

Etymology. - The genus name is derived from the Greek "kyrtos" for humpback, in combination with the name "carcinos" (for crab), alluding to the swelling of the cardiac region and depressed intestinal region of the type species. Gender masculine.

Table 2. Differences between *Glyptocarcinus lophopus* and *G. politus*

Character	*G. lophopus*	*G. politus*
Carapace surface	covered with small granules or pits, forming semi-reticulated pattern	appears almost smooth
Anterolateral margins	horizontal, flat, not upturned	horizontal, flat, not upturned
Cardiac region	anterior part distinct, convex, clearly demarcated, gently sloping posteriorly, forming a concave depression on each side	anterior part gently concave, not distinctly demarcated, confluent with posterior part of branchial regions to form low transverse ridge
Cardio-intestinal groove	anterior part covered by cardiac fold	most of groove covered by cardiac fold
Intestinal region	anterior part deeply excavated, partly overhung by cardiac fold; posterior part separated into 2 subregions by narrow but distinct groove	anterior part deeply excavated, almost completely overhung by cardiac fold; posterior part entire, without groove
Cheliped carpus	inner surfaces pitted, inner angle with a large, sharp tooth and smaller sub-basal tooth	inner surfaces smooth, inner angle with a large, sharp tooth and smaller sub-basal tooth
Fourth ambulatory merus	stout, length ca. 1.8 times width	slender, length ca. 2.1 times width

Remarks. - Serène *et al.* (1958) first suggested that *Harrovia truncata* might be referred to a separate genus, citing the lack of an inner supraorbital tooth, different structure of the orbit, short chelipeds and flattened ambulatory legs as possible distinguishing characters. Takeda (1973) established *Glyptocarcinus lophopus* for a new Japanese species without considering *H. truncata*, a species which Sakai (1974, 1976) later considered to be a synonym of *H. truncata*, effectively synonymising *Glyptocarcinus* and *Harrovia*. Takeda (1979) compared specimens of both species and concluded that *H. truncata* was a separate species of *Glyptocarcinus*, separate from *G. lophopus*. Re-examination of the specimens of *Harrovia truncata* from Hawaii and the type of *Glyptocarcinus lophopus* confirm Takeda's observations that *H. truncata* is not a senior synonym of *Glyptocarcinus lophopus*. The present study however, argues against including *Harrovia truncata* in the genus *Glyptocarcinus* as presently defined. *Harrovia truncata* possesses several peculiar features (see Table 1), notably in the structures of the intestinal region and sternum, which suggest that it requires a separate genus for itself.

Cyrtocarcinus truncatus (Rathbun, 1906) new combination
(Figs. 11-13)

? *Harrovia truncata* Rathbun, 1906: 886, pl. 14 fig. 8, text fig. 40 (Kauai, Hawaii); Edmondson, 1951: 217, figs. 21, 22 (southwest coast of Oahu, Hawaii).

Harrovia truncata - Serène *et al.*, 1958: 196, 199, figs. 7 A (no new record); Serène, 1968: 63 (list only).

Glyptocarcinus truncatus - Takeda, 1979: 68 (Maili Point, Makua and off southwest coast, all in Oahu, Hawaii); Števčić *et al.*, 1988: 1311 (list only).

Material examined. - 1 male (cb 13.5 mm, cl 9.6 mm) (dried) (BPBM S8566), Oahu Island, Hawaiian Islands, under rocks, 75 feet deep, coll. E. H. Chave, 17.x.1976. — 2 males (cb 26.0 mm, cb 23.5 mm, cl of both specimens not determinable as posterior part missing, specimens dried and badly damaged) (BPBM S5632), "Makua": southwest coast of Oahu island, Hawaiian Islands, 40-350 feet depth, coll. Brock, 8.viii.1949.

Diagnosis. - Anterolateral teeth low, broadly triangular, lobiform (more produced in smaller specimens); cardiac region distinctly overhanging very deep cardio-intestinal groove. Inner surface of chela strongly swollen, dorsal surfaces rounded, not cristate; carpus with 1 broad, blunt tooth at inner distal angle. First male pleopod relatively slender, C-shaped, distal margins lined with short, strong spines, groove for G2 marginal, tip slightly turned upwards; second male pleopod short, distal segment distinct, ca. 28% length of basal segment.

Colour. - Edmondson (1951: 219) reported that the "... colour of living specimens white, with the exception of the chelipeds which are bright red". Takeda (1973: 69) reported that the dried coloration of one Hawaiian specimen (BPBM S8566) was "... whitish, with some brownish irregular mottles ... the chelipeds are entirely brick-red".

Remarks. - The fusion of male abdominal segments 3-5 in *C. truncatus* appears to be associated with size. In the smaller male from Oahu (cb 23.5 mm, BPBM S5632b), the sutures between the segments along the inner surface are still evident with some parts ankylosed, and the segments could still be broken off relatively easily. In the larger male (cb 26.0 mm, BPBM S5632a), all the sutures along the inner surface are fused. The male abdomen of the smallest male (cb 13.5 mm, BPBM S8566) was missing. The carapace regions of the smallest male is generally more punctate than those of the larger males.