

Species of the genus *Munida* Leach, 1820 and related genera from Fiji and Tonga (Crustacea: Decapoda: Galatheidae)

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ABSTRACT

During cruises MUSORSTOM 10 (August 1998) and BORDAU 1 (February-March 1999) to Fiji and BORDAU 2 to Tonga (May-June 2000), numerous galatheids belonging to the genera *Agononida* Baba & de Saint Laurent, 1996, *Crosnierita* Macpherson, 1998, *Munida* Leach, 1820, *Paramunida* Baba, 1988 and *Plesionida* Baba & de Saint Laurent, 1996, were collected. The present collection comprises 12 *Agononida* species, 3 *Crosnierita*, 42 *Munida*, and 12 *Paramunida* species. *Paramunida aliena* Macpherson, 1996 is transferred to the genus *Plesionida*. The material was taken at 206 stations in a depth range of 79-1226 m. Additional material from New Caledonia and Vanuatu has also been considered. The following new species are described: *Agononida garciai*, *A. insolita*, *Crosnierita tucanae*, *Munida angusta*, *M. apodis*, *M. delicata*, *M. limatula*, *M. ommata*, *M. pavonis*, *M. pumila*, *M. volantis*, and *Paramunida cristata* and *P. curvata*.

RÉSUMÉ

Les espèces du genre *Munida* Leach, 1820 et des genres apparentés des Fidji et Tonga (Crustacea : Decapoda : Galatheidae).
Lors des campagnes MUSORSTOM 10 (août 1998) et BORDAU 1 (février-mars 1999) aux îles Fidji et BORDAU 2 aux îles Tonga (mai-juin 2000), de nombreux galathéides appartenant aux genres *Agononida* Baba & de Saint Laurent, 1996, *Crosnierita* Macpherson, 1998, *Munida* Leach, 1820, *Paramunida* Baba, 1988 and *Plesionida* Baba & de Saint Laurent, 1996, ont été récoltés. La collection étudiée ici comprend 12 espèces du genre *Agononida*, 3 du genre *Crosnierita*, 42 du genre *Munida*, et 12 du genre *Paramunida*. *Paramunida aliena* Macpherson, 1996 est transférée au genre *Plesionida*. Les spécimens ont été récoltés au cours de 206 stations, entre 79 et 1226 m. Des spécimens additionnels provenant de la Nouvelle-Calédonie et de Vanuatu ont également été étudiés. Les nouvelles espèces suivantes sont décrites : *Agononida garciai*, *A. insolita*, *Crosnierita tucanae*, *Munida angusta*, *M. apodis*, *M. delicata*, *M. limatula*, *M. ommata*, *M. pavonis*, *M. pumila*, *M. volantis*, and *Paramunida cristata* and *P. curvata*.

INTRODUCTION

The present work is based on the collection of species belonging to several genera of the family Galatheididae obtained during expeditions to Fiji (MUSORSTOM 10, August 1998, BORDAU 1, February-March 1999) and Tonga (BORDAU 2, May-June 2000) (Richer de Forges *et al.* 2000a, b). Genera treated are *Agononida* Baba & de Saint Laurent, 1996, *Crosnierita* Macpherson, 1999, *Munida* Leach, 1820, *Paramunida* Baba, 1988 and *Plesionida* Baba & de Saint Laurent, 1996.

Although these genera have been studied in adjacent areas (e.g. New Caledonia: Macpherson 1994, 1996b; Baba & de Saint Laurent 1996; Wallis and Futuna islands: Macpherson 1996a; Vanuatu: Macpherson 1999), there are still numerous, relatively unknown areas in the central and Western Pacific. There has been little work on representatives of these genera from Fiji and Tonga, although several stations were worked in the area during the *Challenger* Expedition and some species described and cited: e.g. *Agononida normani* (Henderson, 1885), *A. spinicordata* (Henderson, 1885), *Munida militaris* Henderson, 1885, *M. tuberculata* Henderson, 1885, and *Paramunida granulata* (Henderson, 1885) (Henderson 1888; Baba 1988; Baba & Macpherson 1991; Macpherson 1994). The present collection comprises 12 species of *Agononida*, three species of *Crosnierita*, 42 species of *Munida*, 12 species of *Paramunida* and one species of *Plesionida*. The material was taken at 206 stations in a depth range of 79-1226 m.

This study has revealed the existence of a rich fauna, including the 13 new species described herein. However, the variation observed in the characters of several species (e.g. *Agononida squamosa*, *Munida cornuta*, *M. leptitis*, *M. microps*, *M. notata*) suggests that the taxonomic position of several forms or species, as well as the definition of some morphological characters, will require further evaluation. Results recently obtained for the related genus *Raymunida* Macpherson & Machordom, 2000, as well as for *Munida*, where genetically different species show small morphological differences (Macpherson & Machordom 2000, 2001, and in prep.), reveal the existence of numerous sibling species. These findings demonstrate that the study of these interesting and highly diverse genera of decapods is still quite incomplete, and further research is required.

Unless specified, all material examined is at Muséum national d'Histoire naturelle, Paris. Measurements given are of carapace length, excluding rostrum, and the terminology mainly follows that used in previous publications (Zariquiey-Alvarez 1952; Macpherson & de Saint Laurent 1991; Macpherson 1994; Baba & de Saint Laurent 1996). Colour notes are taken from slides.

The following organisational abbreviations are used: BMNH (The Natural History Museum, London), IRD (Institut de Recherche pour le Développement) MNHN (Muséum national d'Histoire naturelle, Paris), USNM (National Museum of Natural History, Washington, D.C.).

COMBINED LIST OF STATIONS AND OF SPECIES OBTAINED PER STATION

The abbreviations of the gears used are: DW: Warén dredge; CC: Otter trawl; CP: Beam trawl; CAS: Trap.

MUSORSTOM 10. Fiji

- Stn CP 1312. — 05.08.1998, 660-666 m, 17°24.52'S, 178°34.00'E: *Munida rosula*.
 Stn CP 1316. — 06.08.1998, 478-491 m, 17°14.84'S, 178°21.99'E: *Agononida incerta*, *Munida leviantennata*, *M. rhodonia*.
 Stn CP 1317. — 06.08.1998, 471-475 m, 17°11.99'S, 178°14.14'E: *Agononida incerta*, *Munida idyia*, *M. rhodonia*.
 Stn CP 1318. — 06.08.1998, 330-335 m, 17°15.65'S, 178°03.45'E: *Paramunida setigera*.
 Stn CP 1320. — 06.08.1998, 290-300 m, 17°16.78'S, 177°53.57'E: *Munida delicata*, *Paramunida setigera*.
 Stn CP 1322. — 07.08.1998, 210-282 m, 17°17.10'S, 177°47.92'E: *Munida gilii*, *Paramunida setigera*.
 Stn CP 1323. — 07.08.1998, 143-173 m, 17°16.10'S, 177°45.75'E: *Munida gilii*, *M. semoni*.
 Stn CP 1324. — 07.08.1998, 102-104 m, 17°17.37'S, 177°47.05'E: *Munida clinata*, *M. gilii*.
 Stn CP 1325. — 07.08.1998, 282-322 m, 17°16.39'S, 177°49.80'E: *Munida heteracantha*, *M. idyia*, *Paramunida setigera*.
 Stn CP 1326. — 07.08.1998, 265-300 m, 17°14.26'S, 177°49.68'E: *Munida apodis*, *M. galaxaura*.

- Stn CP 1327. — 07.08.1998, 370-389 m, 17°13.26'S, 177°51.62'E: *Agononida garciai*, *A. incerta*, *A. squamosa*, *Munida idyia*, *M. leviantennata*.
- Stn CP 1328. — 07.08.1998, 248-277 m, 17°16.76'S, 177°50.45'E: *Munida heteracantha*.
- Stn DW 1329. — 08.08.1998, 102-106 m, 17°19.33'S, 177°47.36'E: *Munida gilii*.
- Stn CP 1330. — 08.08.1998, 567-699 m, 17°09.50'S, 177°56.32'E: *Munida leviantennata*, *M. rhodonia*.
- Stn CP 1331. — 08.08.1998, 694-703 m, 17°02.45'S, 178°01.84'E: *Munida rhodonia*.
- Stn CP 1332. — 08.08.1998, 640-687 m, 16°56.17'S, 178°07.86'E: *Agononida incerta*, *Munida rhodonia*.
- Stn DW 1334. — 09.08.1998, 251-257 m, 16°51.37'S, 178°13.95'E: *Crosnierita tucanae*, *Munida offella*, *M. semoni*.
- Stn CP 1335. — 09.08.1998, 729-753 m, 16°52.76'S, 178°03.05'E: *Munida rhodonia*.
- Stn CC 1337. — 09.08.1998, 635-670 m, 17°03.44'S, 177°47.21'E: *Agononida incerta*, *Munida rhodonia*.
- Stn DW 1340. — 10.08.1998, 303-365 m, 16°56.65'S, 177°37.92'E: *Munida delicata*.
- Stn CP 1341. — 10.08.1998, 500-614 m, 16°52.51'S, 177°43.66'E: *Agononida incerta*, *Munida rhodonia*.
- Stn CP 1342. — 10.08.1998, 650-701 m, 16°45.98'S, 177°39.71'E: *Agononida incerta*, *Munida rosula*.
- Stn CP 1344. — 10.08.1998, 588-610 m, 16°45.26'S, 177°40.53'E: *Munida militaris*.
- Stn CP 1346. — 11.08.1998, 673-683 m, 17°19.63'S, 178°32.39'E: *Munida rosula*.
- Stn CP 1348. — 11.08.1998, 353-390 m, 17°30.29'S, 178°39.63'E: *Agononida callirrhoe*, *A. garciai*, *Munida apodis*, *M. idyia*, *M. parca*, *Paramunida setigera*.
- Stn CP 1349. — 11.08.1998, 244-252 m, 17°31.07'S, 178°38.79'E: *Crosnierita tucanae*, *Munida gilii*, *M. idyia*, *M. semoni*, *Paramunida setigera*.
- Stn CP 1351. — 11.08.1998, 292-311 m, 17°31.14'S, 178°39.96'E: *Crosnierita tucanae*, *Munida galaxaura*, *M. heteracantha*, *M. semoni*.
- Stn CP 1355. — 12.08.1998, 302-310 m, 17°49.54'S, 178°49.39'E: *Crosnierita tucanae*, *Munida heteracantha*, *M. leagora*.
- Stn CP 1358. — 13.08.1998, 80-120 m, 17°48.49'S, 178°46.70'E: *Crosnierita tucanae*.
- Stn CP 1360. — 13.08.1998, 402-444 m, 17°59.57'S, 178°48.20'E: *Agononida garciai*, *Munida idyia*, *M. leviantennata*, *Paramunida setigera*.
- Stn CP 1363. — 15.08.1998, 144-150 m, 18°12.39'S, 178°33.01'E: *Munida gilii*, *M. heteracantha*, *M. semoni*.
- Stn CP 1366. — 15.08.1998, 149-168 m, 18°12.36'S, 178°33.06'E: *Munida gilii*, *M. semoni*.
- Stn CP 1368. — 15.08.1998, 380-469 m, 18°10.92'S, 178°23.47'E: *Agononida garciai*, *A. incerta*, *Paramunida setigera*.
- Stn CP 1369. — 16.08.1998, 392-433 m, 18°11.13'S, 178°23.44'E: *Agononida garciai*, *A. incerta*, *Munida idyia*, *Paramunida setigera*.
- Stn CP 1370. — 16.08.1998, 113-123 m, 18°12.32'S, 178°33.10'E: *Munida gilii*.
- Stn CP 1371. — 16.08.1998, 135-151 m, 18°12.36'S, 178°32.85'E: *Munida gilii*, *M. semoni*.
- Stn DW 1373. — 17.08.1998, 238-244 m, 18°18.46'S, 178°02.13'E: *Munida guttata*, *M. notata*.
- Stn CP 1378. — 17.08.1998, 240-249 m, 18°18.42'S, 178°01.89'E: *Munida guttata*, *M. leagora*, *M. notata*.
- Stn DW 1383. — 18.08.1998, 230-251 m, 18°18.40'S, 178°02.60'E: *Munida galaxaura*, *M. guttata*, *M. semoni*.
- Stn CP 1385. — 18.08.1998, 227-284 m, 18°18.48'S, 178°05.18'E: *Munida notata*, *M. semoni*.
- Stn CP 1386. — 19.08.1998, 230-344 m, 18°18.53'S, 178°05.15'E: *Paramunida curvata*.
- Stn CP 1387. — 19.08.1998, 229-370 m, 18°18.55'S, 178°04.86'E: *Crosnierita tucanae*, *M. galaxaura*, *Munida notata*, *M. semoni*, *Paramunida curvata*, *P. labis*.
- Stn CP 1389. — 19.08.1998, 241-417 m, 18°18.58'S, 178°04.73'E: *Agononida callirrhoe*, *Crosnierita tucanae*, *Munida galaxaura*, *M. notata*, *M. semoni*, *Paramunida curvata*.
- Stn CP 1390. — 19.08.1998, 234-361 m, 18°18.59'S, 178°05.10'E: *Munida semoni*, *Paramunida curvata*, *P. labis*.

BORDAU 1. Fiji

- Stn CP 1392. — 23.02.1999, 545-651 m, 16°49.30'S, 179°54.70'E: *Agononida callirrhoe*, *A. sphecia*, *Munida galaxaura*, *M. notata*, *M. rhodonia*, *M. runcinata*.

- Stn DW 1393. — 23.02.1999, 426-487 m, 16°45.17'S, 179°59.17'SE: *Munida volantis*.
- Stn CP 1394. — 23.02.1999, 416 m, 16°45.19'S, 179°59.19'SE: *Paramunida amphitrita*.
- Stn CP 1395. — 23.02.1999, 423-500 m, 16°45.13'S, 179°59.20'SE: *Agononida incerta*, *A. ocyrhoe*, *A. squamosa*, *Munida cornuta*, *M. moliae*, *M. rhodonia*, *M. rufiantennulata*, *M. volantis*, *Paramunida cristata*.
- Stn CP 1396. — 24.02.1999, 591-596 m, 16°38.98'S, 179°57.16'SW: *Munida rhodonia*.
- Stn CP 1397. — 24.02.1999, 674-688 m, 16°32.60'S, 179°51.90'SW: *Munida rhodonia*, *M. rosula*.
- Stn CP 1402. — 25.02.1999, 260-279 m, 16°38.33'S, 179°36.40'SE: *Munida semoni*.
- Stn CP 1403. — 25.02.1999, 220-224 m, 16°39.60'S, 179°35.96'SE: *Munida gilii*, *M. heteracantha*.
- Stn CP 1404. — 25.02.1999, 180 m, 16°39.87'S, 179°35.70'SE: *Munida gilii*, *M. semoni*.
- Stn CP 1405. — 25.02.1999, 180 m, 16°39.30'S, 179°35.61'SE: *Munida semoni*.
- Stn CP 1406. — 25.02.1999, 360-380 m, 16°39.47'S, 179°36.93'SE: *Munida idyia*, *Paramunida setigera*.
- Stn CP 1407. — 25.02.1999, 499-527 m, 16°39.67'S, 179°38.69'SE: *Agononida incerta*, *Paramunida setigera*.
- Stn DW 1408. — 26.02.1999, 550-561 m, 16°01.91'S, 179°29.75'SW: *Munida tuberculata*.
- Stn CP 1409. — 26.02.1999, 557-558 m, 16°01.88'S, 179°29.83'SW: *Agononida incerta*, *Munida rhodonia*, *M. tuberculata*, *Paramunida granulata*, *P. stichas*.
- Stn DW 1410. — 26.02.1999, 400-410 m, 16°05.51'S, 179°27.76'SW: *Agononida squamosa*, *Paramunida amphitrita*.
- Stn CP 1411. — 26.02.1999, 390-403 m, 16°05'S47'S, 179°27.83'SW: *Agononida incerta*, *A. squamosa*, *Munida leptitis*, *M. runcinata*, *Paramunida cristata*.
- Stn CP 1412. — 26.02.1999, 400-407 m, 16°05.52'S, 179°28.05'SW: *Agononida squamosa*, *Munida leptitis*, *M. runcinata*, *Paramunida amphitrita*.
- Stn CP 1413. — 26.02.1999, 669-676 m, 16°10.24'S, 179°24.25'SW: *Munida rosula*.
- Stn CP 1415. — 27.02.1999, 670-682 m, 16°31.05'S, 179°00.29'SW: *Agononida incerta*, *Munida congesta*, *M. rosula*.
- Stn CP 1416. — 27.02.1999, 441-450 m, 16°29.90'S, 178°58.61'SW: *Agononida callirrhoe*, *Munida moliae*, *Paramunida stichas*.
- Stn DW 1417. — 27.02.1999, 353 m, 16°27.07'S, 178°55.19'SW: *Munida moliae*, *Paramunida pictura*.
- Stn CP 1419. — 28.02.1999, 654-656 m, 17°04.94'S, 178°54.85'SW: *Munida rosula*.
- Stn CP 1420. — 28.02.1999, 550-687 m, 17°05.33'S, 178°57.04'SW: *Agononida incerta*, *Munida rhodonia*.
- Stn DW 1421. — 28.02.1999, 403-406 m, 17°07.95'S, 178°59.25'SW: *Agononida squamosa*, *Munida angusta*, *M. runcinata*.
- Stn DW 1426. — 01.03.1999, 330-367 m, 17°15.13'S, 179°01.55'SW: *Munida delicata*.
- Stn CP 1427. — 01.03.1999, 364-369 m, 17°16.26'S, 179°01.06'SW: *Agononida callirrhoe*.
- Stn CP 1431. — 02.03.1999, 495-500 m, 17°19.61'S, 178°42.47'SW: *Munida runcinata*.
- Stn CP 1433. — 02.03.1999, 488-500 m, 17°19.93'S, 178°42.89'SW: *Agononida incerta*, *Munida cornuta*, *M. tuberculata*, *Paramunida cristata*, *P. stichas*, *Plesionida aliena*.
- Stn CP 1434. — 02.03.1999, 400-401 m, 17°11.48'S, 178°41.38'SW: *Agononida callirrhoe*, *A. squamosa*, *Munida runcinata*, *Paramunida pictura*, *P. stichas*.
- Stn CP 1437. — 02.03.1999, 160-177 m, 17°11.17'S, 178°45.80'SW: *Munida clinata*.
- Stn CP 1444. — 03.03.1999, 398-409 m, 17°11.13'S, 178°41.41'SW: *Agononida A. callirrhoe*, *A. squamosa*, *Munida runcinata*, *Paramunida pictura*, *P. stichas*.
- Stn CP 1445. — 03.03.1999, 350-365 m, 17°10.42'S, 178°41.78'SW: *Agononida callirrhoe*, *A. squamosa*, *Munida notata*, *M. runcinata*, *Paramunida belone*.
- Stn CP 1446. — 03.03.1999, 350-367 m, 17°11.34'S, 178°42.03'SW: *Agononida callirrhoe*, *Munida notata*, *Paramunida belone*, *P. labis*, *P. pictura*.
- Stn CP 1447. — 04.03.1999, 420-513 m, 16°45.23'S, 179°59.13'SE: *Agononida incerta*, *Munida rhodonia*, *M. rufiantennulata*, *M. volantis*.
- Stn CP 1448. — 04.03.1999, 410-500 m, 16°45.04'S, 179°58.97'SE: *Agononida incerta*, *Munida cornuta*, *M. idyia*, *M. leagora*, *M. rhodonia*, *M. volantis*.

- Stn DW 1450. — 04.03.1999, 327-420 m, 16°44.45'S, 179°58.50'SE: *Agononida incerta*, *Munida angusta*, *M. leptitis*, *M. runcinata*, *M. volantis*.
- Stn DW 1451. — 04.03.1999, 400-460 m, 16°44.74'S, 179°59.53'SE: *Munida ecleipsis*, *M. leptitis*, *M. volantis*, *Paramunida cristata*.
- Stn CP 1452. — 04.03.1999, 420-508 m, 16°43.88'S, 179°59.70'SE: *Munida leagora*, *M. leptitis*, *M. moliae*, *M. volantis*, *Paramunida cristata*.
- Stn DW 1453. — 04.03.1999, 414-510 m, 16°45.03'S, 179°59.30'SE: *Munida leptitis*, *M. volantis*.
- Stn DW 1454. — 04.03.1999, 300-370 m, 16°45.77'S, 179°58.74'SE: *Munida notata*, *M. ommata*.
- Stn DW 1456. — 05.03.1999, 650-696 m, 17°15.95'S, 179°34.70'SW: *Munida militaris*.
- Stn CP 1457. — 05.03.1999, 942-976 m, 17°19.39'S, 179°34.13'SW: *Munida microps*.
- Stn CP 1458. — 05.03.1999, 1216-1226 m, 17°21.52'S, 179°28.00'SW: *Munida microps*.
- Stn DW 1459. — 05.03.1999, 820-863 m, 17°18.33'S, 179°33.40'SW: *Agononida eminens*.
- Stn CP 1460. — 06.03.1999, 750-767 m, 18°47.06'S, 178°47.29'SW: *Agononida eminens*, *Munida rosula*.
- Stn CP 1461. — 06.03.1999, 560 m, 18°08.83'S, 178°47.70'SW: *Agononida incerta*, *Munida congesta*, *M. leviantennata*, *M. rhodonia*, *Paramunida granulata*.
- Stn CP 1462. — 06.03.1999, 556-560 m, 18°09.31'S, 178°44.27'SW: *Agononida incerta*, *Munida delicata*, *M. leviantennata*, *M. rhodonia*.
- Stn DW 1465. — 06.03.1999, 290-300 m, 18°08.74'S, 178°38.63'SW: *Munida notata*.
- Stn CP 1467. — 06.03.1999, 417-427 m, 18°11.80'S, 178°35.80'SW: *Agononida garciai*, *A. incerta*, *Munida angusta*, *M. idyia*, *M. rhodonia*.
- Stn CP 1468. — 07.03.1999, 478-500 m, 18°16.45'S, 178°41.30'SW: *Agononida garciai*, *A. incerta*, *Munida cornuta*, *M. idyia*, *M. rhodonia*.
- Stn DW 1469. — 08.03.1999, 314-377 m, 19°40.01'S, 178°10.24'SW: *Munida notata*.
- Stn CP 1470. — 08.03.1999, 316-323 m, 19°39.59'S, 178°10.27'SW: *Crosnierita dicata*, *Munida notata*, *Paramunida pictura*, *P. thalie*.
- Stn DW 1471. — 08.03.1999, 280-296 m, 19°40.09'S, 178°10.25'SW: *Munida guttata*, *M. hyalina*.
- Stn DW 1473. — 08.03.1999, 270-288 m, 19°42.68'S, 178°10.27'SW: *Munida guttata*, *M. hyalina*.
- Stn CP 1474. — 08.03.1999, 316-340 m, 19°39.21'S, 178°10.23'SW: *Munida guttata*, *M. notata*, *Paramunida thalie*.
- Stn CP 1475. — 08.03.1999, 321-424 m, 19°40.70'S, 178°11.15'SW: *Munida notata*, *M. ommata*, *M. runcinata*, *Paramunida belone*, *P. labis*, *P. pictura*.
- Stn CP 1476. — 08.03.1999, 310-420 m, 19°41.50'S, 178°11.30'SW: *Agononida callirrhoe*, *A. sphecia*, *Munida ommata*, *M. runcinata*, *Paramunida belone*, *P. pictura*, *P. thalie*.
- Stn DW 1477. — 09.03.1999, 390-405 m, 20°57.97'S, 178°44.51'SW: *Agononida callirrhoe*, *Munida javieri*.
- Stn CP 1478. — 09.03.1999, 386-396 m, 20°58.55'S, 178°44.80'SW: *Agononida callirrhoe*.
- Stn DW 1479. — 09.03.1999, 450-460 m, 20°58.05'S, 178°44.94'SW: *Munida javieri*, *M. tuberculata*.
- Stn CP 1480. — 09.03.1999, 437-466 m, 20°58.90'S, 178°45.60'SW: *Agononida sphecia*.
- Stn CP 1481. — 09.03.1999, 441-506 m, 20°57.50'S, 178°44.90'SW: *Agononida squamosa*, *Munida galaxaura*, *M. leptitis*, *M. rufiantennulata*, *Paramunida pictura*, *P. stichas*.
- Stn CP 1484. — 10.03.1999, 680-723 m, 19°02.95'S, 178°28.75'SW: *Agononida soelae*, *Munida militaris*, *M. pygmaea*.
- Stn DW 1486. — 10.03.1999, 395-540 m, 19°00.58'S, 178°25.99'SW: *Agononida incerta*, *A. squamosa*, *Munida militaris*, *Paramunida stichas*.
- Stn CP 1490. — 11.03.1999, 785-820 m, 18°50.60'S, 178°32.13'SW: *Agononida eminens*, *Munida rosula*.
- Stn CP 1491. — 11.03.1999, 777-787 m, 18°50.02'S, 178°27.07'SW: *Agononida eminens*, *Munida congesta*, *M. rosula*.
- Stn CP 1493. — 11.03.1999, 429-440 m, 18°43.02'S, 178°23.74'SW: *Agononida squamosa*, *Munida pagesi*, *M. runcinata*.
- Stn DW 1494. — 12.03.1999, 240-319 m, 18°54.95'S, 178°29.23'SW: *Crosnierita tucanae*, *Munida angusta*, *M. elachia*, *M. offella*, *M. semoni*.

- Stn DW 1496. — 12.03.1999, 392-407 m, 18°43.50'S, 178°23.30'SW: *Munida angusta*, *M. leptitis*, *M. runcinata*, *Paramunida pictura*.
- Stn DW 1497. — 12.03.1999, 335-350 m, 18°43.52'S, 178°24.54'SW: *Munida notata*, *Paramunida belone*, *P. labis*.
- Stn DW 1498. — 12.03.1999, 300-307 m, 18°40.60'S, 178°28.47'SW: *Munida gordoae*, *M. semoni*.
- Stn DW 1499. — 12.03.1999, 389-400 m, 18°39.82'S, 178°26.78'SW: *Munida angusta*, *M. galaxaura*, *M. notata*.
- Stn CP 1500. — 12.03.1999, 366-389 m, 18°41.74'S, 178°26.20'SW: *Munida angusta*, *M. galaxaura*.
- Stn CP 1501. — 12.03.1999, 350-357 m, 18°39.68'S, 178°29.90'SW: *Munida angusta*, *M. galaxaura*, *M. notata*.
- Stn CP 1502. — 13.03.1999, 640-660 m, 18°20.61'S, 178°26.98'SW: *Agonida incerta*, *Munida rhodonia*, *M. rosula*.
- Stn CP 1504. — 13.03.1999, 427-440 m, 18°13.22'S, 178°34.45'SW: *Agonida garciai*, *A. incerta*, *Munida angusta*, *M. idyia*, *M. offella*, *M. rosula*.
- Stn CP 1505. — 13.03.1999, 420-450 m, 18°12.29'S, 178°37.34'SW: *Agonida garciai*, *A. incerta*, *Munida angusta*, *M. idyia*, *Paramunida longior*.
- Stn DW 1507. — 13.03.1999, 255-290 m, 18°09.03'S, 178°37.90'SW: *Crosnierita. tucanae*, *Munida offella*, *M. semoni*.

BORDAU 2. Tonga

- Stn DW 1509. — 31.05.2000, 456-510 m, 21°04.63'S, 175°22.47'W: *Agonida incerta*, *Munida tuberculata*.
- Stn CP 1510. — 31.05.2000, 461-497 m, 21°04.65, 175°22.52'W: *Agonida callirrhoe*, *A. squamosa*, *Munida cornuta*, *M. leptitis*, *M. tuberculata*, *Paramunida cretata*, *P. pronoe*, *P. stichas*.
- Stn CP 1511. — 31.05.2000, 384-402 m, 21°07.83, 175°22.38'W: *Agonida callirrhoe*, *Munida leviantennata*, *M. runcinata*, *M. angusta*, *Paramunida belone*, *P. longior*.
- Stn DW 1514. — 01.06.2000, 130-133 m, 21°18.20'S, 175°04.70'W: *Munida clinata*.
- Stn DW 1516. — 01.06.2000, 229-246 m, 21°21.47'S, 175°02.08'W: *Munida hyalina*.
- Stn DW 1518. — 01.06.2000, 336-347 m, 21°20.84'S, 175°07.23'W: *Paramunida labis*.
- Stn DW 1519. — 01.06.2000, 447 m, 21°22'S, 175°07'W: *Paramunida labis*.
- Stn DW 1520. — 01.06.2000, 447-450 m, 21°24.98'S, 175°02.78'W: *Paramunida longior*.
- Stn CP 1522. — 02.06.2000, 229-232 m, 21°18.78'S, 175°00.29'W: *Munida pavonis*.
- Stn DW 1523. — 02.06.2000, 300-302 m, 21°17.96'S, 175°00.05'W: *Munida guttata*, *M. notata*, *Paramunida labis*.
- Stn CP 1525. — 02.06.2000, 349-351 m, 21°17.25'S, 174°59.37'W: *Munida runcinata*.
- Stn CP 1526. — 02.06.2000, 463-464 m, 21°15.80'S, 174°59.20'W: *Agonida callirrhoe*, *A. squamosa*, *Munida runcinata*, *Paramunida labis*, *P. stichas*.
- Stn CP 1527. — 03.06.2000, 483-509 m, 21°15.62'S, 174°59.07'W: *Agonida callirrhoe*, *A. incerta*, *A. squamosa*, *Munida cornuta*, *M. runcinata*, *Paramunida stichas*.
- Stn CP 1528. — 03.06.2000, 587-592 m, 21°14.11'S, 174°58.94'W: *Agonida incerta*, *Munida leviantennata*, *M. rhodonia*, *Paramunida granulata*.
- Stn CP 1529. — 03.06.2000, 688-710 m, 21°13.17'S, 174°58.45'W: *Munida congesta*.
- Stn DW 1537. — 04.06.2000, 391-421 m, 21°40.64'S, 175°19.37'W: *Munida limatula*, *Paramunida labis*.
- Stn DW 1538. — 04.06.2000, 471-508 m, 21°39.11'S, 175°19.31'W: *Paramunida stichas*.
- Stn CP 1539. — 04.06.2000, 558-586 m, 21°36.75'S, 175°19.37'W: *Agonida incerta*, *Munida armilla*, *M. cornuta*, *M. leviantennata*, *M. rhodonia*.
- Stn CP 1541. — 05.06.2000, 319-333 m, 21°15.29'S, 175°14.15'W: *Munida moliae*, *M. runcinata*.
- Stn CP 1542. — 05.06.2000, 427-428 m, 21°16.12'S, 175°17.79'W: *Agonida squamosa*.
- Stn DW 1543. — 05.06.2000, 427-436 m, 21°16'S, 175°18'W: *Munida leptitis*, *Paramunida labis*.
- Stn DW 1544. — 05.06.2000, 441-443 m, 21°18.33'S, 175°17.76'W: *Munida leptitis*, *M. moliae*, *M. tuberculata*.
- Stn CP 1545. — 05.06.2000, 444-447 m, 21°17.46'S, 175°17.18'W: *Agonida callirrhoe*, *A. squamosa*, *Munida leptitis*, *M. limatula*, *Paramunida cretata*, *P. stichas*, *Plesionida aliena*.
- Stn DW 1548. — 06.06.2000, 476-478 m, 20°37.79'S, 175°03.12'W: *M. leptitis*, *M. pumila*, *M. tuberculata*.

- Stn DW 1553. — 06.06.2000, 650-676 m, 20°41.90'S, 174°54.02'W: *Munida militaris*.
- Stn CP 1556. — 07.06.2000, 589-591 m, 20°10.93'S, 174°45.23'W: *Agonida incerta*, *A. squamosa*, *Munida delicata*, *M. leviantennata*, *M. rhodonia*, *Paramunida granulata*, *P. stichas*.
- Stn CH 1557. — 07.06.2000, 578 m, 20°10.31'S, 174°42.25'W: *Agonida normani*, *Munida militaris*.
- Stn CP 1558. — 07.06.2000, 580-593 m, 20°10.01'S, 174°43.20'W: *Agonida incerta*, *A. normani*, *Munida congesta*, *M. rhodonia*.
- Stn DW 1559. — 08.06.2000, 339-345 m, 19°52.69'S, 174°37.09'W: *Munida apodis*.
- Stn CP 1560. — 08.06.2000, 365-372 m, 19°52.43'S, 174°38.89'W: *Munida angusta*.
- Stn CP 1561. — 08.06.2000, 383-393 m, 19°52.15'S, 174°40.17'W: *Munida angusta*, *M. apodis*, *M. notata*.
- Stn CP 1562. — 08.06.2000, 417-424 m, 19°51.77'S, 174°42.01'W: *Munida angusta*, *M. notata*, *M. runcinata*, *Paramunida longior*.
- Stn CH 1563. — 08.06.2000, 362-388 m, 19°52.48'S, 174°38.74'W: *Munida notata*.
- Stn CH 1564. — 08.06.2000, 371-387 m, 19°52.32'S, 174°39.24'W: *Munida apodis*, *M. notata*.
- Stn CP 1565. — 09.06.2000, 869-880 m, 20°57.65'S, 175°15.62'W: *Munida pumila*, *M. rosula*.
- Stn DW 1567. — 10.06.2000, 351-356 m, 21°02.22'S, 175°18.55'W: *Agonida callirrhoe*, *Munida microps*.
- Stn CP 1568. — 10.06.2000, 431 m, 21°02.07'S, 175°18.62'W: *Agonida incerta*, *Munida leviantennata*, *M. rhodonia*, *Paramunida granulata*, *P. longior*.
- Stn DW 1571. — 11.06.2000, 389-418 m, 19°42.43'S, 174°31.68'W: *Munida angusta*.
- Stn CP 1572. — 11.06.2000, 391-402 m, 19°42.31'S, 174°31.35'W: *Munida angusta*, *M. runcinata*, *Paramunida labis*.
- Stn CP 1573. — 11.06.2000, 331-345 m, 19°42'S, 174°26'W: *Munida apodis*
- Stn CP 1575. — 11.06.2000, 232-295 m, 19°41.75'S, 174°21.21'W: *Munida offella*, *M. semoni*.
- Stn CP 1576. — 11.06.2000, 253-263 m, 19°41.80'S, 174°18.50'W: *Munida offella*, *M. semoni*.
- Stn DW 1577. — 11.06.2000, 257-265 m, 19°42'S, 174°19'W: *Munida offella*.
- Stn CP 1578. — 11.06.2000, 329-331 m, 19°41.63'S, 174°24.99'W: *Munida apodis*, *M. semoni*.
- Stn CH 1579. — 11.06.2000, 332 m, 19°41.88'S, 174°26.05'W: *Munida semoni*.
- Stn CP 1582. — 13.06.2000, 79-82 m, 18°40.57'S, 174°02.69'W: *Munida olivarae*.
- Stn DW 1583. — 13.06.2000, 327-360 m, 18°36.72'S, 174°02.84'W: *Munida callista*, *M. hyalina*, *M. leptitis*, *M. notata*, *Paramunida amphitrita*.
- Stn DW 1584. — 13.06.2000, 439 m, 18°35.90'S, 174°01.42'W: *Agonida insolita*, *Munida leagora*, *M. leptitis*, *M. notata*, *Paramunida longior*, *P. pronoe*.
- Stn DW 1585. — 13.06.2000, 578 m, 18°32.90'S, 173°57.08'W: *Munida leviantennata*, *M. militaris*.
- Stn DW 1586. — 13.06.2000, 440-487 m, 18°34.20'S, 173°54.93'W: *C. yante*, *Munida leptitis*, *Paramunida belone*, *P. cretata*.
- Stn DW 1587. — 13.06.2000, 309-400 m, 18°36.84'S, 173°53.67'W: *Munida runcinata*, *Paramunida labis*.
- Stn DW 1588. — 13.06.2000, 630-710 m, 18°39.81'S, 173°52.48'W: *Munida pygmaea*, *Paramunida pictura*.
- Stn DW 1589. — 13.06.2000, 281 m, 18°39.29'S, 173°54.32'W: *Crosnierita dicata*, *Munida militaris*, *M. offella*.
- Stn CP 1591. — 14.06.2000, 351-360 m, 19°10.24'S, 174°15.14'W: *Munida hyalina*, *M. moliae*, *M. notata*, *M. ommata*.
- Stn CP 1592. — 14.06.2000, 391-426 m, 19°08.10'S, 174°16.82'W: *Agonida callirrhoe*, *Munida runcinata*.
- Stn CP 1593. — 14.06.2000, 436-442 m, 19°06.21'S, 174°18.43'W: *Agonida callirrhoe*, *A. sabatesae*, *A. squamosa*, *Munida cornuta*, *M. leptitis*, *Paramunida pictura*, *P. stichas*.
- Stn CP 1594. — 14.06.2000, 971-991 m, 19°02.02'S, 174°19.38'W: *Munida microps*.
- Stn CP 1595. — 14.06.2000, 523-806 m, 19°03'S, 174°19'W: *Munida hyalina*, *M. leptitis*, *M. notata*.
- Stn CH 1596. — 14.06.2000, 371-437 m, 19°06.46'S, 174°18.19'W: *Agonida sabatesae*, *A. squamosa*, *Munida cornuta*, *M. leptitis*, *M. runcinata*, *Paramunida cretata*, *P. stichas*.
- Stn CP 1598. — 15.06.2000, 596-620 m, 20°40.01'S, 174°55.13'W: *Munida militaris*.
- Stn DW 1602. — 15.06.2000, 263-320 m, 20°49.19'S, 174°57.08'W: *Munida moliae*, *M. notata*.

- Stn DW 1605. — 16.06.2000, 441 m, 22°17'S, 175°16'W: *Agonida sphecia*, *Munida notata*, *M. ommata*.
 Stn DW 1607. — 16.06.2000, 356-367 m, 22°14.79'S, 175°23.11'W: *Agonida sphecia*, *Munida notata*.
 Stn CH 1609. — 16.06.2000, 385-405 m, 22°11.46'S, 175°27.42'W: *Munida limatula*.
 Stn DW 1612. — 17.06.2000, 327-342 m, 23°02.32'S, 175°47.00'W: *Paramunida labis*.
 Stn CP 1613. — 17.06.2000, 331-352 m, 23°02.70'S, 175°47.04'W: *Munida notata*, *Paramunida pictura*.
 Stn CP 1615. — 17.06.2000, 482-504 m, 23°03'S, 175°53'W: *Munida tuberculata*.
 Stn DW 1618. — 18.06.2000, 627-656 m, 24°12.51'S, 176°18.19'W: *Munida amblytes*, *M. armilla*, *M. cornuta*.
 Stn DW 1619. — 18.06.2000, 591-593 m, 24°15.76'S, 176°19.67'W: *Munida eclepsis*.
 Stn CP 1620. — 18.06.2000, 572 m, 24°18.18'S, 176°20.37'W: *Agonida incerta*, *Munida cornuta*.
 Stn CH 1621. — 18.06.2000, 570-573 m, 24°19.12'S, 176°22.72'W: *Agonida incerta*, *A. laurentae*, *Munida armilla*, *M. cornuta*, *M. rhodonia*, *M. rufiantennulata*, *M. tuberculata*, *Paramunida stichas*.
 Stn CH 1622. — 18.06.2000, 569-573 m, 24°19.99'S, 176°22.45'W: *Agonida incerta*, *Munida cornuta*, *Paramunida granulata*.
 Stn CP 1625. — 19.06.2000, 824 m, 23°28.33'S, 176°22.48'W: *Agonida eminens*, *Munida pygmaea*, *M. rosula*.
 Stn CP 1626. — 19.06.2000, 220-249 m, 23°20.32'S, 176°15.82'W: *Munida notata*, *M. pygmaea*.
 Stn DW 1630. — 19.06.2000, 360 m, 23°22.79'S, 176°17.82'W: *Munida leptitis*, *M. notata*.
 Stn DW 1631. — 19.06.2000, 407-443 m, 23°23'S, 176°18'W: *Munida limatula*, *Paramunida labis*.
 Stn DW 1632. — 20.06.2000, 613-618 m, 22°01.17'S, 175°41.95'W: *Munida congesta*.
 Stn DW 1637. — 21.06.2000, 464-507 m, 21°05'S, 175°23'W: *Munida congesta*, *Paramunida granulata*.
 Stn CP 1638. — 21.06.2000, 469-520 m, 21°05.00'S, 175°22.88'W: *Agonida incerta*, *Munida delicata*, *M. leviantennata*, *M. pagesi*, *Paramunida granulata*, *longior*, *P. stichas*.
 Stn CP 1640. — 21.06.2000, 564-569 m, 21°09.14'S, 175°23.96'W: *Agonida incerta*, *Munida leviantennata*, *M. rhodonia*, *Paramunida granulata*.
 Stn CP 1641. — 21.06.2000, 395-395 m, 21°09.31'S, 175°22.04'W: *Agonida callirrhoe*, *Munida delicata*, *M. leviantennata*, *M. rhodonia*, *M. runcinata*, *Paramunida granulata*.
 Stn CP 1642. — 21.06.2000, 532 m, 21°04.85'S, 175°22.85'W: *Agonida incerta*, *A. sabatesae*, *Munida delicata*, *M. leviantennata*, *M. rhodonia*, *Paramunida granulata*.
 Stn CP 1643. — 22.06.00, 487 m, 21°04.54'S, 175°22.50'W: *Agonida squamosa*, *Munida cornuta*, *M. leptitis*, *M. runcinata*, *Paramunida belone*, *P. cretata*, *P. stichas*.
 Stn CP 1644. — 22.06.2000, 501 m, 21°04.90'S, 175°22.78'W: *Munida angusta*, *M. cornuta*, *M. rhodonia*.

SYSTEMATIC ACCOUNT

Genus **AGONONIDA** Baba & de Saint Laurent, 1996

Agononida callirrhoe (Macpherson, 1994)

Munida callirrhoe Macpherson, 1994: 453, figs 9, 91.
Agononida callirrhoe – Baba & de Saint Laurent 1996: 442.

TYPE MATERIAL. — New Caledonia. BIOCAL: stn 108, 22°02.55'S, 167°05.68'E, 335 m: holotype ovig. ♀ 16.5 mm (MNHN Ga 2581).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 400-401 m: 1 ♂ 12.2 mm, 1 ovig. ♀ 11.8 mm, 1 ♀ 11.3 mm; stn 1348, 353-390 m: 1 ♂ 9.2 mm, 6 ovig. ♀ 13.2-14.5 mm. BOR-DAU 1: stn 1392, 370 m: 1 ♂ 13.3 mm; stn 1416, 441-450 m: 1 ♂ 9.7 mm; stn 1427, 364-369 m: 1 ovig. ♀ 11.8 mm; stn 1434, 1444, 398-409 m: 1 ♂ 13.1 mm, 1 ovig. ♀ 12.5 mm; stn 1445, 350-365 m: 1 ♂ 13.0 mm, 1 ovig. ♀ 10.6 mm, 1 ♀ 12.9 mm; stn 1446, 350-367 m: 1 ♂ 11.8 mm; stn 1476, 310-420 m: 2 ♂ 10.6

and 14.1 mm, 1 ovig. ♀ 12.2 mm; stn 1477, 390-405 m: 1 ♂ 7.0 mm; stn 1478, 386-396 m: 3 ovig. ♀ 11.0-13.9 mm.

Tonga. BORDAU 2: stn 1510, 461-497 m: 1 ♂ 6.8 mm; stn 1511, 384-402 m: 2 ♂ 6.8 and 8.6 mm; stn 1526, 463-464 m: 3 ♂ 9.1-10.5 mm, 2 ♀ 7.5 and 11.5 mm; stn 1527, 483-509 m: 1 ♂ 10.2 mm, 1 ♀ 8.3 mm; stn 1545, 444-447 m: 6 ♂ 8.5-8.6 mm, 4 ovig. ♀ 9.7-10.8 mm, 2 ♂ 5.1 and 7.8 mm; stn 1567, 351-356 m: 1 ♂ 9.8 mm, 1 ovig. ♀ 12.1 mm; stn 1592, 391-426 m: 1 ♂ 11.4 mm, 3 ovig. ♀ 8.6-9.0 mm; stn 1593, 436-442 m: 2 ♀ 11.7 and 12.6 mm; stn 1641, 395 m: 2 ♂ 7.6 and 7.7 mm, 2 ovig. ♀ 12.6 and 12.7 mm, 8 ♀ 6.0-9.5 mm.

DISTRIBUTION. — New Caledonia, Chesterfield Islands, Loyalty Islands, Fiji and Tonga, 241 to 575 m.

Agononida eminens (Baba, 1988)

Munida eminens Baba, 1988: 95, fig. 35.

Munida eminens – Macpherson 1994: 466, fig. 72; 1996a: 392.

Agononida eminens – Baba & de Saint Laurent 1996: 442. — Macpherson 1997: 600; 1999: 412.

TYPE MATERIAL. — Philippines. *Albatross*: stn 5444, 12°43'51"N, 124°58'50"E, 564 m: holotype ♂ 21.2 mm (USNM 150339).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1459, 820-863 m: 1 ♀ 14.1 mm; stn 1460, 750-767 m: 4 ♂ 9.6-15.2 mm, 1 ovig. ♀ 14.6 mm, 3 ♀ 10.4-13.4 mm; stn 1490, 785-820 m: 4 ♂ 9.7-14.7 mm, 5 ovig. ♀ 13.9-17.9 mm, 1 ♀ 10.3 mm; stn 1491, 777-787 m: 4 ♂ 13.1-14.8 mm, 3 ovig. ♀ 15.1-19.2 mm, 2 ♀ 9.7 and 9.9 mm.

Tonga. BORDAU 2: stn 1625, 824 m: 2 ♂ 8.8 and 9.3 mm, 2 ovig. ♀ 13.0 and 13.2 mm, 9 ♀ 9.4-11.5 mm.

DISTRIBUTION. — Philippines, Indonesia, eastern Australia, New Caledonia, Loyalty Islands, Chesterfield Islands, Vanuatu, Wallis and Futuna islands, 564-1000 m (Baba 1988; Macpherson 1994, 1996a, 1997, 1999); Fiji and Tonga, 750-863 m.

Agononida garciai n. sp.

Fig. 1

TYPE MATERIAL. — Fiji (holotype and paratypes). BORDAU 1: stn 1504, 427-440 m: holotype ♂ 15.5 mm (MNHN Ga 4556), 7 ♂ 7.5-15.3 mm, 6 ♀ 7.5-12.4 mm; stn 1467, 417-427 m: 9 ♂ 6.1-13.2 mm, 3 ovig. ♀ 11.0-12.4 mm, 10 ♀ 7.1-13.7 mm; stn 1468, 478-500 m: 1 ♂ 12.7 mm; stn 1505, 420-450 m: 4 ♂ 7.5-13.8 mm, 5 ♀ 7.2-12.9 mm. — MUSORSTOM 10: stn 1327, 370-389 m: 4 ♂ 10.2-14.9 mm, 3 ovig. ♀ 11.2-12.7 mm, 3 ♀ 10.6-14.5 mm; stn 1348, 353-390 m: 1 ovig. ♀ 13.8 mm; stn 1360, 402-444 m: 1 ♂ 14.9 mm, 1 ♀ 13.8 mm; stn 1368, 380-469 m: 1 ovig. ♀ 11.5 mm; stn 1369, 392-433 m: 1 ♂ 13.7 mm, 1 ovig. ♀ 11.5 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Males 6.1-15.5 mm, females 7.2-13.8 mm, ovigerous females from 11.0 mm. Carapace as long as wide. Transverse ridges usually interrupted, apart from a few on posterior part of carapace, set with very short, non-iridescent setae and few long setae scattered on cardiac and branchial regions. Few scales and secondary striae between main striae. Gastric region with 2 well developed epigastric spines. Cardiac region with strong median spine. Posterior border of carapace unarmed. Frontal margins slightly concave. Lateral margins moderately convex. Anterolateral spine strong, at anterolateral angle, reaching level of sinus between rostrum and supraocular spines. Second marginal spine before cervical groove very small. Branchial margins with 4 small spines. Rostrum spiniform, less than half as long as remaining carapace, straight and horizontal. Supraocular spines clearly overreaching midlength of rostrum and overreaching end of corneas, parallel, directed slightly upwards (Fig. 1A).

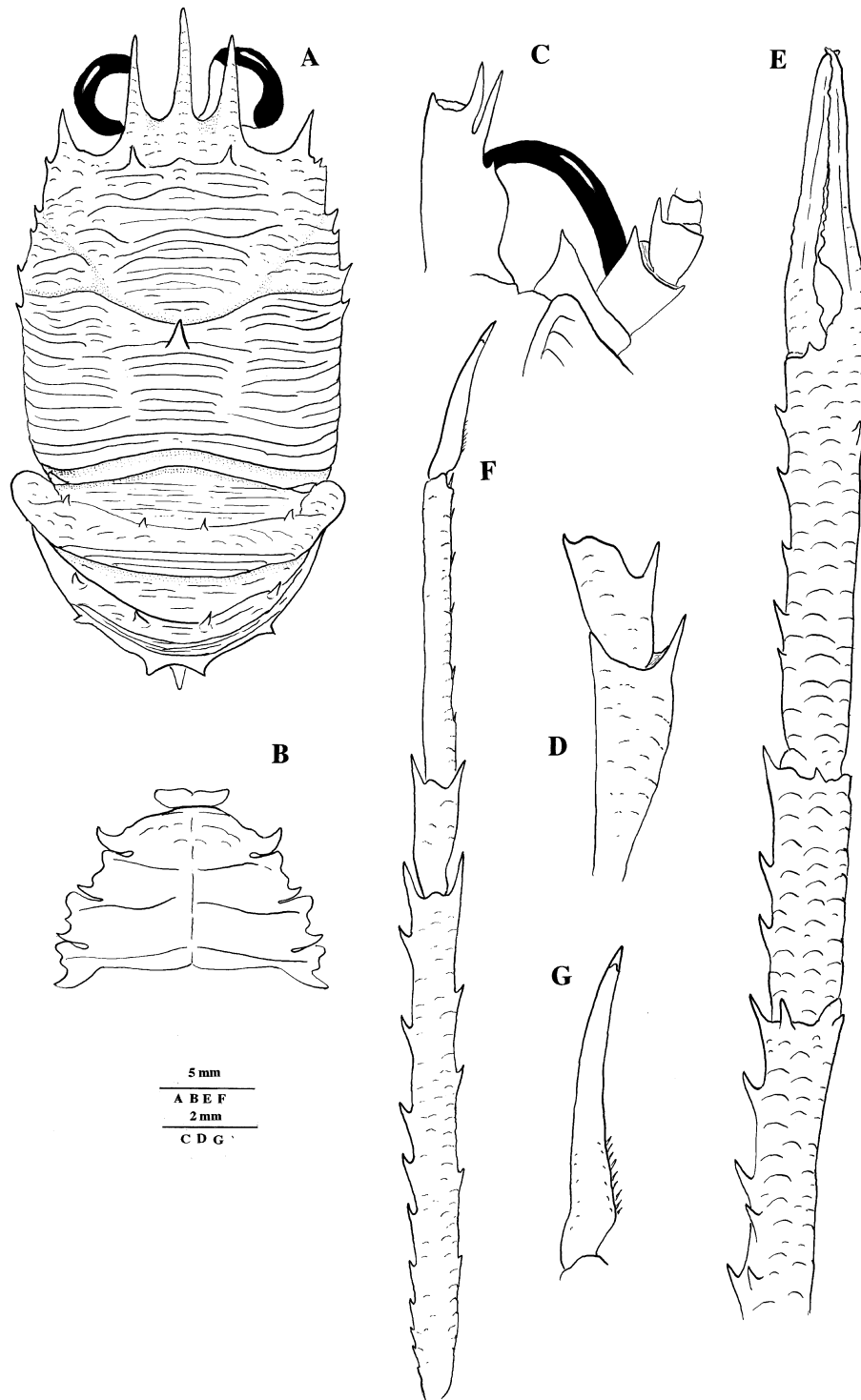


FIG. 1. *Agononida garciai* n. sp., holotype, mâle, 15,5 mm, Fidji, 427-440 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique montrant les pédoncules antennaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélipède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

FIG. 1. *Agononida garciai* n. sp., holotype, mâle, 15,5 mm, Fidji, 427-440 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique montrant les pédoncules antennaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélipède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

Thoracic sternites smooth, with few short striae on fourth sternite. Anterior part of fourth sternite slightly narrower than third. Transverse ridges between fifth, sixth and seventh sternites obtuse, weakly granulated (Fig. 1B).

Second to fourth abdominal somites with 4 median spines on anterior ridge, ridges with few transverse striae and scales. Posterior ridge of fourth abdominal somite with median spine.

Eyes large, maximum corneal diameter half distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/3 carapace length, elongate, slightly overreaching corneae, with 2 distal spines, mesial spine clearly shorter than lateral spine; with 2 spines on lateral margin, proximal spine short, distal spine long (Fig. 1C).

First segment of antennal peduncle with short process on mesial margin clearly not reaching end of second antennal peduncle; second segment with 2 short distal spines, mesial spine longer than lateral spine, clearly not reaching end of penultimate segment; third segment with mesiodistal spine (Fig. 1C).

Ischium of third maxilliped about 1.5 x length of merus (measured along dorsal margin), distoventrally bearing long spine. Merus of third maxilliped with 1 well developed median spine on flexor margin; extensor margin with distal spine (Fig. 1D).

Chelipeds subequal, squamous, with few uniramous setae on mesial borders of merus and carpus. Palm shorter than fingers. Merus armed with row of spines, on mesial, ventral and dorsal borders. Carpus with few well developed spines on mesial side. Palm with row of spines along mesial margin, few spines on lateral border. Fingers unarmed, with longitudinal carina on each side, distally curving and crossing, ending in a sharp point (Fig. 1E).

Second pereopod about 3.5 x carapace length; merus 1.5 x longer than carapace, about 12 x as long as high, about 4 x carpus length and 1.7 x as long as propodus; propodus 9.5 x as long as high, about 1.8 x dactylus length (Fig. 1E). Merus with spines along dorsal and ventral borders, increasing in size distally. Carpus with 1 distomesial and distoventral spine. Propodus with 5-7 movable ventral spinules. Dactylus with dorsal margin slightly convex, slightly curving distally, with 10-12 movable small spinules along proximal third of ventral margin (Fig. 1F). Third pereopod similar to second; fourth pereopod slightly shorter than second and third.

DISTRIBUTION. — Fiji, 353-500 m.

REMARKS. — *Agononida garciai* closely resembles to *A. similis* (Baba, 1988) from the Philippines and Indonesia (Baba 1988; Macpherson 1997). Both species have one strong median spine on the cardiac region, the posterior margin of the carapace unarmed, one median spine on the posterior ridge of the fourth abdominal somite and the first antennal segment with a short process. The new species is clearly distinguishable from *A. similis* by the thoracic sternites, which are smooth in the new species, and clearly scaly in *A. similis*. Moreover, the spines on the segments of the antennal peduncle are more strongly developed in the new species than in *A. similis* (see Macpherson 1997 for the material examined of *A. similis*).

ETYMOLOGY. — This species is dedicated to Antoni García Rubies for his support in my work, and his defence of taxonomic works.

Agononida incerta (Henderson, 1888)

Munida incerta Henderson, 1888: 130, pl.13, fig. 4a.

Munida incerta – Baba 1988: 106 (references); 1994: 12. — Macpherson 1994: 478, fig. 74; 1996a: 394.

Agononida incerta – Baba & de Saint Laurent 1996: 442. — Macpherson 1997: 600; 1999: 413.

TYPE MATERIAL. — Philippines. *Challenger*: stn 200, 06°47'N, 122°28'E, 463 m: syntypes (BMNH).

MATERIAL EXAMINED. — Syntype ♀ 15.5 mm (see above).

Fiji. MUSORSTOM 10: stn 1316, 478-491 m: 4 ovig. ♀ 11.4-25.1 mm; stn 1317, 471-475 m: 1 ♂ 21.0 mm, 1 ovig. ♀ 24.2 mm; stn 1327, 370-389 m: 3 ♂ 18.2-21.6 mm, 2 ovig. ♀ 19.8 and 22.6 mm; stn 1332, 640-687 m: 1 ♂ 34.7 mm; stn 1337, 635-670 m: 3 ♂ 26.2-34.1 mm; stn 1341, 500-614 m: 27 ♂ 12.1-25.5 mm, 2 ovig. ♀ 26.8 and 28.9 mm, 15 ♀ 10.7-16.6 mm; stn 1342, 650-701 m: 1 ♀ 13.0 mm; stn 1368, 380-469 m: 2 ♂ 19.8 and 20.0 mm, 1 ovig. ♀ 22.8 mm; stn 1369, 392-433 m: 4 ovig. ♀ 18.8-20.8 mm. — BORDAU 1: stn 1395, 423-500 m: 7 ♂ 9.1-14.3 mm, 13 ♀ 8.7-17.1 mm; stn 1407, 499-527 m: 1 ♀ 22.0 mm; stn 1409, 557-558 m: 36 ♂ 7.1-13.2 mm, 20 ♀ 9.0-12.2 mm; stn 1411, 390-403 m: 3 ovig. ♀ 14.7-15.1 mm; stn 1415, 670-682 m: 4 ♂ 18.6-23.3 mm, 3 ovig. ♀ 16.4-21.1 mm, 4 ♀ 15.1-19.9 mm; stn 1420, 550-687 m: 1 ♂ 15.1 mm, 3 ♀ 13.8-16.4 mm; stn 1433, 488-500 m: 1 ♂ 25.3 mm, 1 ♀ 15.5; stn 1447, 420-513 m: 2 ♂ 14.8 and 16.1 mm, 1 ovig. ♀ 17.4 mm, 5 ♀ 8.3-10.7 mm; stn 1448, 410-500 m: 2 ♀ 10.5 and 15.1 mm, 2 juv. 6.7 and 8.3 mm; stn 1450, 327-420 m: 1 ♂ 14.9 mm; stn 1461, 560 m: 1 ♂ 14.7 mm; stn 1462, 556-560 m: 2 ♂ 13.6 and 19.2 mm, 7 ♀ 11.6-18.7 mm; stn 1467, 417-427 m: 1 ovig. ♀ 23.0 mm; stn 1468, 478-500 m: 11 ♂ 7.7-23.3 mm, 3 ovig. ♀

17.6-19.7 mm, 8 ♀ 8.2-18.1 mm; stn 1486, 395-540 m: 1 ♂ 25.3 mm, 1 ♀ 19.9 mm; stn 1502, 640-660 m: 3 ♂ 19.7-26.4 mm, 3 ovig. ♀ 17.7-20.2 mm, 9 ♀ 12.6-22.5 mm; stn 1504, 427-440 m: 2 ♂ 14.7 and 14.8 mm, 1 ovig. ♀ 18.5, 1 ♀ 18.5 mm; stn 1505, 420-450 m: 1 ovig. ♀ 21.3 mm.

Tonga. BORDAU 2: stn 1509, 456-510 m: 1 ♂ 8.5 mm, 1 ♀ 9.0 mm; stn 1527, 483-509 m: 3 ♀ 7.7-8.9 mm, 1 juv. 6.1 mm; stn 1528, 587-592 m: 2 ♂ 11.3 and 21.1 mm, 2 ovig. ♀ 16.9 and 20.8 mm, 2 ♀ 12.4 and 13.5 mm, 1 juv. 6.4 mm; stn 1539, 558-586 m: 8 ♂ 13.0-25.8 mm, 2 ovig. ♀ 13.2 and 18.7 mm, 2 ♀ 14.1 and 14.4 mm; stn 1556, 589-591 m: 3 ♂ 14.0-31.1 mm, 3 ovig. ♀ 17.0-19.0 mm, 2 ♀ 10.3 and 10.7 mm, 2 juv. 5.8 and 7.4 mm; stn 1558, 580-593 m: 1 ♂ 20.7 mm; stn 1568, 431 m: 1 ♂ 18.0 mm; stn 1620, 572 m: 4 ♂ 13.1-30.5 mm, 7 ovig. ♀ 15.6-24.2 mm, 3 ♀ 15.0-15.3 mm; stn 1621, 570-573 m: 18 ♂ 12.0-30.6 mm, 5 ovig. ♀ 14.9-22.4 mm, 1 ♀ 12.3 mm; stn 1622, 569-573 m: 2 ♂ 14.4 and 27.8 mm; stn 1638, 469-520 m: 7 ♂ 13.3-26.9 mm, 3 ovig. ♀ 18.9-21.5 mm, 3 ♀ 12.2-14.0 mm, 2 juv. 6.5 and 7.7 mm; stn 1640, 564-569 m: 7 ♂ 13.1-30.7 mm, 2 ovig. ♀ 17.7 and 17.9 mm, 2 ♀ 13.1 and 15.4 mm; stn 1642, 532 m: 4 ♂ 12.1-25.5 mm, 3 ovig. ♀ 15.9-18.2 mm, 2 ♀ 11.1 and 12.8 mm, 2 juv. 4.9 and 6.4 mm.

DISTRIBUTION. — East Africa, Japan, Philippines, Indonesia, eastern Australia, New Caledonia, Loyalty Islands, Chesterfield Islands, Vanuatu, Wallis, Futuna and Kiribati, 17-863 m (Baba 1988; Macpherson 1994, 1996a, 1997, 1999); Fiji and Tonga, 327-701 m.

Agononida insolita n. sp.

Fig. 2

TYPE MATERIAL. — New Caledonia (holotype and paratypes). NORFOLK 1: stn 1670, 23°39.449'S, 167°59.336'E, 382-386 m, 21.06.2001: holotype ovig. ♀ 7.2 mm (MNHN Ga 4557), 2 ovig. ♀ 6.6 and 6.8 mm; stn 1716, 26.06.2001, 23°21.525'S, 168°02.598'E, 266-276 m: 2 ovig. ♀ 7.5 and 7.9 mm.

Tonga (paratype). — BORDAU 2: stn 1584, 439 m: 1 ♂ 7.9 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Males 7.9-8.9 mm, ovigerous females 6.6-7.9 mm. Carapace as long as wide. Transverse ridges mostly interrupted, apart from several on posterior part of carapace, bearing very short, non-iridescent setae. Main transverse striae on posterior part of carapace interrupted in cardiac region. No scales or secondary striae between main striae. Gastric region with row of epigastric spines; 2 small spines at base of rostrum. A few parahepatic and anterobranchial spines and 1 postcervical spine on each side. Frontal margins concave. Lateral margins slightly convex. Anterolateral spine strong, at anterolateral angle, nearly reaching level of sinus between rostrum and supraocular spines. Second marginal spine before cervical groove very small. Branchial margins with 4 small spines. Rostrum spiniform, less than half as long as remaining carapace, slightly carinated dorsally, straight, and slightly upwardly directed. Supraocular spines overreaching midlength of rostrum and clearly not overreaching end of corneas, parallel, directed slightly upwards (Fig 2A).

Thoracic sternites smooth, without striae. Anterior part of fourth sternite slightly narrower than third. Transverse ridges between fifth, sixth and seventh sternites obtuse, weakly granulated (Fig. 2B).

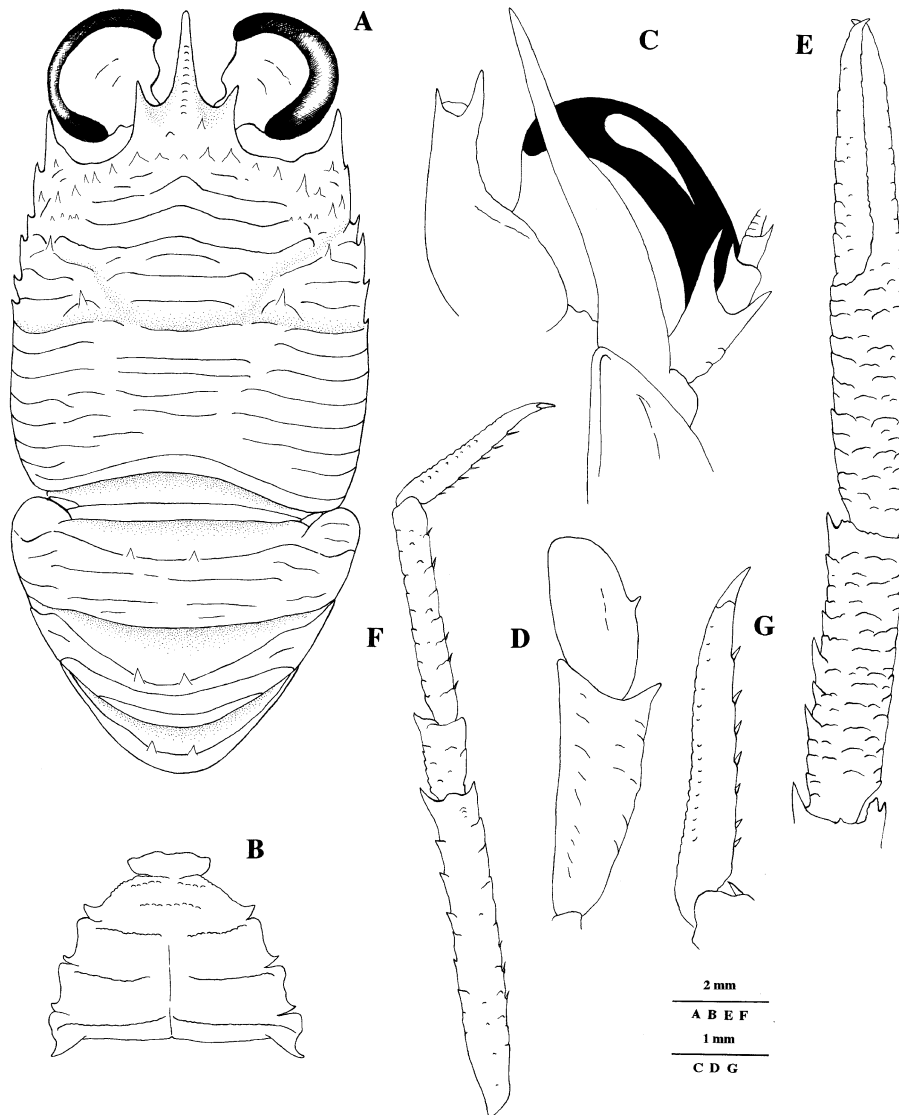


FIG. 2. *Agononida insolita* n. sp., holotype, ovig. female, 7.2 mm, S New Caledonia, 382-386 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, right first walking leg, lateral view; G, dactylus of right first walking leg, lateral view.

FIG. 2. *Agononida insolita* n. sp., holotype, femelle ovigère, 7,2 mm, Sud Nouvelle-Calédonie, 382-386 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncules antennulaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélicède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

Second to fourth abdominal somites with 2 median spines on anterior ridge. Second and third somites each with 1 or 2 transverse striae. Fourth abdominal somite without striae.

Eyes large, maximum corneal diameter half distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/3 carapace length, elongate, slightly overreaching cornea, with 2 distal spines, mesial spine clearly shorter than lateral spine; without spines on lateral margin (Fig. 2C).

First segment of antennal peduncle with unusually long process on mesial margin overreaching end of antennular peduncle; second segment with 2 distal spines, mesial spine clearly longer than lateral spine, overreaching penultimate segment; third segment with small mesiodistal spine; ultimate segment with small distolateral spine (Fig. 2C).

Ischium of third maxilliped about 1.5 x length of merus (measured along dorsal margin), with distoventral spine. Merus of third maxilliped with 1 well developed median spine on flexor margin; extensor margin unarmed (Fig. 2D).

Chelipeds subequal, squamous, with uniramous setae that are densest on mesial borders of merus and carpus. Palm shorter than fingers. Merus armed with a few spines, strongest spine on distal border short, not overreaching proximal quarter of carpus. Carpus with several spines on dorsal side. Palm with several spines scattered on mesial margin. Fingers unarmed, distally curving and crossing, ending in a sharp point (Fig. 2E).

Second pereopod about 2.5 x carapace length; merus longer than carapace, about 9 x as long as high, about 3 x carpus length and 1.5 x as long as propodus; propodus 7 x as long as high, about 1.3 x dactylus length (Fig. 2F). Merus with spines along dorsal border, increasing in size distally, ventral margin with 1 distal spine. Carpus with 1 distomesial and 1 distoventral spine. Propodus with 6-8 movable ventral spinules. Dorsal margin of dactylus slightly convex, slightly curving distally, with 3-6 movable spinules along entire ventral margin (Fig. 2G). Third pereopod similar to second; fourth pereopod shorter than second and third. Merus of fourth pereopod 2/3 length of second pereopod.

DISTRIBUTION. — New Caledonia and Tonga, 266-439 m.

REMARKS. — This species is provisionally assigned to the genus *Agononida*, although it clearly differs from other species of the genus. The new species is unique in the genus in having a concave frontal margin, two median spines on the second to fourth abdominal somites, the fourth abdominal somite without a spine on the posterior ridge, the lateral border of the antennular peduncle unarmed, and an unusually long process on the first antennal segment.

ETYMOLOGY. — From the Latin *insolitus*, unusual, strange, in reference to the characteristics and differences of the species from congeners.

Agononida laurentae (Macpherson, 1994)

Munida laurentae Macpherson, 1994: 483, figs 25, 92.

Agononida laurentae – Baba & de Saint Laurent 1996: 442. — Macpherson 1999: 413.

TYPE MATERIAL. — New Caledonia. CHALCAL 2: stn 1, 24°54.96'S, 168°21.91'E, 500-580 m: holotype ♂ 15.3 mm (MNHN Ga 2761).

OTHER MATERIAL EXAMINED. — Tonga. BORDAU 2: stn 1621, 570-573 m: 1 ♂ 8.2 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands, Chesterfield Islands, Matthew and Hunter Islands and Vanuatu, 260-610 m (Macpherson 1994, 1999); Tonga, 570-573 m.

Agononida normani (Henderson, 1885)

Munida normani Henderson, 1885: 408.

Munida normani – Henderson 1888: 129, pl. 13, fig. 5. — Baba 1988: 83. — Macpherson 1994: 500; 1996a: 400, fig. 20.

Agononida normani – Baba & de Saint Laurent 1996: 442. — Macpherson 1999: 414.

TYPE MATERIAL. — Fiji. *Challenger*: stn 173, 19°09'35"S, 179°41'50"E, 576 m: syntypes 7 ♂ 9.7-15.0 mm, 3 ♀ 9.0-11.7 mm, 1 juvenile 7.6 mm (BMNH).

OTHER MATERIAL EXAMINED. — Tonga. BORDAU 2: stn 1557, 578 m: 1 ♂ 11.7 mm; stn 1558, 580-593 m: 2 ♂ 14.4 and 14.5 mm, 2 ovig. ♀ 11.8 and 14.0 mm.

DISTRIBUTION. — Fiji, New Caledonia, Wallis and Futuna area and Vanuatu, 320-668 m (Henderson 1888; Baba 1988; Macpherson 1994, 1996a, 1999); Tonga, 578-593 m.

Agononida ocyrhoe (Macpherson, 1994)

Munida ocyrhoe Macpherson, 1994: 503, figs 35, 79.

Agononida ocyrhoe – Baba & de Saint Laurent 1996: 442. — Macpherson 1999: 414.

TYPE MATERIAL. — New Caledonia. SMIB 4: stn 62, 23°00.4'S, 167°21.8'E, 540 m: holotype ovig. ♀ 25.0 mm (MNHN Ga 2914).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1395, 423-500 m: 1 ♂ 15.4 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands, Chesterfield Islands, Wallis and Futuna islands and Vanuatu, 420-650 m (Macpherson 1994, 1996a, 1999); Fiji, 423-500 m.

Agononida sabatesae (Macpherson, 1994)

Fig. 15

Munida sabatesae Macpherson, 1994: 525, fig. 48.

Agononida sabatesae – Baba & de Saint Laurent 1996: 442.

TYPE MATERIAL. — New Caledonia. MUSORSTOM 4: stn 167, 18°35.8'S, 163°06.4'E, 575 m: holotype ♂ 17.3 mm (MNHN Ga 3010).

OTHER MATERIAL EXAMINED. — Tonga. BORDAU 2: stn 1593, 436-442 m: 1 ovig. ♀ 14.9 mm; stn 1596, 371-437 m: 1 ovig. ♀ 15.6 mm; stn 1642, 532 m: 1 juv. 3.8 mm.

DESCRIPTION (supplemental to that of Macpherson 1994). — Ground colour of carapace orange. Epigastric region, cervical groove, center parts of branchial regions and intestinal region purple. Rostrum and supraocular spines orange. Second and third abdominal segments with large reddish and whitish spots. Chelipeds and walking legs with light orange and red transverse bands; distal part of fingers of chelipeds light orange, proximal part red; dactylus of walking legs light orange.

DISTRIBUTION. — New Caledonia and Vanuatu, 350-610 m (Macpherson 1994); and Tonga, 371-532 m.

Agononida soelae (Baba, 1986)

Munida soelae Baba, 1986: 2, fig. 3.

Munida soelae – Baba 1988: 82. — Macpherson 1994: 530. — Wu *et al.* 1998: 129, fig.

Agononida soelae – Baba & de Saint Laurent 1996: 442. — Macpherson 1997: 602.

TYPE MATERIAL. — NW Australia. *Soela*: stn NWS-37, 18°52.2'S, 116°09.4'E, 501-502: holotype ♀ 14.1 mm (Northern Territory Museum, Cr.000655).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1484, 680-723 m: 1 ♂ 14.8 mm.

DISTRIBUTION. — Indonesia, northwestern Australia and New Caledonia, 450-620 m (Baba 1986, 1988; Macpherson 1994, 1997); Fiji, 680-723 m.

Agononida sphecia (Macpherson, 1994)

Munida sphecia Macpherson, 1994: 531, figs 50, 95.

Agononida sphecia – Baba & de Saint Laurent 1996: 442.

TYPE MATERIAL. — New Caledonia. MUSORSTOM 4: stn 213, 22°51.3'S, 167°12.0'E, 405-430 m: holotype ♂ 18.1 mm (MNHN Ga 3050).

MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1392, 370 m: 1 ♂ 15.3 mm, 1 ovig. ♀ 12.3 mm; stn 1476, 310-420 m: 1 ♀ 12.1 mm; stn 1480, 437-466 m: 1 ♂ 16.2 mm. Tonga. BORDAU 2: stn 1607, 356-367 m: 1 ♀ 11.5 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands and Chesterfield Islands, 59-520 m (Macpherson 1994); Fiji and Tonga, 310-466 m.

Agononida squamosa (Henderson, 1885)

Munida squamosa Henderson, 1885: 409.

Munida squamosa – Henderson 1988: 131, pl. 13, figs 1a, b. — Baba 1988: 82; 1994: 16. — Macpherson 1993a: 427, figs 1h-i; 1994: 537, fig. 96; 1996a: 406. — Wu et al. 1998: 131, fig.

Agononida squamosa – Baba & de Saint Laurent 1996: 442. — Macpherson 1997: 603; 1999: 414, figs 3b, c.

TYPE MATERIAL. — Admiralty Islands. *Challenger*: stn 219, 01°54'00"S, 146°39'40"E, 278 m: syntypes 2 ♂ 8.4 and 10.3 mm, 1 ovig. ♀ 10.8 mm (BMNH).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1327, 370-389 m: 1 ♂ 15.9 mm. BORDAU 1: stn 1395, 423-500 m: 1 ♂ 12.8 mm; stn 1410, 400-410 m: 2 ♂ 12.5 and 13.3 mm, 1 ovig. ♀ 11.1 mm, 1 ♀ 9.7 mm; stn 1411, 390-403 m: 5 ♂ 8.7-13.1 mm, 3 ovig. ♀ 10.0-12.5 mm, 1 juv. 6.0 mm; stn 1412, 400-407 m: 3 ♂ 13.1-14.0 mm, 1 ovig. ♀ 11.2 mm; stn 1421, 403-406 m: 1 ♀ 11.8 mm; stn 1434, 400-401 m: 3 ♂ 11.0-12.0 mm, 2 ♀ 7.5 and 9.2 mm; stn 1444, 398-409 m: 1 ♂ 9.2 mm; stn 1445, 350-365 m: 2 ♂ 9.0 and 13.9 mm; stn 1481, 441-506 m: 1 juv. 4.7 mm; stn 1486, 395-540 m: 1 ♀ 7.1 mm; stn 1493, 429-440 m: 1 ♂ 7.9 mm.

Tonga. BORDAU 2: stn 1510, 461-497 m: 4 ♂ 8.2-13.9 mm,

1 ovig. ♀ 12.6 mm, 8 ♀ 6.3-14.7 mm, 2 juv. 5.3 and 6.1 mm; stn 1526, 463-464 m: 18 ♂ 6.8-13.7 mm, 5 ovig. ♀ 11.2-12.1 mm, 8 ♀ 5.8-9.6 mm, 5 juv. 4.8-6.3 mm; stn 1527, 483-509 m: 30 ♂ 9.4-13.2 mm, 15 ovig. ♀ 10.3-13.8 mm, 20 ♀ 6.8-13.3 mm; stn 1542, 427-428 m: 1 ♂ 12.4 mm; stn 1545, 444-447 m: 14 ♂ 7.2-11.3 mm, 4 ovig. ♀ 11.8-12.1 mm, 8 ♀ 4.7-11.1 mm, 4 juv. 5.1-6.4 mm; stn 1556, 589-591 m: 2 ♂ 11.3 and 13.7 mm, 4 ovig. ♀ 11.3-12.6 mm; stn 1593, 436-442 m: 15 ♂ 9.5-12.7 mm, 6 ovig. ♀ 10.3-12.5 mm, 12 ♀ 8.8-12.6 mm, 1 juv. 6.7 mm; stn 1596, 371-437 m: 4 ♂ 10.7-13.2 mm, 5 ovig. ♀ 10.0-11.5 mm, 6 ♀ 8.6-12.2 mm; stn 1643, 487 m: 7 ♂ 8.1-12.8 mm, 2 ovig. ♀ 11.6 and 13.0 mm, 3 ♀ 8.2-12.4 mm.

DISTRIBUTION. — Japan, Indonesia, Admiralty Islands, northeastern Australia, New Caledonia, Loyalty Islands, Vanuatu and Wallis islands, 176-752 m (Baba 1988; Macpherson 1993a, 1994, 1996a, 1997, 1999); Fiji and Tonga, 350-591 m.

REMARKS. — As pointed out by Macpherson (1996a), *A. squamosa* can have a well developed mesogastric spine, which is absent in the type material. This morphological variation, together with the existence of different colour patterns (Macpherson 1999), suggests that several taxa may be confused under this name and further study is recommended.

Genus **CROSNIERITA** Macpherson, 1998

Crosnierita dicata Macpherson, 1998

Crosnierita dicata Macpherson, 1998: 353, fig. 1.

TYPE MATERIAL. — Loyalty Islands. MUSORSTOM 6: stn 419, 20°41.65'S, 167°03.70'E, 283 m: holotype ♂ 8.9 mm (MNHN Ga 4241).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1470, 316-323 m: 1 ♂ 11.6 mm.
Tonga. BORDAU 2: stn 1589, 281 m: 2 juv. 3.2 and 3.3 mm.

DISTRIBUTION. — Loyalty Islands and Vanuatu, 283-440 m; Fiji and Tonga, 281-323 m.

Crosnierita tucanae n. sp.

Fig. 3

TYPE MATERIAL. — Fiji (holotype and paratypes). MUSORSTOM 10: stn 1349, 244-417 m: holotype ♂ 8.8 mm (MNHN Ga 4558), 17 ♂ 5.0-9.2 mm, 23 ovig. ♀ 6.5-7.7 mm, 5 ♀ 4.0-7.1 mm; stn 1334, 251-257 m: 1 ♀ 6.0 mm; stn 1351, 292-311 m: 6 ♂ 4.3-8.4 mm, 13 ovig. ♀ 5.8-7.3 mm; stn 1355, 302-310 m: 2 ♂ 7.7 and 8.0 mm, 10 ovig. ♀ 6.6-7.2 mm, 2 ♀ 4.3 and 5.0 mm; stn 1358, 80-120 m: 1 ovig. ♀ 7.0 mm; stn 1387, 229-370 m: 2 ♂ 5.8 and 6.6 mm; stn 1389, 241-417 m: 2 ovig. ♀ 6.7 and 7.5 mm. — BORDAU 1: stn 1494, 240-319 m: 1 ♂ 5.1 mm; stn 1507, 294-300 m: 1 ♂ 7.4 mm, 1 ovig. ♀ 7.2 mm, 1 ♀ 5.9 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Males 4.3 mm and 9.2 mm, females 4.3-7.7 mm, ovigerous females from 5.8 mm. Carapace as long as wide. Few scales and secondary striae between main striae. Transverse ridges mostly interrupted, with very short, dense, non-iridescent setae. Main transverse striae on posterior part of carapace interrupted in cardiac region. Strong median spine on anterior part of mesogastric and cardiac regions. Two epigastric and 2 postcervical spines. Posterior margin unarmed. Frontal margins strongly excavated. Lateral margins slightly convex. Anterolateral spine strong, at anterolateral angle, overreaching level of sinus between rostrum and supraocular spines. Second marginal spine before cervical groove small. Branchial margins with 4 spines. Rostrum spiniform, half as long as remaining carapace, slightly sinuous and nearly horizontal. Supraocular spines reaching midlength of rostrum and clearly not reaching end of corneas, parallel, directed slightly upwards (Fig. 3A).

Thoracic sternites smooth, some small striae on fourth and fifth sternites. Anterior part of fourth sternite as wide than third. Transverse ridges between fifth, sixth and seventh sternites obtuse, weakly granulated (Fig. 3B).

Second abdominal somite with 6 spines on anterior ridge. Third and fourth somites with 4 spines on anterior ridge, 1 median spine on posterior ridge of fourth somite.

Eyes large, maximum corneal diameter about half distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/3 carapace length, slightly overreaching corneae, with 2 distal spines, mesial spine clearly shorter than lateral spine; 2 spines on lateral margin, proximal one short, located at midlength of segment, distal one long, overreaching distolateral spine (Fig. 3C).

First segment of antennal peduncle with 1 short distal spine on mesial margin, clearly not reaching end of second segment; second segment with 2 distal spines, mesial spine longer than lateral spine, overreaching antennal peduncle; penultimate segment unarmed (Fig. 3C).

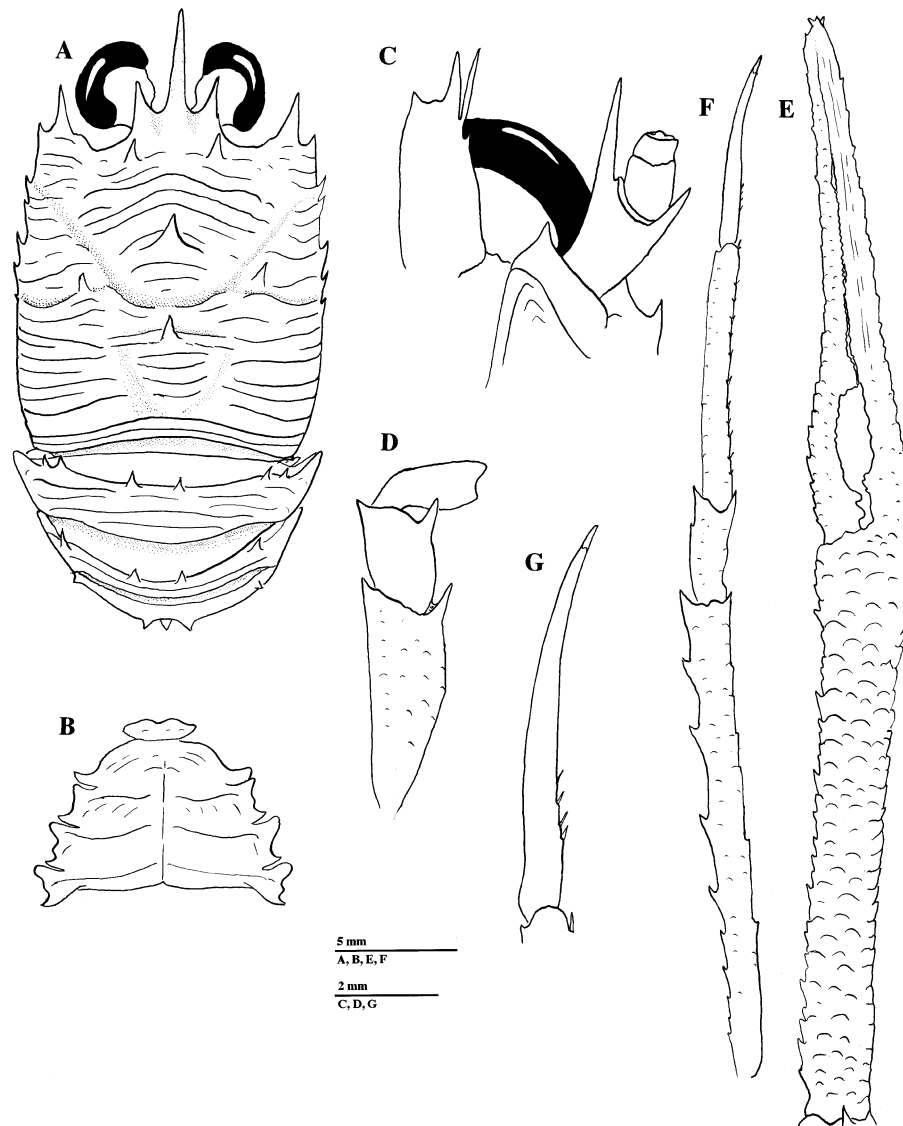


FIG. 3. *Crosnierita tucanae* n. sp., holotype, male, 8.8 mm, Fiji, 244-252 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, right first walking leg, lateral view; G, dactylus of right first walking leg, lateral view.

FIG. 3. *Crosnierita tucanae* n. sp., holotype, mâle, 8,8 mm, Fidji, 244-252 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncules antennaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélipède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

Ischium of third maxilliped about 3 x length of merus (measured along dorsal margin), with distoventralspine. Merus of third maxilliped with 1 strong median spine on flexor margin; extensor margin with distal spine (Fig. 3D).

Chelipeds long, subequal, squamous, with uniramous setae that are densest on mesial borders of merus. Palm slightly longer than fingers. Merus armed with a few spines, short spine on distal border strongest. Carpus with few spines. Palm with small spines along mesial and lateral borders. Fingers distally curving and crossing, ending in a sharp point; movable with a few small spines along mesial border; cutting edges with small teeth of different sizes (Fig. 3E).

Walking legs long and slender. Second pereiopod more than 3 x carapace length; merus 1.5 x carapace length, about 9 x as long as high, about 4 x carpus length and twice as long as propodus; propodus 8 x as long as high, slightly longer than dactylus length (Fig. 3F). Merus with spines along dorsal border, increasing in size distally, ventral margin with few spines and 1 long distal spine. Carpus with 1 or 2 small dorsal spines and 1 distoventral spine. Propodus with 10 or 11 small movable ventral spines. Dactylus slightly curving distally, with 4 or 5 movable spinules along proximal half of ventral margin (Fig. 3G). Third pereiopod similar to second; fourth pereiopod shorter than second and third. Merus of fourth pereiopod 2/3 length of second pereiopod.

DISTRIBUTION. — Fiji, 80-417 m.

REMARKS. — This new species is most similar to *C. urizae* (Macpherson, 1994), from New Caledonia and Matthew, Hunter and Chesterfield Islands. However, *C. tucanae* differs markedly from *C. urizae* by the presence of a well developed cardiac spine and the absence of a spine on the posterior border of the carapace. Moreover, the dactyli of the walking legs are slightly shorter than the propodi in the new species, being clearly shorter in *C. urizae*.

ETYMOLOGY. — From the Latin *tucanae* (Toucan), referring to one of the southern hemisphere constellations (Tucana).

Crosnierita yante (Macpherson, 1994)

Munida yante Macpherson, 1994: 555, figs 62, 97.

Crosnierita yante – Macpherson 1998: 353; 2000: 417.

TYPE MATERIAL. — New Caledonia. SMIB 8: stn 178, 23°45.1'S, 168°17'E, 400 m: holotype ♀ 5.5 mm (MNHN Ga 3555).

OTHER MATERIAL EXAMINED. — Tonga. BORDAU 2: stn 1586, 440-487 m: 1 ♂ 7.9 mm.

DISTRIBUTION. — New Caledonia and Marquesas Islands, 95-460 m (Macpherson 1994, 2000); Tonga, 440 to 487 m.

Genus **MUNIDA** Leach, 1820

Munida amblytes Macpherson, 1994

Munida amblytes Macpherson, 1994: 443, fig. 4.

TYPE MATERIAL. — New Caledonia. SMIB 3: stn 23, 22°58.00'S, 167°20.00'E, 530 m: holotype ♂ 16.0 mm (MNHN Ga 2554).

OTHER MATERIAL EXAMINED. — Tonga. BORDAU 2: stn 1618, 627-656 m: 1 ♂ 10.1 mm.

DISTRIBUTION. — New Caledonia, 525-1000 m (Macpherson 1994); Tonga, 627-656 m.

Munida angusta n. sp.

Figs 4, 16

TYPE MATERIAL. Tonga (holotype and paratypes). BORDAU 2: stn 1511, 384-402 m: holotype ♂ 9.8 mm (MNHN Ga 4559), 1 ♂ 10.5 mm, 2 ovig. ♀ 7.3 and 8.9 mm, 2 ♀ 10.8 and 11.5 mm; stn 1560, 365-372 m: 2 ovig. ♀ 9.7 and 9.9 mm; stn 1561, 383-393 m: 1 ♂ 8.6 mm, 2 ovig. ♀ 9.3 and 9.7 mm, 1 ♀ 9.9 mm; stn 1562, 417-424 m: 1 ♀ 9.0 mm; stn 1571, 389-418 m: 1 ovig. ♀ 10.1 mm; stn 1572, 391-402 m: 12 ♂ 4.0-9.9 mm, 3 ovig. ♀ 9.7-10.4 mm, 6 ♀ 6.0-6.9 mm, 1 juv. 3.8 mm; stn 1644, 501 m: 2 ♀ 8.8 and 10.4 mm.

New Caledonia (paratypes). BATHUS 4: stn 899, 3.08.1994, 20°16'S, 163°50'E, 500-600 m: 9 ♂ 5.3-12.5 mm, 4 ovig. ♀ 7.5-11.7 mm, 4 ♀ 7.3-10.3 mm.

Fiji (paratypes). BORDAU 1: stn 1421, 403-406 m: 1 ♂ 7.6 mm, 2 ovig. ♀ 9.9 and 10.0 mm; stn 1450, 327-420 m: 1 ovig. ♀ 11.4 mm; stn 1467, 417-427 m: 3 ♂ 9.0-10.5 mm, 2 ♀ 6.7 and 10.0 mm; stn 1493, 429-440 m: 1 ♂ 10.2 mm; stn 1496, 392-407 m: 1 ♂ 9.2 mm; stn 1499, 389-400 m: 1 ♀ 6.1 mm; stn 1500, 366-389 m: 8 ♂ 6.7-11.0 mm, 1 ovig. ♀ 8.3 mm, 4 ♀ 8.0-12.9 mm; stn 1501, 350-357 m: 5 ♂ 7.8-10.2 mm; stn 1504, 427-440 m: 6 ♂ 6.6-10.4 mm, 1 ovig. ♀ 10.2 mm; stn 1505, 420-450 m: 3 ♀ 7.3-8.0 mm.

DESCRIPTION. — Males 4.0-12.5 mm, females 6.0-12.9 mm, ovigerous females from 7.3 mm. Carapace clearly longer than wide, longitudinally convex. Transverse ridges mostly interrupted, with very short, dense, non-iridescent setae and few long setae. Few scales and secondary striae between main striae. Few scales on intestinal region, sometimes absent. Gastric region with 4 or 5 pairs of epigastric spines. One parahepatic and 1 postcervical spine on each side. Frontal margins transverse. Lateral margins subparallel. Anterolateral spine well developed, situated on frontal margin near anterolateral angle, reaching level of sinus between rostrum and supraocular spines. One or 2 small marginal spines before cervical groove, posterior spine larger than preceding one and about half size of anterolateral spine. Branchial margins with 5 spines (seldom 4 spines on 1 side). Rostrum spiniform, half as long as remaining carapace, straight and slightly upwardly directed. Supraocular spines reaching midlength of rostrum and clearly not reaching end of corneae, parallel, directed upwards (Fig. 4A).

Thoracic sternites smooth. Fourth sternites with few short arcuate striae, concave medially. Anterior part of fourth sternite slightly narrower than third (Fig. 4B).

Second abdominal somite with row of 8-10 spines on anterior ridge. Second to fourth somites each with 1 transverse stria.

Eyes large, maximum corneal diameter about half distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/4 carapace length, elongate, slightly overreaching end of corneae, with 2 distal spines, mesial shorter than lateral; 2 spines on lateral margin, proximal spine short, located at midlength of segment, distal spine long, reaching end of distal spines (Fig. 4C).

First segment of antennal peduncle with 1 well distal spine on mesial margin nearly reaching end of second segment; second segment with 2 long distal spines, mesial spine longer than lateral spine, nearly reaching or reaching end of antennal peduncle; penultimate segment unarmed (Fig. 4C).

Ischium of third maxilliped slightly longer than merus (measured along dorsal margin), with distoventral spine. Merus of third maxilliped with 2 well developed spines on flexor margin, distal smaller; extensor margin unarmed (Fig. 4D).

Chelipeds subequal, squamous, with numerous short and long uniramous setae, some of them iridescent, densest on mesial borders of articles. Palm shorter than fingers. Merus armed with a few spines, strongest spine on distal border short, not overreaching proximal third of carpus. Carpus with several spines on dorsal side and several spines scattered on mesial and ventral sides. Palm with spines scattered on mesial and dorsal sides and row of spines on lateral border. Fixed finger with a few spines along lateral margin, movable finger with spines along mesial border; fingers distally curving and crossing, ending in a sharp point (Fig. 4E).

Second pereopod about 2.5 x carapace length; merus longer than carapace, about 10 x as long as high, about 4.5 x carpus length and twice as long as propodus; propodus about 6.5 x as long as high, slightly longer than dactylus (Fig. 4F).

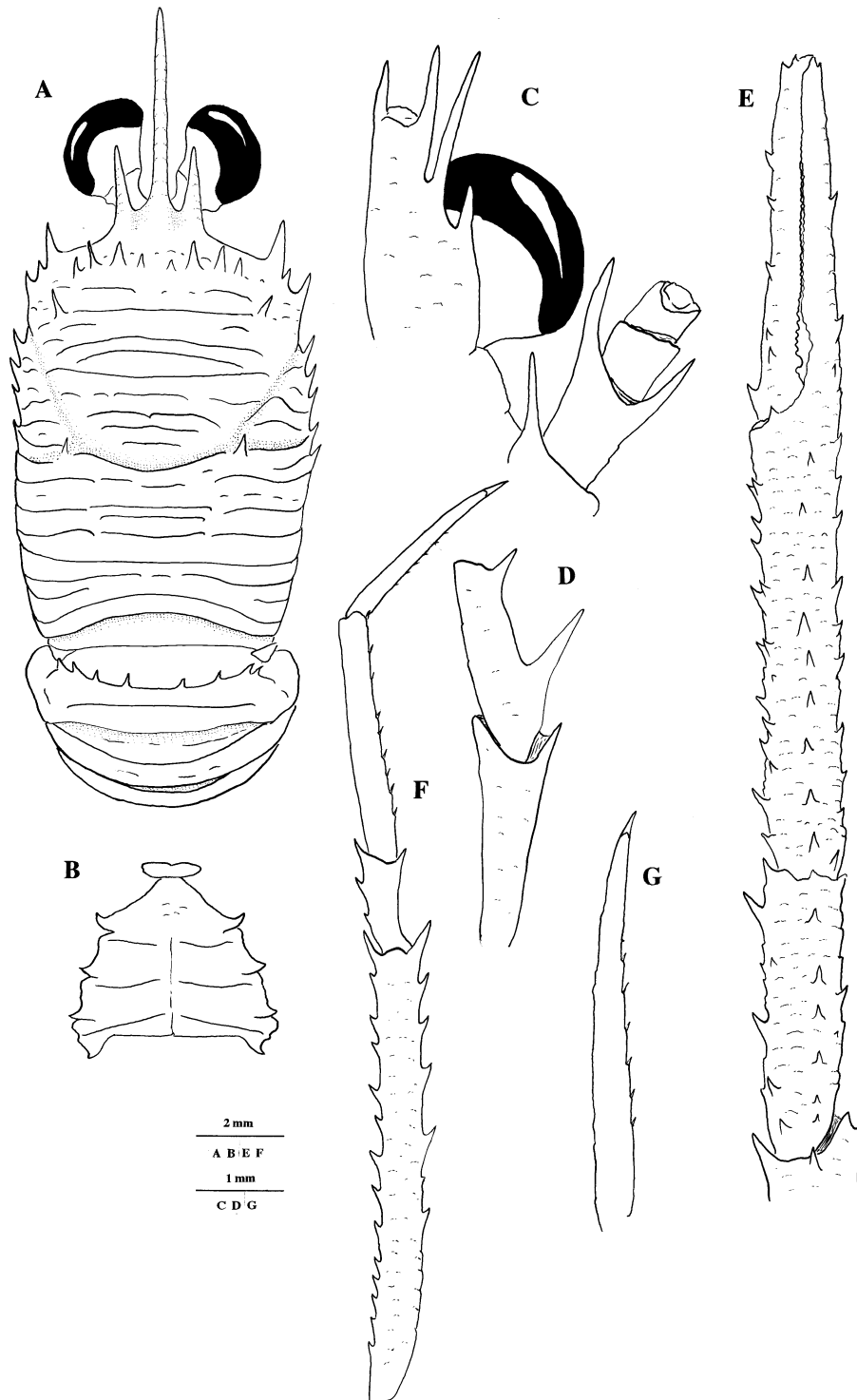


FIG. 4. *Munida angusta* n. sp., holotype, male, 9.8 mm, Tonga, 384-402 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, right first walking leg, lateral view; G, dactylus of right first walking leg, lateral view.

FIG. 4. *Munida angusta* n. sp., holotype, mâle, 9,8 mm, Tonga, 384-402 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncules antennaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélopède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

Merus with well developed spines along dorsal and ventral borders, increasing in size distally. Carpus with a few dorsal spines and 1 distoventral spine. Propodus with 10-12 movable ventral spines. Dactylus slightly curving distally, with 7 or 8 movable spinules along ventral margin, distal third unarmed (Fig. 4G). Third pereopod slightly shorter than to second; fourth pereopod clearly shorter than second and third. Merus of fourth pereopod half length of second pereopod. Ground colour of carapace, abdominal somites and pereopods light orange. Striae of carapace and abdomen reddish. Rostral spine whitish. Fingers of chelipeds orange; movable finger with white spot at base.

DISTRIBUTION. — New Caledonia, Fiji and Tonga, 327-600 m.

REMARKS. — *Munida angusta* belongs to the group of species having five spines on the lateral margins of the carapace behind the cervical groove, smooth thoracic sternites, large eyes, spines on the anterior ridge of the second abdominal somite, spiniform rostrum, the distomesial spine of the basal antennular segment shorter than the distolateral and the terminal third of the ventral border of the dactylus of the walking legs unarmed. The new species closely resembles *M. sacksi* Macpherson, 1993, from the Philippines (Macpherson 1993a), but the two species are easily distinguished as follows:

- The carapace is more convex in *M. angusta* than in *M. sacksi*;
- *M. sacksi* has more numerous scales and secondary striae than the new species;
- The second abdominal somite has several secondary striae in *M. sacksi* instead of only one in the new species;
- The distomesial spine of the second segment of the antennal peduncle clearly overreaches the antennal peduncle in *M. sacksi*, whereas this spine only reaches or nearly reaches the end of the antennal peduncle in *M. angusta*.

ETYMOLOGY. — From the Latin, *angustus*, slender, thin, in reference to the shape of the carapace.

***Munida apodis* n. sp.**

Fig. 5

TYPE MATERIAL. — Tonga (holotype and paratypes). BORDAU 2: stn 1564, 371-387 m: holotype ovig. ♀ 5.9 mm (MNHN Ga 4560), 1 ♀ 5.8 mm; stn 1559, 339-345 m: 1 ♀ 6.0 mm; stn 1561, 383-393 m: 1 ♂ 6.3 mm; stn 1573, 331-345 m: 2 ♂ 5.9 and 6.2 mm, 1 ♀ 4.5 mm; stn 1578, 329-331 m: 4 ♂ 5.4-6.1 mm, 1 ♀ 5.3 mm.

Fiji (paratypes). MUSORSTOM 10: stn 1326, 265-300 m: 1 ♂ 9.3 mm; stn 1348, 353-390 m: 1 ♂ 9.2 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Males 5.4-9.3 mm, females 5.3-6.3 mm, ovigerous females from 5.9 mm. Carapace longer than wide. Transverse ridges mostly interrupted, with very short, dense, non-iridescent setae and few long, iridescent setae. Main transverse striae on posterior part of carapace interrupted in cardiac region. Few scales and secondary striae between main striae. Scales on intestinal region absent. Gastric region with row of epigastric spines. One parahepatic, 1 anterobranchial and 1 postcervical spine on each side. Frontal margins transverse. Lateral margins slightly convex. Anterolateral spine well developed, at anterolateral angle, not reaching level of sinus between rostrum and supraocular spines. Second marginal spine before cervical groove small, about 1/3 the size of preceding one. Branchial margins with 5 spines. Rostrum spiniform, half as long as remaining carapace, slightly sinuous and horizontal. Supraocular spines short, clearly not reaching midlength of rostrum and not overreaching end of corneas, parallel, directed upwards (Fig. 5A).

Thoracic sternites smooth, without striae, granules or carinae. Anterior part of fourth sternite as wide as third. Transverse ridges between fifth, sixth and seventh sternites obtuse, weakly granulated (Fig. 5B).

Second abdominal somite unarmed. Second to fourth somites each with transverse stria.

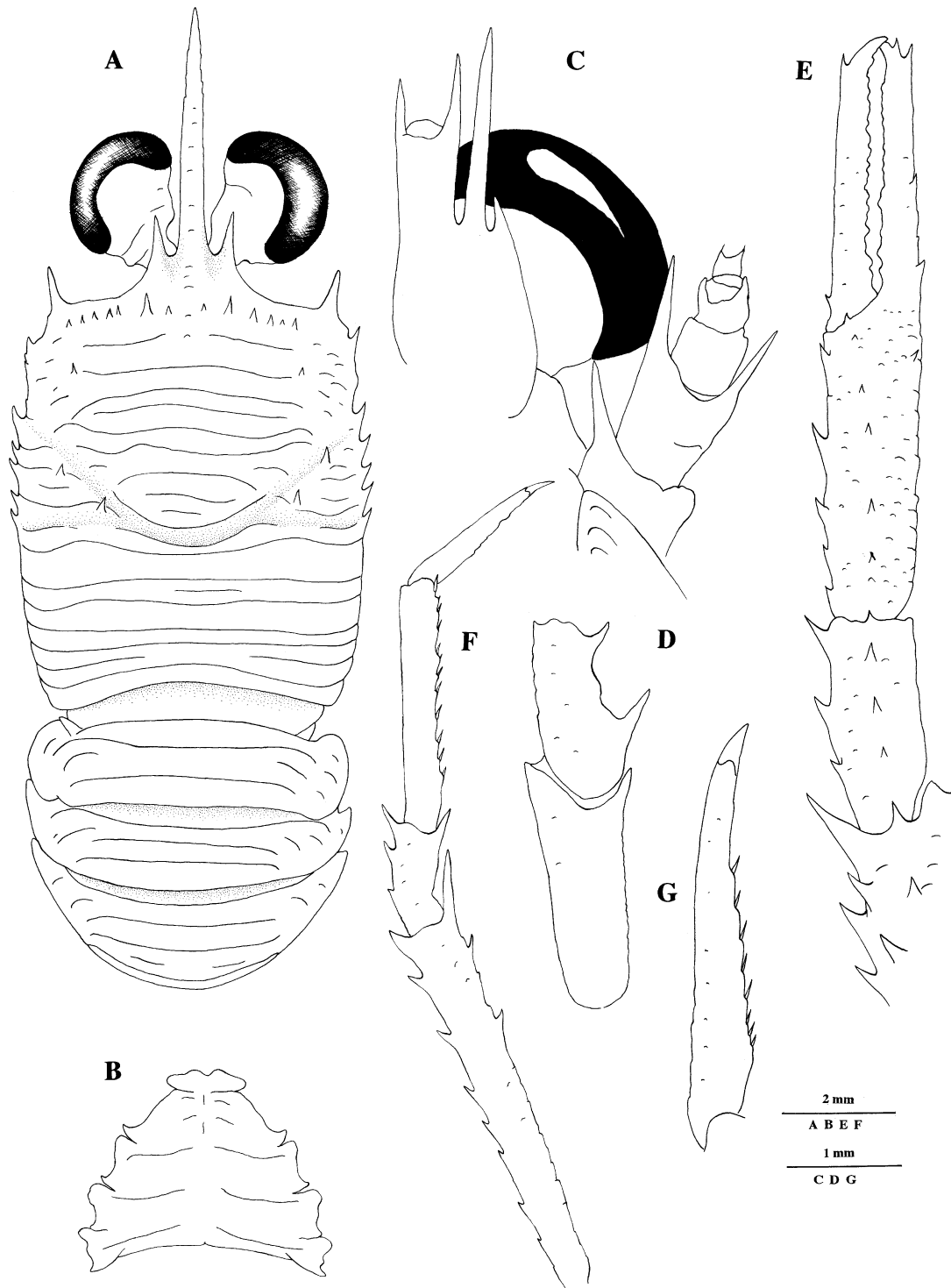


FIG. 5. *Munida apodis* n. sp., holotype, ovig. female, 5.9 mm, Tonga, 371-387 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, right first walking leg, lateral view; G, dactylus of right first walking leg, lateral view.

FIG. 5. *Munida apodis* n. sp., holotype, femelle ovigère, 5,9 mm, Tonga, 371-387 m: A, carapace, vue dorsale; B, plastron sternal; C, vue ventrale de la région céphalique, montrant les pédoncules antennaires et antennulaires; D, troisième maxillipède droit, vue latérale; E, chélopède droit, vue dorsale; F, première patte marcheuse droite, vue latérale; G, dactyle de la première patte marcheuse droite, vue latérale.

Eyes moderately large, maximum corneal diameter half distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/4 carapace length, elongate, slightly overreaching corneae, with 2 distal spines, mesial spine shorter than lateral spine; 2 spines on lateral margin, proximal spine short, located at midlength of segment, distal spine long, overreaching distolateral spine (Fig. 5C).

First segment of antennal peduncle with 1 distal spine on mesial margin reaching end of second segment; second segment with 2 distal spines, mesial spine longer than lateral spine, reaching end of antennal peduncle; penultimate segment unarmed (Fig. 5C).

Ischium of third maxilliped about twice length of merus (measured along dorsal margin), distoventrally bearing spine. Merus of third maxilliped with 2 well developed spines on flexor margin, distal smaller; extensor margin with small distal spine (Fig. 5D).

Chelipeds subequal, squamous, with numerous short uniramous setae that are densest on mesial borders of articles. Palm slightly shorter than fingers. Merus armed with a few spines, strongest spine on distal border short, clearly not overreaching proximal quarter of carpus. Carpus with a few spines on dorsal side and several spines scattered on mesial and ventral sides. Palm with several spines scattered on mesial and dorsal sides and 1 row of lateral spines, continuing onto along proximal half of fixed finger. Fingers distally curving and crossing, ending in a sharp point; movable with 1 basal spine on mesial border; cutting edges with small teeth of different sizes (Fig. 5E).

Second pereopod slightly longer than twice carapace length; merus as long as carapace, about 7 x as long as high, about 3 x carpus length and 1.7 x as long as propodus; propodus 6 x as long as high, about 1.3 x dactylus length (Fig. 5F). Merus with small spines on dorsal border, increasing in size distally, ventral margin with several spines and 1 long distal spine. Carpus with few dorsal spines and 1 distoventral spine. Propodus with 11-14 movable ventral spines. Dactylus slightly curving distally, with 8 or 9 movable spinules along ventral margin, distal third unarmed (Fig. 5G). Third pereopod similar to second; fourth pereopod shorter than second and third. Merus of fourth pereopod 2/3 length of second pereopod.

DISTRIBUTION. — Fiji and Tonga, 265-393 m.

REMARKS. — *Munida apodis* belongs to the group of small species having five spines on the lateral margins of the carapace behind the cervical groove, large eyes, an unarmed second abdominal somite, lateral parts of the posterior thoracic sternites without granules or carinae, spiniform rostrum, distolateral spine of the basal antennular segment longer than the distomesial, and the dactylus of the walking legs unarmed on the distal third of the ventral border. The new species is closely similar to *M. stia* Macpherson, 1994, from New Caledonia and Chesterfield Islands (Macpherson 1994), and the two species are distinguished as follows:

- The movable finger of the cheliped has one basal spine in *M. apodis*, whereas in *M. stia* there is a row of spines along the mesial margin;
- The walking legs are shorter in *M. stia* than in *M. apodis*;
- The merus of the second pereopod is as long as the carapace in *M. apodis*, whereas it is clearly shorter in *M. stia*;
- The second pereopod is slightly more than twice the carapace length in the new species, but clearly shorter than the carapace in *M. stia*.

ETYMOLOGY. — From the Latin *apodis*, meaning the bird of the paradise, and refers to one of the southern hemisphere constellations (Apus).

Munida armilla Macpherson, 1994

Munida armilla Macpherson, 1994: 446, figs 6, 65.

Munida armilla – Macpherson 1996a: 390.

TYPE MATERIAL. — New Caledonia. CHALCAL 2: stn 1, 24°54.96'S, 168°21.91'E, 500-580 m: holotype ♂ 13.0 mm (MNHN Ga 2558).

OTHER MATERIAL EXAMINED. — Tonga. BORDAU 2: stn 1539, 558-586 m: 3 ♂ 7.0-12.5 mm, 1 ovig. ♀ 12.7 mm; stn 1618, 627-656 m: 9 ♂ 4.4-13.3 mm, 3 ovig. ♀ 9.1-10.2 mm, 3 ♀ 4.7-10.8 mm; stn 1621, 570-573 m: 1 ovig. ♀ 7.7 mm.

DISTRIBUTION. — New Caledonia, Matthew and Hunter islands and Wallis and Futuna area, 233-700 m (Macpherson 1994, 1996a); Tonga, 570-656 m.

Munida callista Macpherson, 1994

Munida callista Macpherson, 1994: 454, figs 10, 67.

Munida callista – Macpherson 1996a: 391.

TYPE MATERIAL. — New Caledonia. BIOCAL: stn 78, 22°16.28'S, 167°14.86'E, 445 m: holotype ♂ 18.1 mm (MNHN Ga 2940).

OTHER MATERIAL EXAMINED. — Tonga. BORDAU 2: stn 1583, 327-360 m: 1 ♀ 6.8 mm.

DISTRIBUTION. — New Caledonia, Chesterfield Islands and Wallis Island, 335-590 m (Macpherson 1994, 1996a); Tonga, 327-360 m.

Munida clinata Macpherson, 1994

Munida clinata Macpherson, 1994: 457, fig. 11.

Munida clinata – Macpherson 1996a: 391, fig. 31; 1997: 605; 1999: 415.

TYPE MATERIAL. — New Caledonia. LAGON: stn 392, 22°48.2'S, 167°02.3'E, 80 m: holotype ♂ 6.8 mm (MNHN Ga 2598).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1324, 102-104 m: 5 ♂ 4.4-8.2 mm, 1 ovig. ♀ 5.8 mm, 1 ♀ 7.2 mm. BORDAU 1: stn 1437, 160-177 m: 1 broken. Tonga. BORDAU 2: stn 1514, 130-133 m: 2 ♂ 6.7 and 8.5 mm, 4 ovig. ♀ 6.2-8.6 mm.

DISTRIBUTION. — Philippines, Indonesia, New Caledonia, Chesterfield Islands, Vanuatu and Futuna Island, 28-245 m (Macpherson 1994, 1996a, 1997, 1999); Fiji and Tonga, 102-177 m.

Munida congesta Macpherson, 1999

Munida congesta Macpherson, 1999: 415, figs 2, 3d, 4a.

TYPE MATERIAL. — Vanuatu. MUSORSTOM 8 stn 975, 19°23'S, 169°29'E, 536-566 m: holotype ovig. ♀ 10.2 mm (MNHN).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1415, 670-682 m: 2 ♂ 11.3 and 12.3 mm, 1 ovig. ♀ 12.7 mm; stn 1461, 560 m: 1 ♂ broken; 2 ♀ 6.9 and 9.8 mm; stn 1491, 777-787 m: 1 ♂ 7.0 mm, 2 ♀ 4.8 and 7.2 mm. Tonga. BORDAU 2: stn 1529, 688-710 m: 4 ♂ 11.9-13.9 mm, 1 ovig. ♀ 12.6 mm; stn 1558, 580-593 m: 2 ♂ 12.0 and 12.4 mm, 1 ovig. ♀ 11.6 mm; stn 1632, 613-618 m: 1 ♂ 11.9 mm; stn 1637, 464-507 m: 1 juv. 4.1 mm.

DISTRIBUTION. — Vanuatu, 536-668 m (Macpherson 1999); Fiji and Tonga, 560-787 m.

Munida cornuta Macpherson, 1994

Fig. 17

Munida cornuta Macpherson, 1994: 459, figs 12, 13c.

TYPE MATERIAL. — Kiribati. (precise position not recorded) 400 m: holotype ♂ 11.7 mm (MNHN Ga 2620).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1395, 423-500 m: 1 ♂ 11.6 mm; stn 1433, 488-500 m: 5 ♂ 10.3-12.0 mm, 1 ovig. ♀ 14.2 mm, 2 ♀ 12.4 and 13.2 mm; stn 1448, 410-500 m: 1 ♀ 11.6 mm; stn 1468, 478-500 m: 1 ♀ 12.3 mm. Tonga. BORDAU 2: stn 1510, 461-497 m: 1 ♂ 9.9 mm, 1 ovig. ♀ 10.4 mm; stn 1527, 483-509 m: 1 ♂ 12.5 mm, 1 ovig. ♀ 12.1 mm; stn 1539, 558-586 m: 7 ♂ 10.1-11.5 mm, 2 ovig. ♀ 9.9 and 10.5 mm; stn 1593, 436-442 m: 1 ♂ 7.7 mm, 1 ovig. ♀ 9.8 mm; stn 1596, 371-437 m: 1 ♀ 9.2 mm; stn 1618, 627-656 m: 1 ♂ 12.7 mm; stn 1620, 572 m: 7 ♂ 9.4-12.5 mm, 2 ovig. ♀ 10.9 and 12.9 mm, 2 ♀ 8.4 and 13.5 mm; stn 1621, 570-573 m: 5 ♂ 6.4-10.6 mm, 5 ovig. ♀ 9.7-13.1 mm, 6 ♀ 6.6-10.4 mm; stn 1622, 569-573 m: 2 ♂ 8.7 and 12.2 mm, 1 ovig. ♀ 11.7 mm, 1 ♀ 7.2 mm; stn 1643, 487 m: 2 ♂ 9.1 and 12.5 mm; stn 1644, 501 m: 1 ♂ 10.8 mm.

DISTRIBUTION. — Kiribati, Fiji and Tonga, 371-656 m.

REMARKS. — *Munida cornuta* was described from a single specimen collected off Kiribati, at 600 m (Macpherson 1994). The species belongs to the group of species with five spines on the lateral margins of the carapace, eyes large, abdominal somites unarmed, lateral parts of posterior thoracic sternites without granules or carinae and rostrum laterally compressed. The other two members of the group are *M. compressa* Baba, 1988, from Japan, Southern China Sea, Philippines, Arafura Sea and Molucca Sea (Baba 1988; Macpherson 1994, 1997), *M. rubrodigitalis* Baba, 1994, from eastern Australia, Indonesia, New Caledonia, Loyalty Islands and Vanuatu (Baba 1994; Macpherson 1994, 1997, 1999), and *M. cornuta* Macpherson, 1994, from Kiribati. *Munida cornuta* is easily distinguished from the other species by the absence of striae on the thoracic sternites.

The ground colour of the carapace, abdomen and pereopods is orange-reddish, the posterior part of the carapace red. There is one red spot on the distal part of the rostral spine, the fingers of the chelipeds are red, with whitish tips, and the dactylus of the walking legs are whitish.

The rostrum is much more upwardly directed in the holotype than in the present material. Furthermore, some specimens have no spines on the anterior ridge of the second abdominal somite, suggesting the need for caution in the use of this character in this group of species. These differences are considered to be intraspecific variation.

Munida delicata n. sp.

Fig. 6

Munida sacksi Macpherson, 1993a: 438, fig. 6 (in part, specimens from New Caledonia); 1999: 424 (not *M. sacksi* Macpherson, 1993)

TYPE MATERIAL. — New Caledonia (holotype and paratypes). BATHUS 3: stn 845, 01.12.1993, 23°03'S, 166°56'E, 592-622 m: holotype ♂ 12.8 mm (MNHN Ga 4561), 1 ovig. ♀ 13.3 mm. — BATHUS 1: stn 671, 14.03.1993, 20°51'S, 165°28'E, 450-470 m: 1 ♂ 8.5 mm. — BATHUS 4: stn 892, 02.08.1994, 21°01'S, 164°27'E, 580-600 m: 1 ovig. ♀ 10.7 mm. — HALIPRO 1: stn 869, 23.03.1994, 21°14'S, 165°55'E, 450-490 m: 2 ♀ 10.4 and 11.8 mm. — MUSORSTOM 4: stn 241, 470-480 m: 1 ♂ 9.1 mm, 1 ♀ 9.7 mm; stn 242, 500-550 m: 3 ♀ 9.1-10.6 mm.

Fiji (paratypes). MUSORSTOM 10: stn 1320, 290-300 m: 1 ovig. ♀ 5.9 mm; stn 1340, 303-365 m: 1 ♀ 5.1 mm. — BORDAU 1: stn 1426, 330-367 m: 1 ♀ 9.6 mm; stn 1462, 556-560 m: 1 ♀ 6.0 mm.

Tonga (paratypes). BORDAU 2: stn 1556, 589-591 m: 2 ♂ 10.1 and 10.2 mm, 1 ovig. ♀ 9.7 mm; stn 1638, 469-520 m: 2 ♂ 11.9 and 12.5 mm, 1 ovig. ♀ 11.1 mm; stn 1641, 395 m: 3 ♂ 4.9-10.7 mm, 6 ovig. ♀ 8.7-10.1 mm, 3 ♀ 6.3-8.8 mm; stn 1642, 532 m: 1 ♂ 7.6 mm, 2 ovig. ♀ 10.7 and 11.6 mm.

Vanuatu (paratypes). MUSORSTOM 8: stn 1047, 486-494 m: 1 ovig. ♀ 11.5 mm; stn 1124, 532-599 m: 1 ♀ 10.4 mm; stn 1135, 282-375 m: 1 ♀ 5.6 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Males 4.9-12.5 mm, females 5.1-13.3 mm, ovigerous females from 5.9 mm. Carapace longer than wide, slightly convex. Transverse ridges mostly interrupted, with short, dense, non-iridescent setae. Intestinal region without striae or scales. Few scales and secondary striae between main striae. Intestinal region without scales. Gastric region with a row of 7 or 8 epigastric spines, pair just behind supraocular spines being the largest. One parahepatic and 1 postcervical spine on each side. Frontal margins transverse. Lateral margins weakly convex. Anterolateral spine well developed, situated at anterolateral angle, reaching level of sinus between rostrum and supraocular spines. Second marginal spine before cervical groove small, 1/3 size of preceding one. Branchial margins with 5 spines decreasing in size posteriorly. Rostrum spiniform, half as long as remaining carapace, slightly curved and horizontal. Supraocular spines reaching midlength of rostrum, clearly not exceeding end of corneas, subparallel, upwardly directed (Fig. 6A).

Fourth thoracic sternite with a few, small, granulate scales; lateral surface of fifth to seventh sternites smooth. Anterior part of fourth sternite narrower than third, concave medially. Transverse ridges between fifth, sixth and seventh sternites obtuse, weakly granulated (Fig. 6B).

Second abdominal tergite with 9-10 spines on anterior ridge. Second and third tergites each with 1 transverse continuous stria.

Eyes moderately large, maximum corneal diameter half distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/4 carapace length, elongate, slightly exceeding corneas, with 2 distal spines, mesial spine shorter than lateral spine; 2 spines on lateral margin, proximal spine short, located at midlength of segment, distal spine long, reaching end of distolateral spine (Fig. 6C).

First segment of antennal peduncle with 1 distal spine on mesial margin, overreaching end of second segment; second segment with 2 distal spines, mesial spine clearly longer than lateral spine, overreaching antennal peduncle; third segment unarmed (Fig. 6C).

Ischium of third maxilliped about twice length of merus (measured along dorsal margin), with distoventral spine. Merus of third maxilliped with 1 well developed spine on flexor margin; extensor margin unarmed (Fig. 6D).

Chelipeds squamous. Palm as long as fingers. Merus armed with a few spines, longer on distal border, strongest spine on distal border short, not reaching proximal fourth of carpus. Carpus with several spines on dorsal side and several spines scattered on mesial and ventral sides. Palm with spines scattered on mesial and dorsal sides and 1 row of well developed

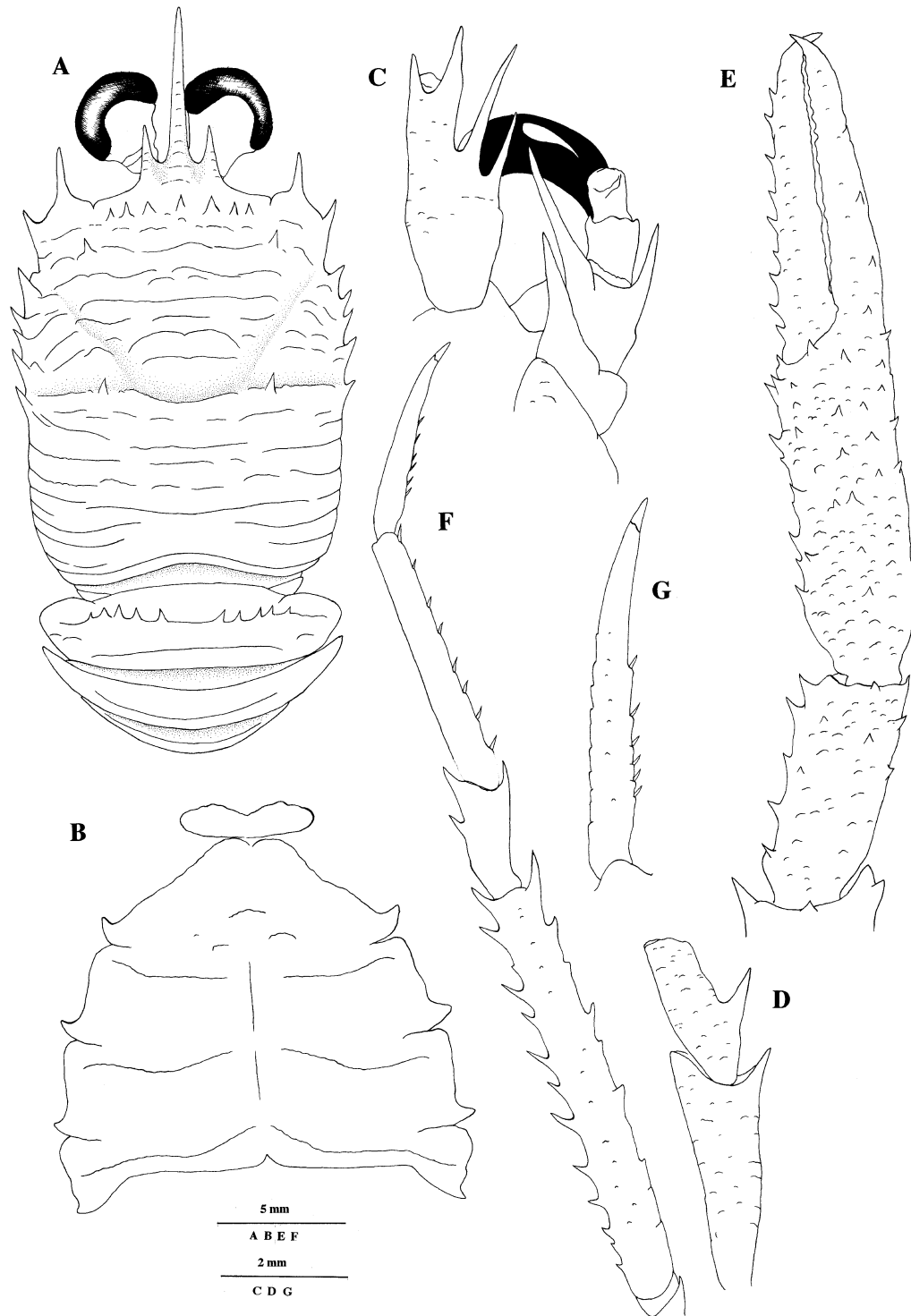


FIG. 6. *Munida delicata* n. sp., holotype, male, 12.8 mm, New Caledonia, 592-622 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, right first walking leg, lateral view; G, dactylus of right first walking leg, lateral view.

FIG. 6. *Munida delicata* n. sp., holotype, mâle, 12,8 mm, Nouvelle-Calédonie, 592-622 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncules antennaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélopède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

dorsolateral spines, continuing along fixed finger. Fingers distally curving and crossing, ending in a sharp point; movable finger with a row of spines along mesial border, 1 spine near tip; fixed finger with 1 additional spine near tip; cutting edges with small teeth of different sizes (Fig. 6E).

Second pereopod more than twice carapace length; merus slightly longer than carapace, about 8 x as long as high, 3 x carpus length and 1.5 x as long as propodus; propodus about 7 x as long as high, about 1.3 x dactylus length (Fig. 6F). Merus with row of spines along dorsal border, ventral margin with 1 long distal spine, several additional spines, and a few projecting scales on distal half. Carpus with few dorsal spines and 1 distoventral spine. Propodus with 7-9 movable ventral spinules. Dactylus long and slender, with dorsal margin slightly convex on proximal half, slightly curving distally, with 6-8 movable spinules along proximal half of ventral margin (Fig. 6G). Third pereopod similar to second; fourth pereopod shorter than second and third. Merus of fourth pereopod half length of second pereopod.

DISTRIBUTION. — New Caledonia, Vanuatu, Fiji and Tonga, 290-622 m.

REMARKS. — The new species resembles *M. sacksi* Macpherson, 1993, in having five spines on the lateral margins of the carapace behind the cervical groove, large eyes, the second abdominal segment with spines, the lateral parts of the posterior thoracic sternites without granules, the rostrum spiniform, the distomesial spine of the basal antennular segment shorter than the distolateral segment, and the distal half of ventral border of the dactylus unarmed.

The original description of *M. sacksi* was based on one specimen from the Philippines and some specimens caught off New Caledonia. However, the collection of numerous additional specimens from New Caledonia and adjacent waters, initially identified as *M. sacksi*, suggests that they are in fact specifically distinct. The two species can be easily distinguished by comparing specimens from the two areas:

- The general shape of the carapace and abdominal segments, markedly convex in *M. sacksi* and weakly convex in the new species;
 - The intestinal region has several scales in *M. sacksi*, but no scales in the new species;
 - There are more numerous secondary striae on the carapace and abdominal segments in *M. sacksi* than in *M. delicata*.
- These differences are constant in all specimens examined.

ETYMOLOGY. — From the Latin *delicatus*, soft, tender, in reference to the smooth surface of the carapace and abdomen.

Munida ecleipsis Macpherson, 1994

Munida ecleipsis Macpherson, 1994: 463, figs 15, 70.

TYPE MATERIAL. — New Caledonia. SMIB 4: stn 34, 24°55.0'S, 168°22.0'E, 515 m: holotype ♀ 11.0 mm (MNHN Ga 2632).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1451, 400-460 m: 1 ♂ 5.3 mm.
Tonga. BORDAU 2: stn 1619, 591-593 m: 1 ♀ 8.6 mm.

DISTRIBUTION. — New Caledonia, 515-520 m (Macpherson 1994); Fiji and Tonga, 400-593 m.

Munida elachia Macpherson, 1994

Munida elachia Macpherson, 1994: 465, figs 16, 71.

TYPE MATERIAL. — New Caledonia. CHALCAL 2: stn 73, 24°39.90'S, 168°18.10'E, 573 m: holotype ♀ 4.4 mm (MNHN Ga 2633).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1494, 240-319 m: 1 ♂ 3.1 mm.

DISTRIBUTION. — New Caledonia, 573-650 m (Macpherson 1994); Fiji, 240-319 m.

Munida galaxaura Macpherson, 1996

Munida galaxaura Macpherson, 1996a: 392, fig. 1.

TYPE MATERIAL. — Futuna Island. MUSORSTOM 7: stn 513, 14°13.5'S, 178°10.8'W, 260-300 m: holotype ovig. ♀ 5.3 mm (MNHN Ga 3643).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1326, 265-300 m: 1 ovig. ♀ 7.6 mm; stn 1351, 292-311 m: 1 ♂ 8.2 mm, 3 ovig. ♀ 6.9-7.6 mm, 2 ♀ 5.1 and 5.7 mm; stn 1383, 230-251 m: 1 ♂ 6.5 mm, 1 ovig. ♀ 8.3 mm, 1 ♀ 4.4 mm; stn 1387, 229-370 m: 2 ♂ 5.8 and 8.8 mm, 4 ovig. ♀ 6.8-8.1 mm, 1 ♀ 8.6 mm; stn 1389, 241-417 m: 5 ♂ 5.1-8.8 mm, 5 ovig. ♀ 5.1-8.6 mm, 2 ♀ 4.6 and 6.2 mm. — BORDAU 1: stn 1392, 370 m: 2 ♂ 9.3 and 9.9 mm; stn 1481, 441-506 m: 2 ♀ 3.8 and 6.1 mm; stn 1499, 389-400 m: 1 ovig. ♀ 6.2 mm; stn 1500, 366-389 m: 2 ♂ 7.2 and 7.8 mm, 4 ovig. ♀ 6.0-6.1 mm; stn 1501, 350-357 m: 4 ♂ 6.5-7.8 mm, 4 ovig. ♀ 6.7-8.0 mm.

DISTRIBUTION. — Wallis and Futuna islands, 210-300 m (Macpherson 1996a); Fiji, 229-506 m.

REMARKS. — The specimens from Fiji agree quite well with the type material. *Munida galaxaura* belongs to the group of species with five spines on the lateral margins of the carapace behind the cervical groove, large eyes, the second abdominal segment unarmed, the lateral parts of the posterior thoracic sternites without granules, the rostrum spiniform, the distal spines of the basal antennular segment subequal and the distal third of ventral border of the dactylus unarmed. Some specimens have the distal spines of the basal antennular segment broken, and can be confused with *M. notata* Macpherson, 1994, but they are easily distinguishable by the length of the antennal spines.

Munida gillii Macpherson, 1993

Munida gillii Macpherson, 1993a: 429, fig. 2 (references and synonymy).

Munida gillii – Macpherson 1996b: 424. — Wu *et al.* 1998: 107, fig.

TYPE MATERIAL. — Philippines. MUSORSTOM 1: stn 56, 13°53.1'N, 120°08.9'E, 129-134 m: holotype ♂ 5.9 mm (MNHN Ga 2479).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1322, 210-282 m: 3 ♂ 6.5-6.6 mm, 1 ovig. ♀ 6.5 mm, 1 ♀ 4.7 mm; stn 1323, 143-173 m: 17 ♂ 5.0-7.1 mm, 6 ovig. ♀ 5.7-6.7 mm, 2 ♀ 4.8 and 4.9 mm; stn 1324, 102-104 m: 4 ♂ 5.2-6.7 mm, 1 ovig. ♀ 6.3 mm, 1 ♀ 4.5 mm; stn 1329, 102-106 m: 1 ♀ 3.4 mm; stn 1349, 244-252 m: 1 ♂ 5.2 mm, 1 ovig. ♀ 5.9 mm, 5 ♀ 5.7-7.1 mm; stn 1363, 144-150 m: 9 ♂ 5.3-7.6 mm, 1 ovig. ♀ 6.1 mm, 2 ♀ 5.5 and 7.9 mm; stn 1366, 149-168 m: 5 ♂ 4.1-6.7 mm, 1 ♀ 7.5 mm; stn 1370, 113-123 m: 3 ♂ 6.3-7.2 mm, 1 ♀ 5.4 mm; stn 1371, 135-151 m: 4 ♂ 3.8-7.0 mm, 2 ovig. ♀ 4.6 and 5.3 mm. — BORDAU 1: stn 1403, 220-224 m: 11 ♂ 5.2-7.1 mm, 4 ovig. ♀ 4.9-6.7 mm; stn 1404, 180 m: 2 ♂ 6.1 and 6.4 mm.

DISTRIBUTION. — Philippines and New Caledonia, 100-360 m (Macpherson 1993a, 1996b); Fiji, 102-282 m.

Munida gordoae Macpherson, 1994

Munida gordoae Macpherson, 1994: 469, fig. 18.

Munida gordoae – Macpherson 1999: 419.

TYPE MATERIAL. — Chesterfield Islands. CORAIL 2: stn 141, 19°33.95'S, 158°27.34'E, 95 m: holotype ♂ 6.5 mm (MNHN Ga 2661).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1498, 300-307 m: 1 ♀ 4.2 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands, Chesterfield Islands, Matthew and Hunter islands and Vanuatu, 80-283 m (Macpherson 1994, 1999); Fiji, 300-307 m.

Munida guttata Macpherson, 1994

Munida guttata Macpherson, 1994: 471, figs 20, 73.

Munida guttata – Macpherson 1996a: 394.

TYPE MATERIAL. — New Caledonia. CHALCAL 2: stn 19, 24°42.85'S, 168°09.73'E, 271 m: holotype ♂ 13.5 mm (MNHN Ga 2673).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1471, 280-296 m: 1 juv. 3.6 mm; stn 1473, 270-280 m: 1 ♂ 1373, 238-244 m: 1 ♀ 3.8 mm; stn 1378, 240-249 m: 1 ovig. ♀ 15.3 mm; stn 1474, 316-340 m: 1 ♂ 6.5 mm. 9.3 mm; stn 1383, 230-251 m: 1 ♂ 7.3 mm. — BORDAU 1: stn Tonga. BORDAU 2: stn 1523, 300-302 m: 1 ♀ 9.5 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands and Futuna islands, 170-320 m (Macpherson 1994, 1996a); Fiji and Tonga, 230-296 m.

Munida heteracantha Ortmann, 1892

Munida heteracantha Ortmann, 1892: 255, pl. 11, figs 12, 12i, k.

Munida heteracantha – Macpherson & Baba 1993: 393, fig. 6 (references and synonymy). — Baba 1994: 11. — Macpherson, 1996b: 424.

TYPE MATERIAL. — Japan. Sagami Bay (depth not recorded): lectotype ovig. ♀ 7.3 mm (Strasbourg Museum).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn ♀ 6.7 mm, 2 ♀ 6.1 and 7.3; stn 1355, 302-310 m: 1 ♂ 8.0 mm, 1325, 282-322 m: 1 ♀ 10.2 mm; stn 1328, 248-277 m: 1 ovig. ♀ 2 ovig. ♀ 6.7 and 7.6 mm; stn 1363, 144-150 m: 1 ♂ 8.6 mm. — 8.9 mm, 1 ♀ 9.1 mm; stn 1351, 292-311 m: 1 ♂ 7.8 mm, 1 ovig. BORDAU 1: stn 1403, 220-224 m: 1 ♂ 7.3 mm.

DISTRIBUTION. — Japan, Hong Kong, Philippines, Indonesia and New Caledonia, 68-222 m (Baba 1988; Macpherson & Baba 1993; Macpherson 1996b); Fiji, 144-322 m.

Munida hyalina Macpherson, 1994

Munida hyalina Macpherson, 1994: 477, fig. 22.

Munida hyalina – Macpherson 1997: 607.

TYPE MATERIAL. — Chesterfield Islands. MUSORSTOM 5: stn 359, 19°39.00'S, 158°9.00'E, 700-720 m: holotype ♂ 5.0 mm (MNHN Ga 2683).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1471, 280-296 m: 3 ♂ 3.6-5.4 mm; stn 1473, 270-280 m: 1 ovig. ♀ 4.2 mm, 1 ♀ 5.0 mm.

Tonga. BORDAU 2: stn 1516, 229-246 m: 1 ♂ 3.5 mm; stn 1583, 327-360 m: 3 ovig. ♀ 3.5-5.1 mm; stn 1591, 351-360 m: 1 ♂ 3.6 mm; stn 1595, 523-806 m: 1 ♂ 4.7 mm.

DISTRIBUTION. — New Caledonia, Chesterfield Islands and Indonesia, 205-720 m (Macpherson 1994, 1997); Fiji and Tonga, 229-523 m.

Munida idyia Macpherson, 1994

Munida idyia Macpherson, 1994: 415, fig. 23.

Munida idyia – Macpherson 1999: 419.

TYPE MATERIAL. — New Caledonia. MUSORSTOM 4: stn 170, 18°57.0'S, 163°12.6'E, 485 m: holotype ♂ 8.4 mm (MNHN Ga 2648).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1317, 471-475 m: 1 ♂ 13.6 mm, 1 ovig. ♀ 12.3 mm; stn 1325, 282-322 m: 1 ♂ 12.8 mm; stn 1327, 370-389 m: 18 ♂ 7.9-15.8 mm, 12 ovig. ♀ 10.7-13.5 mm, 3 ♀ 8.1-12.9 mm; stn 1348, 353-390 m: 1 ♂ 9.7 mm, 1 ovig. ♀ 10.8 mm, 1 ♀ 4.7 mm; stn 1349, 244-252 m: 1 ♂ 9.3 mm; stn 1360, 402-444 m: 6 ♂ 11.5-14.4 mm, 2 ovig. ♀ 10.5 and 11.5 mm; stn 1369, 392-433 m: 2 ♂ 11.3 and 13.2 mm, 1 ovig. ♀ 12.5. — BORDAU 1: stn 1406, 360-380 m: 1 ♂ 11.8 mm, 1 ovig. ♀ 12.0 mm, 1 ♀ 7.2 mm; stn 1448, 410-500 m: 1 ♂ 14.6 mm, 3 ovig. ♀ 11.9-12.4 mm; stn 1467, 417-427 m: 1 ovig. ♀ 11.7 mm, 3 ♀ 5.7-9.6 mm; stn 1468, 478-500 m: 5 ♂ 9.5-14.1 mm, 1 ovig. ♀ 10.4 mm, 1 ♀ 9.1 mm; stn 1504, 427-440 m: 2 ♂ 11.3 and 11.4 mm, 2 ovig. ♀ 11.0 and 12.7 mm; stn 1505, 420-450 m: 1 ♂ 11.9 mm, 1 ovig. ♀ 11.3 mm.

DISTRIBUTION. — New Caledonia and Vanuatu, 360-525 m (Macpherson 1994, 1999); Fiji, 244-500 m.

Munida javieri Macpherson, 1994

Munida javieri Macpherson, 1994: 480, figs 24, 75.

TYPE MATERIAL. — New Caledonia. SMIB 4: stn 42, 24°45.7'S, 168°08.4'E, 320 m: holotype ♂ 12.2 mm (MNHN Ga 2740).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1477, 390-405 m: 1 juv. 4.0 mm; stn 1479, 450-460 m: 1 juv. 4.2 mm.

DISTRIBUTION. — New Caledonia, Matthew and Hunter islands and Chesterfield Islands, 280-440 m (Macpherson 1994); Fiji, 390-460 m.

Munida leagora Macpherson, 1994

Munida leagora Macpherson, 1994: 415, figs 26, 76.

Munida leagora – Macpherson 1996a: 394; 1999: 419.

TYPE MATERIAL. — New Caledonia. BIOCAL: stn 78, 22°16.28'S, 167°14.86'E, 445 m: holotype ♂ 12.0 mm (MNHN Ga 2795).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1355, 302-310 m: 1 ♂ 6.8 mm, 2 ovig. ♀ 6.7 and 7.5 mm; stn 1378, 240-249 m: 1 ♂ 8.6 mm. — BORDAU 1: stn 1448, 410-500 m: 4 ♂ 10.5-10.7 mm, 1 ♀ 11.3 mm; stn 1452, 420-508 m: 3 ♂ 9.0-12.1 mm, 1 ovig. ♀ 10.0 mm. Tonga. BORDAU 2: stn 1584, 439 m: 6 ♂ 5.6-11.0 mm, 1 ♀ 8.4 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands, Chesterfield islands, Vanuatu and Wallis and Futuna area, 265-580 m (Macpherson 1994, 1996a, 1999); Fiji and Tonga, 240-508 m.

Munida leptitis Macpherson, 1994

Munida leptitis Macpherson, 1994: 487, fig. 27.

Munida leptitis – Macpherson 1996a: 394, fig. 14; 1997: 607; 1999: 419.

TYPE MATERIAL. — Loyalty Islands. MUSORSTOM 6 stn 431, 20°22.25'S, 166°10.00'E, 21 m: holotype ♀ 3.4 mm (MNHN Ga 2810).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1411, 390-403 m: 2 ♂ 6.8 and 7.0 mm; stn 1412, 400-407 m: 2 ♂ 4.7 and 6.5 mm, 4 ovig. ♀ 4.1-5.6 mm, 1 ♀ 6.2 mm; stn 1450, 327-420 m: 1 ♂ 7.1 mm, 1 ovig. ♀ 7.1 mm; stn 1451, 400-460 m: 400-460 m: 1 ♂ 6.2 mm; stn 1452, 420-508 m: 2 ♂ 5.2 and 6.9 mm; stn 1453, 414-510 m: 3 ♂ 5.9-7.1 mm; stn 1481, 441-506 m: 2 ovig. ♀ 4.6 and 6.0 mm, 1 ♀ 4.7 mm; stn 1496, 392-407 m: 2 ovig. ♀ 5.0 and 5.3 mm.

Tonga. BORDAU 2: stn 1510, 461-497 m: 7 ♂ 5.8-6.4 mm, 2 ovig. ♀ 6.0 and 6.3 mm, 3 ♀ 4.5-5.6 mm; stn 1543, 427-436 m:

1 ♂ 2.1 mm; stn 1544, 441-443 m: 1 ♂ 4.5 mm, 1 ovig. ♀ 4.6 mm; stn 1545, 444-447 m: 3 ♂ 4.1-6.2 mm, 1 ovig. ♀ 6.0 mm; stn 1548, 476-478 m: 1 ♀ 3.6 mm; stn 1583, 327-360 m: 1 ♂ 5.7 mm; stn 1584, 439 m: 2 ♂ 5.6 and 6.2 mm; stn 1586, 440-487 m: 3 ♂ 4.6-7.4 mm, 1 ♀ 4.1 mm; stn 1593, 436-442 m: 3 ♂ 6.2-7.0 mm; stn 1595, 523-806 m: 1 ovig. ♀ 5.0 mm; stn 1596, 371-437 m: 1 ♂ 5.5 mm; stn 1630, 360 m: 2 ♂ 3.7 and 5.9 mm; stn 1643, 487 m: 2 ♂ 6.4 and 6.7 mm, 1 ♀ 4.5 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands, Vanuatu and Wallis and Futuna area, 21-480 m (Macpherson 1994, 1996a, 1997, 1999); Fiji and Tonga, 327-510 m.

Munida leviantennata Baba, 1988

Munida leviantennata Baba, 1988: 111, figs 41, 42.

Munida leviantennata – Baba 1994: 12, fig. 5. — Macpherson 1994: 491; 1996a: 395; 1997: 608; 1999: 419.

TYPE MATERIAL. — Philippines. *Albatross*: stn 5626, 0°07'30"N, 127°29'00", 485 m: holotype ♀ 18.4 mm (USNM 150338).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1316, 478-491 m: 1 ♂ 10.0 mm; stn 1327, 370-389 m: 3 ♂ 10.8-13.4 mm, 1 ♀ 12.6 mm; stn 1330, 567-699 m: 1 ovig. ♀ 10.8 mm, 1 ♀ 11.4 mm; stn 1360, 402-444 m: 2 ♂ 10.4 and 13.7 mm. — BORDAU 1: stn 1461, 560 m: 1 ♀ 5.7 mm; stn 1462, 556-560 m: 1 ♂ 11.0 mm, 1 ♀ 12.5 mm.

Tonga. BORDAU 2: stn 1511, 384-402 m: 1 ♂ 5.2 mm; stn 1528, 587-592 m: 3 ♂ 12.5-13.2 mm, 1 ♀ 10.1 mm; stn 1539,

558-586 m: 1 ♂ 11.1 mm, 1 ♀ 11.2 mm; stn 1556, 589-591 m: 2 ♂ 9.8 and 12.5 mm; stn 1568, 431 m: 1 ♂ 13.3 mm; stn 1585, 578 m: 1 ovig. ♀ 10.5 mm, 1 ♀ 9.2 mm; stn 1638, 469-520 m: 1 ovig. ♀ 10.3 mm; stn 1640, 564-569 m: 2 ♂ 10.0 and 10.1 mm, 2 ovig. ♀ 7.4 and 7.6 mm, 5 ♀ 7.5 and 9.8 mm; stn 1641, 395 m: 1 ♂ 11.3 mm, 1 ♀ 9.6 mm; stn 1642, 532 m: 1 ♀ 6.2 mm; stn 1644, 501 m: 1 ♂ 7.9 mm.

DISTRIBUTION. — Philippines, Indonesia, eastern Australia, New Caledonia, Chesterfield Islands, Vanuatu and Wallis islands, 300-1250 m (Baba 1988, 1994; Macpherson 1994, 1996a, 1997, 1999); Fiji and Tonga, 370-699 m.

Munida limatula n. sp.

Fig. 7

TYPE MATERIAL. — Tonga (holotype and paratypes). BORDAU 2: stn 1609, 385-405 m: holotype ovig. ♀ 6.1 mm (MNHN Ga 4562), 8 ♂ 5.1-6.2 mm, 16 ovig. ♀ 4.5-7.1 mm, 2 ♀ 4.6 and 6.4 mm; stn 1537, 391-421 m: 2 ♂ 4.1 and 4.5 mm; stn 1545, 444-447 m: 1 ♂ 5.7 mm, 1 ovig. ♀ 5.3 mm; stn 1631, 407-443 m: 1 ♂ 5.6 mm, 1 ♀ 5.4 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Males 4.1-6.2 mm, females 4.5-7.1 mm, ovigerous females from 4.5 mm. Carapace as long as wide. Transverse ridges mostly interrupted, with dense, very short, non-iridescent setae and few long, iridescent setae. Few scales and secondary striae between main striae. Scales on intestinal region absent. Gastric region with 6 pairs of epigastric spines. No other spines on carapace surface. Frontal margins transverse. Lateral margins slightly convex. Anterolateral spine well developed, at anterolateral angle, not reaching level of sinus between rostrum and supraocular spines. Two additional marginal spines before cervical groove, clearly smaller than preceding one. Branchial margins with 5 spines. Rostrum spiniform, about 2/3 length of remaining carapace, slightly sinuous and upwardly directed. Supraocular spines clearly not reaching midlength of rostrum and end of corneas, parallel, directed upwards (Fig. 7A).

Thoracic sternites smooth, without striae, granules or carinae. Anterior part of fourth sternite slightly narrower than third. Transverse ridges between fifth, sixth and seventh sternites obtuse, weakly granulated (Fig. 7B).

Second abdominal somite unarmed. Second to fourth somites each with 1 or 2 transverse stria.

Eyes large, maximum corneal diameter about half distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/4 carapace length, moderately elongate, clearly not reaching end of corneae, with 2 subequal distal spines; 2 spines on lateral margin, proximal one short, located at midlength of segment, distal one long, clearly overreaching distolateral spine (Fig. 7C).

First segment of antennal peduncle with 1 distal spine on mesial margin overreaching end of second segment; second segment with 2 distal spines, mesial spine slightly longer than lateral spine, slightly overreaching penultimate segment, although not overreaching antennal peduncle; penultimate segment unarmed (Fig. 7C).

Ischium of third maxilliped about 1.5 x length of merus (measured along dorsal margin), with distoventral spine. Merus of third maxilliped with 2 well developed spines on flexor margin, distal smaller; extensor margin with small distal spine (Fig. 7D).

Chelipeds subequal, squamous, with numerous short uniramous setae that are densest on mesial borders of articles. Palm as long as fingers. Merus armed with a few spines, strongest spine on distal border short, not overreaching proximal third of carpus. Carpus with a few spines on dorsal side and others scattered on mesial and ventral sides. Palm with several spines scattered on mesial and dorsal sides and 1 row of lateral spines, continuing onto along fixed finger. Fingers distally curving and crossing, ending in a sharp point; movable with 1 basal spine on mesial border; cutting edges with small teeth of different sizes (Fig. 7E).

Second pereopod about twice carapace length; merus shorter than carapace, about 5 x as long as high, about 2.5 x carpus length and 1.5 x as long as propodus; propodus 5.5 x as long as high, about 1.5 x dactylus length (Fig. 7F). Merus with a few spines along dorsal border, increasing in size distally, ventral margin with 1 long distal spine and few projecting scales. Carpus with few small dorsal spines and 1 distodorsal and distoventral spines. Propodus with 10 or 11 movable ventral spines. Dactylus with dorsal margin slightly convex on proximal half, slightly curving distally, with 8 or 9 movable spinules along entire ventral margin (Fig. 7G). Third pereopod similar to second; fourth pereopod shorter than second and third. Merus of fourth pereopod 2/3 length of second pereopod.

DISTRIBUTION. — Tonga, 384-447 m.

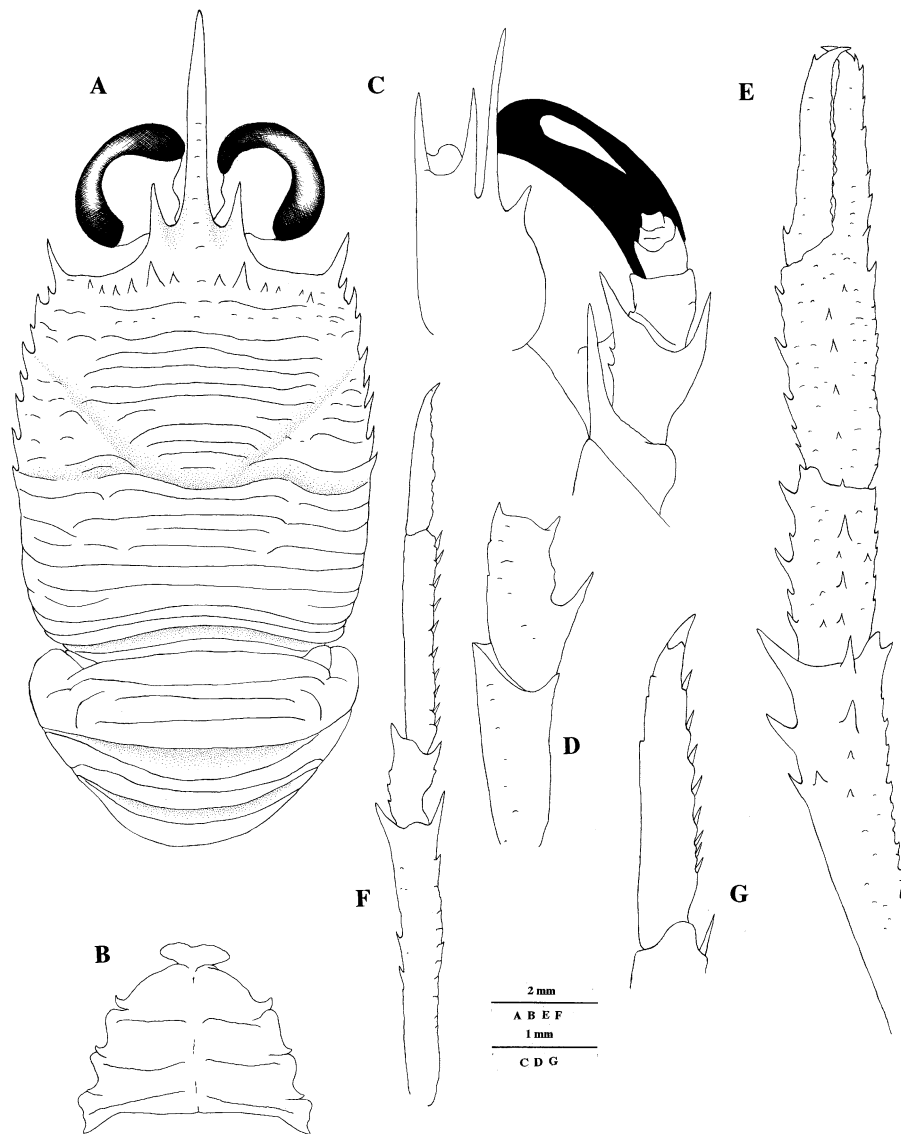


FIG. 7. *Munida limatula* n. sp., holotype, ovig. female, 6.1 mm, Tonga, 385-405 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, right first walking leg, lateral view; G, dactylus of right first walking leg, lateral view.

FIG. 7. *Munida limatula* n. sp., holotype, femelle ovigère, 6,1 mm, Tonga, 385-405 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncules antennaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélopède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

REMARKS. — *Munida limatula* belongs to the group of species having five spines on the lateral margins of the carapace behind the cervical groove, the carapace surface armed only with epigastric spines, large eyes, an unarmed second abdominal somite, the lateral parts of the posterior thoracic sternites without granules or carinae, a spiniform rostrum, the distal spines of the basal antennular segment subequal, and the dactylus of the walking legs bearing movable spinules along the entire ventral border. The new species is closely similar to *M. runcinata* Macpherson, 1994, but the two species are clearly distinguished by several constant characters:

- The rostrum is longer in the new species than in *M. runcinata*;
- The distomesial spine of the second segment of the antennal peduncle overreaches the antennal peduncle in *M. runcinata*, but only slightly exceeds the end of the third segment in the new species;
- The fixed finger of the chelipeds has a row of spines along the lateral border in *M. limatula*, but is spineless in *M. runcinata*;
- The terminal part of the ventral margin of the dactylus of the walking legs is unarmed in *M. runcinata*, whereas spinules are present on the entire margin in the new species.

ETYMOLOGY. — From the Latin *limatulus*, polished, in reference to the smooth surface of the carapace, which is only armed with epigastric spines.

Munida microps Alcock, 1894

Munida microps Alcock, 1894: 326.

Munida microps – Alcock 1901: 240. — Baba 1988: 122 (references and synonymy). — Macpherson 1994: 496, fig. 32; 1996a: 397; 1997: 608; 1999: 421. — Macpherson & de Saint Laurent 2002: 471.

TYPE MATERIAL. — Andaman Sea. *Investigator*: 878-1170 m: syntypes (supposedly deposited at Zoological Survey of India, Calcutta - not seen).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1457, 942-976 m: 1 ♂ 8.7 mm, 1 ♀ 13.2 mm; stn 1458, 1216-1226 m: 1 ♀ 22.5 mm. Tonga. BORDAU 2: stn 1565, 869-880 m: 2 ♂ 5.1 and 9.2 mm; stn 1594, 971-991 m: 2 ♂ 11.1 and 19.7 mm, 1 ovig. ♀ 13.5 mm, 2 ♀ 10.6 and 10.9 mm.

DISTRIBUTION. — Arabian Sea, Andaman Sea, Philippines, Indonesia, southeastern Australia, New Caledonia, Chesterfield Islands, Vanuatu, Wallis and Futuna islands, 495-1260 m (Baba 1988; Macpherson 1994, 1996a, 1997, 1999); Fiji and Tonga, 869-1226 m.

REMARKS. — As pointed out in my previous papers, a revision of the material from different localities is needed to confirm the specific identity of the specimens from different areas.

Munida militaris Henderson, 1885

Munida militaris Henderson, 1885: 410.

Munida militaris – Henderson 1888: 137 (in part), pl. 14, figs 2a, b, 5a, b. — Baba & Macpherson, 1991: 539, fig. 1 (references and synonymy). — Macpherson, 1994: 496; 1996a: 399, fig. 16; 1999: 421.

TYPE MATERIAL. — Fiji. *Challenger*: stn 173, 19°09'35"S, 179°41'50"E, 576 m: lectotype (Baba & Macpherson 1991) ♂ 21.9 mm (BMNH).

OTHER MATERIAL EXAMINED. — MUSORSTOM 10: stn 1344, 588-610 m: 1 ovig. ♀ 15.8 mm. BORDAU 1: stn 1456, 650-696 m: 1 ♂ 18.6 mm; stn 1484, 680-723 m: 1 ♂ 14.7 mm; stn 1486, 395-540 m: 1 ♀ 10.3 mm. ovig. ♀ 13.5 mm; stn 1557, 558 m: 1 ♂ 12.2 mm; stn 1585, 578 m: 2 ♂ 6.1 and 11.6 mm, 1 ovig. ♀ 10.0 mm, 2 ♀ 7.1 and 8.8 mm; stn 1589, 281 m: 1 ♂ 18.5 mm; stn 1598, 596-620 m: 1 ♂ 11.1 mm, 5 ovig. ♀ 9.5-11.8 mm, 1 ♀ 9.3 mm. Tonga. BORDAU 2: stn 1553, 650-676 m: 1 ♂ 14.9 mm, 1

DISTRIBUTION. — Indonesia, New Caledonia, Vanuatu, Fiji (type locality) and Wallis and Futuna area, 183-1280 m (Henderson 1888; Baba & Macpherson 1991; Macpherson 1994, 1996a, 1999); Fiji and Tonga, 281 and 723 m.

Munida moliae Macpherson, 1994

Munida moliae Macpherson, 1994: 499, fig. 33.

Munida moliae – Macpherson 1996a: 400.

TYPE MATERIAL. — New Caledonia. MUSORSTOM 4: stn 156, 18°54'S, 163°18.8'E, 530 m: holotype ♂ 13.6 mm (MNHN Ga 2863).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1395, 423-500 m: 3 ♂ 12.3-18.2 mm, 1 ovig. ♀ 12.2, 3 ♀ 11.2-13.2 mm; stn 1416, 441-450 m: 1 ♀ 13.4 mm; stn 1417, 353 m: 1 ovig. ♀ 7.3 mm; stn 1452, 420-508 m: 2 ♀ 10.2 and 14.9 mm. Tonga. BORDAU 2: stn 1541, 319-333 m: 1 ovig. ♀ 9.6 mm; stn 1544, 441-443 m: 1 ovig. ♀ 10.2 mm; stn 1591, 351-360 m: 1 ♂ 4.0 mm; stn 1602, 263-320 m: 2 ♂ 6.8 and 8.8 mm, 1 ovig. ♀ 7.7 mm, 1 ♀ 6.2 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands and Wallis and Futuna area, 335-575 m (Macpherson 1994, 1996a); Fiji and Tonga, 263-508 m.

Munida notata Macpherson, 1994

Munida notata Macpherson, 1994: 500, figs 34, 78.

Munida notata – Macpherson 1996a: 402; 1999: 421.

TYPE MATERIAL. — Loyalty Islands. MUSORSTOM: 6 stn 399, 20°41.80'S, 167°00.20'E, 282 m: holotype ovig. ♀ 9.4 mm (MNHN Ga 2882).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1373, 238-244 m: 1 ♂ 10.4 mm, 1 ♀ ovig. ♀ 10.1 mm; stn 1378, 240-249 m: 1 ♂ 8.8 mm, 2 ovig. ♀ 8.5 and 8.9 mm; stn 1385, 227-284 m: 10 ♂ 6.5-9.8 mm, 3 ovig. ♀ 6.1 and 8.2 mm, 1 ♀ 5.9 mm; stn 1387, 229-370 m: 3 ♂ 8.5-9.0 mm; stn 1389, 241-417 m: 7 ♂ 6.0-9.8 mm, 6 ovig. ♀ 5.5-9.8, 1 ♀ 5.4 mm. — BORDAU 1: stn 1392, 370 m: 2 ♂ 10.4 and 12.2 mm, 2 ovig. ♀ 9.2 and 9.3 mm, 2 ♀ 8.8 and 10.0 mm; stn 1445, 350-365 m: 1 ♂ 5.2 mm, 2 ovig. ♀ 6.2 and 6.3 mm, 1 ♀ 6.0 mm; stn 1446, 350-367 m: 1 ♂ 8.0 mm; stn 1454, 300-370 m: 4 ♂ 7.0-8.9 mm, 1 ovig. ♀ 9.9 mm, 2 ♀ 5.9 and 7.1 mm; stn 1465, 290-300 m: 1 ♂ 8.9 mm, 1 ♀ 6.3 mm; stn 1469, 314-377 m: 1 ♂ 8.1 mm; stn 1470, 316-323 m: 2 ♂ 9.2 and 9.4 mm, 7 ovig. ♀ 8.1-10.8 mm, 2 ♀ 7.6 and 8.2 mm; stn 1474, 316-340 m: 3 ♂ 7.2-10.8 mm, 5 ovig. ♀ 7.3-9.2 mm, 2 ♀ 7.1 and 7.6 mm; stn 1475, 321-424 m: 1 ovig. ♀ 6.0 mm; stn 1497, 335-350 m: 6 ♂ 7.1-8.9 mm, 4 ovig. ♀ 6.8-8.6 mm; stn 1499, 389-400 m: 1 ♀ 6.6 mm; stn 1501, 350-357 m: 3 ♀ 7.5-8.0 mm, 2 ovig. ♀ 8.3 and 9.5 mm, 1 ♀ 7.4 mm. Tonga. BORDAU 2: stn 1523, 300-302 m: 1 ♂ 6.0 mm, 1 ovig. ♀ 6.6 mm; stn 1561, 383-393 m: 1 ♂ 8.0 mm, 1 ovig. ♀ 8.2 mm; stn 1562, 417-424 m: 2 ♂ 6.7 and 8.1 mm, 1 ovig. ♀ 7.8 mm, 3 ♀ 5.5-6.4 mm; stn 1563, 362-388 m: 4 ♂ 8.6-9.6 mm; stn 1564, 371-387 m: 1 ♂ 7.9 mm, 1 ♀ 8.1 mm; stn 1583, 327-360 m: 2 ♂ 4.6 and 7.2 m, 1 ovig. ♀ 7.3 mm, 1 ♀ 4.8 mm; stn 1584, 439 m: 1 ♂ 7.8 mm; stn 1591, 351-360 m: 1 ♂ 4.0 mm; stn 1595, 523-806 m: 2 ♂ 7.2 and 7.5 mm; stn 1602, 263-320 m: 2 ♂ 6.8 and 8.8 mm, 1 ovig. ♀ 7.7 mm, 1 ♀ 6.2 mm; stn 1605, 441 m: 1 ♀ 4.4 mm; stn 1607, 356-367 m: 1 ♀ 4.9 mm; stn 1613, 331-352 m: 1 ♀ 6.4 mm; stn 1626, 220-249 m: 2 ♂ 7.3 and 9.2 mm; stn 1630, 360 m: 1 ♂ 7.2 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands, Chesterfield Islands, Vanuatu and Wallis and Futuna islands, 59-850 m (Macpherson 1994, 1996a, 1999); Fiji and Tonga, 570-656 m.

REMARKS. — Some specimens have the distomesial spine of the basal segment of the antennal peduncle shorter than in the type material, and others have the chelipeds longer than in the type material. These differences have been considered here as variations, although complementary studies using molecular data are recommended.

Munida offella Macpherson, 1996

Munida offella Macpherson, 1996a: 402, fig. 5.

TYPE MATERIAL. — Futuna Island. MUSORSTOM 7: stn 508, 14°19.5'S, 178°04.5'W, 245-440 m: holotype ovig. ♀ 4.6 mm (MNHN Ga 3648).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1334, 251 m: 1 ♂ 4.9 mm, 1 ovig. ♀ 5.3 mm. — BORDAU 1: stn 1494, 240-319 m: 1 ♂ 3.4 mm, 1 ovig. ♀ 5.5 mm; stn 1504, 427-440 m: 1 ♂ 4.7 mm; stn 1507, 294-300 m: 1 ♂ 4.6 mm. Tonga. BORDAU 2: stn 1575, 232-295 m: 4 ♂ 4.4-4.8 mm, 1 ♀ 3.3 mm; stn 1576, 253-263 m: 1 ♂ 3.8 mm, 1 ♀ 4.7 mm; stn 1577, 257-265 m: 1 ♂ 3.7 mm, 1 ovig. ♀ 4.7 mm; stn 1589, 281 m: 1 juv. 2.8 mm.

DISTRIBUTION. — Futuna Island and Combe Bank, 210-500 m (Macpherson 1996a); Fiji and Tonga, 232-440 m.

Munida olivarae Macpherson, 1994

Munida olivarae Macpherson, 1994: 505, figs 36, 80.

TYPE MATERIAL. — Loyalty Islands. MUSORSTOM 6: stn 436, 20°20.27'S, 166°07.49'E, 33 m: holotype ♂ 6.3 mm (MNHN Ga 2919).

OTHER MATERIAL EXAMINED. — Tonga. BORDAU 2: stn 1582, 79-82 m: 6 ♂ 4.6-5.7 mm, 7 ovig. ♀ 4.5-5.2 mm, 5 ♀ 3.5-5.5 mm.

DISTRIBUTION. — New Caledonia, Matthew and Hunter islands, Loyalty Islands and Wallis Island, 6-190 m (Macpherson 1994); Tonga, 79-82 m.

Munida ommata n. sp.

Fig. 8

Munida rufiantennulata – Macpherson 1994: 523 (in part not *M. rufiantennulata* Baba, 1969), figs 46, 83; 1997: 610 (not Baba, 1969).

TYPE MATERIAL. — Chesterfield Islands (holotype and paratypes). MUSORSTOM 5: stn 301, 480-610 m: holotype ♂ 9.0 mm (MNHN Ga 4563), 1 ♂ 5.0 mm; stn 300, 450 m: 1 ♀ 5.6 mm.

Loyalty Islands (paratypes). MUSORSTOM 6: stn 391, 390 m: 1 ovig. ♀ 7.3 mm.

New Caledonia. BATHUS 3: stn 817, 28.11.1993, 23°42'S, 168°16'E, 405-410 m: 1 ♂ 3.5 mm, 1 ovig. ♀ 5.9 mm. — BATHUS 4: stn 943, 9.08.1994, 20°12'S, 164°31'E, 316-347 m: 2 ♂ 3.8 and 4.0 mm, 1 ♀ 4.2 mm.

Indonesia (paratypes). KARUBAR: stn 18, 205-212 m: 3 ♂ 4.3-9.4 mm, 7 ♀ 3.0-7.7 mm.

Fiji (paratypes). BORDAU 1: stn 1454, 300-370 m: 1 ♀ 5.0 mm; stn 1475, 321-424 m: 1 ♂ 5.8 mm; stn 1476, 310-420 m: 1 ♂ 5.9 mm; stn 1481, 441-506 m: 1 ♀ 5.3 mm.

Tonga (paratypes). BORDAU 2: stn 1591, 351-360 m: 1 ♂ 5.8 mm; stn 1605, 441 m: 1 ovig. ♀ 6.5 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Males 3.5-9.4 mm, females 3.0-7.7 mm, ovigerous females from 5.9 mm. Carapace slightly longer than wide. Transverse ridges mostly interrupted, with short and long iridescent and non-iridescent setae. Few scales and secondary striae between main striae. Few small scales on intestinal region. Gastric region with 3-5 pairs of epigastric spines. Usually 1 parahepatic, 1 anterobranchial and 1 postcervical spine on each side. Frontal margins slightly oblique,

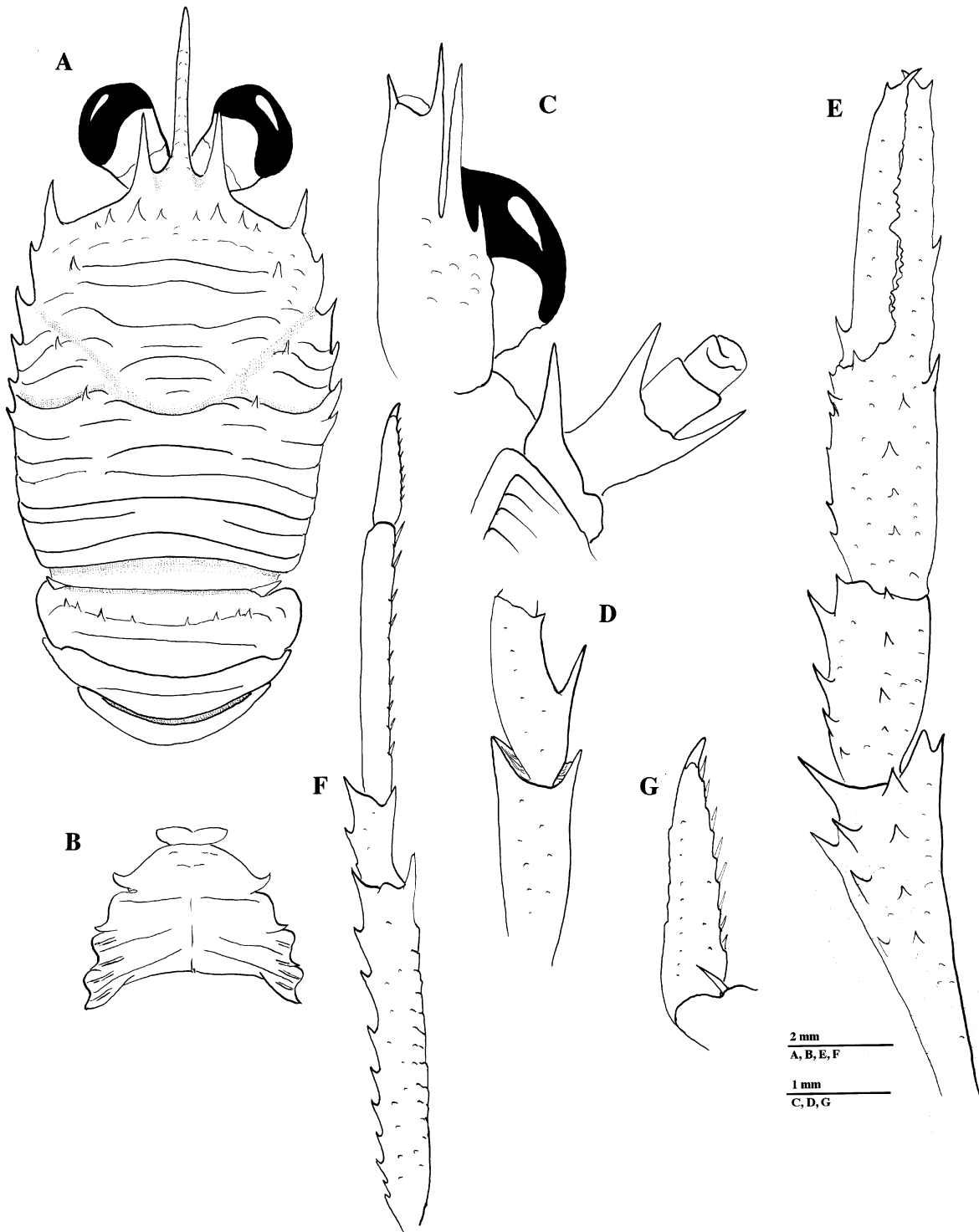


FIG. 8. *Munida ommata* n. sp., paratype, male, 5.8 mm, Tonga, 351-360 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, right first walking leg, lateral view; G, dactylus of right first walking leg, lateral view.

FIG. 8. *Munida ommata* n. sp., paratype, mâle, 5,8 mm, Tonga, 351-360 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncules antennaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélopède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

steeper in younger individuals. Lateral margins slightly convex. Anterolateral spine long, at anterolateral angle, reaching level of sinus between rostrum and supraocular spines. Second marginal spine before cervical groove 3 or 4 x smaller than preceding one. Branchial margins with 4 spines. Rostrum spiniform, about half as long as remaining carapace, straight and horizontal. Supraocular spines reaching midlength of rostrum and not reaching end of corneae, parallel, slightly directed upwards (Fig. 8A).

Lateral surfaces of sixth and seventh thoracic sternites with distinct carinae. Fourth sternites with few arcuate striae. Anterior part of fourth sternite slightly narrower than third (Fig. 8B).

Second abdominal somite with row of 6-8 spines on anterior ridge. Second and third somites each with 1 transverse stria.

Eyes moderately large, maximum corneal diameter about 1/3 distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/4 carapace length, elongate, overreaching end of corneae, with 2 distal spines, mesial spine shorter than lateral; 2 spines on lateral margin, proximal spine short, located at midlength of segment, distal spine long, not reaching end of distal spines (Fig. 8C).

First segment of antennal peduncle with 1 long distal spine on mesial margin reaching end of second segment; second segment with 2 long distal spines, mesial spine as long as lateral spine, reaching or slightly exceeding antennal peduncle; penultimate segment unarmed (Fig. 8C).

Ischium of third maxilliped about 1.5 x length of merus (measured along dorsal margin), with distoventral spine. Merus of third maxilliped with 2 well developed spines on flexor margin, distal spine smaller; extensor margin unarmed (Fig. 8D).

Chelipeds subequal in length, squamous, with numerous uniramous setae, which are densest on mesial borders of articles. Palm slightly shorter than fingers. Merus armed with a few spines, strongest spine on distal border short, not overreaching proximal third of carpus. Carpus with several spines on dorsal and mesial sides. Palm with several spines scattered on mesial and dorsal sides and a few spines on lateral border. Fixed finger with 1 or 2 well-developed spines on proximal half and 1 small distal spine, movable finger only with basal and distal spines; fingers distally curving and crossing, ending in a sharp point (Fig. 8E).

Second pereiopod about twice carapace length; merus slightly shorter than carapace, about 5.5 x as long as high, about 3 x carpus length and 1.3 x as long as propodus; propodus about 8 x as long as high, about twice dactylus length (Fig. 8F). Merus with well developed spines on dorsal border, increasing in size distally, ventral margin with few spines and 1 long distal spine. Carpus with several dorsal spines and 1 distoventral spine. Propodus with 7 or 8 movable ventral spines. Dactylus slightly curving distally, with 8 or 9 movable spinules along entire ventral margin (Fig. 8G). Third pereiopod similar to second; fourth pereiopod shorter than second and third. Merus of fourth pereiopod 2/3 length of second pereiopod. Ground colour of carapace orange-yellow; anterobranchial regions with red-orange spot with whitish border; whitish transverse band on posterior part of carapace; rostrum and supraocular spines orange. Chelipeds with distal part of articles red; proximal portion of fingers white. Walking legs with reddish and orange bands.

DISTRIBUTION. — Indonesia, New Caledonia, Chesterfield Islands, Loyalty Islands, Fiji and Tonga, 205-610 m.

REMARKS. — *Munida ommata* belongs to the group of species having three or four spines on the lateral margins of the carapace behind the cervical groove, distinct carinae on the lateral parts of the sixth and seventh thoracic sternites, and moderately large eyes and spines on the anterior ridge of the second abdominal somite. The new species is closely similar to *M. rufiantennulata* Baba, 1969, but the two species are easily distinguished by several constant characters:

- The branchial margins have three spines in *M. rufiantennulata*, instead of four in *M. ommata*;
- The lateral border of the fixed finger is unarmed (except for distal spines) in *M. rufiantennulata*, whereas in the new species this border always has one or two well developed proximal spines;
- *M. ommata* has one red-orange spot with a whitish border on each anterobranchial region, but these spots are absent in *M. rufiantennulata*.

The new species is also close to *M. ocellata* Macpherson & de Saint Laurent, 1991 from French Polynesia, the latter differing, however, in that the carapace is yellow-orange with light-purple bands.

ETYMOLOGY. — From the Greek *omma* (spot), in reference to the spots on the anterior branchial regions.

Munida pagesi Macpherson, 1994

Munida pagesi Macpherson, 1994: 415, figs 2, 3d, 4a.

Munida pagesi - Macpherson, 1999: 422.

TYPE MATERIAL. — New Caledonia. MUSORSTOM 4: stn 242, 22°05.8'S, 167°10.3'E, 500-550 m: holotype ovig. ♀ 18.5 mm (MNHN Ga 2925).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1493, 429-440 m: 1 ♂ 17.8 mm.

Tonga. BORDAU 2: stn 1638, 469-520 m: 1 ♀ 17.2 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands and Vanuatu, 250-600 m (Macpherson 1994, 1999); Fiji and Tonga, 429-520 m.

Munida parca Macpherson, 1996

Munida parca Macpherson, 1996b: 424, fig. 1.

TYPE MATERIAL. — New Caledonia. BATHUS 1: stn 705, 21°02'S, 165°37'E, 350-400 m: holotype ovig. ♀ 4.3 mm (MNHN Ga 3779).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1348, 353-390 m: 1 ♂ 5.9 mm. — BORDAU 1: stn 1450, 327-420 m: 1 ♀ 4.6 mm.

DISTRIBUTION. — New Caledonia, 350-440 m (Macpherson 1996b); Fiji, 327-420 m.

Munida pavonis n. sp.

Fig. 9

TYPE MATERIAL. — Tonga (holotype and paratype). BORDAU 2: stn 1522, 229-232 m: holotype ♂ 5.5 mm (MNHN Ga 4564), 1 ♀ 5.2 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Male 5.5 mm, female 5.2 mm. Carapace longer than wide. Transverse ridges mostly interrupted, with very short, dense, non-iridescent setae and few long, iridescent setae. Few scales and secondary striae between main striae. Scales on intestinal region absent. Gastric region with 5 pairs of epigastric spines. One parahepatic and 1 postcervical spine on each side. Frontal margins slightly oblique. Lateral margins straight. Anterolateral spine short, at anterolateral angle, not reaching level of sinus between rostrum and supraocular spines. Second marginal spine before cervical groove half size of preceding one. Branchial margins with 5 spines. Rostrum spiniform, half as long as remaining carapace, straight and

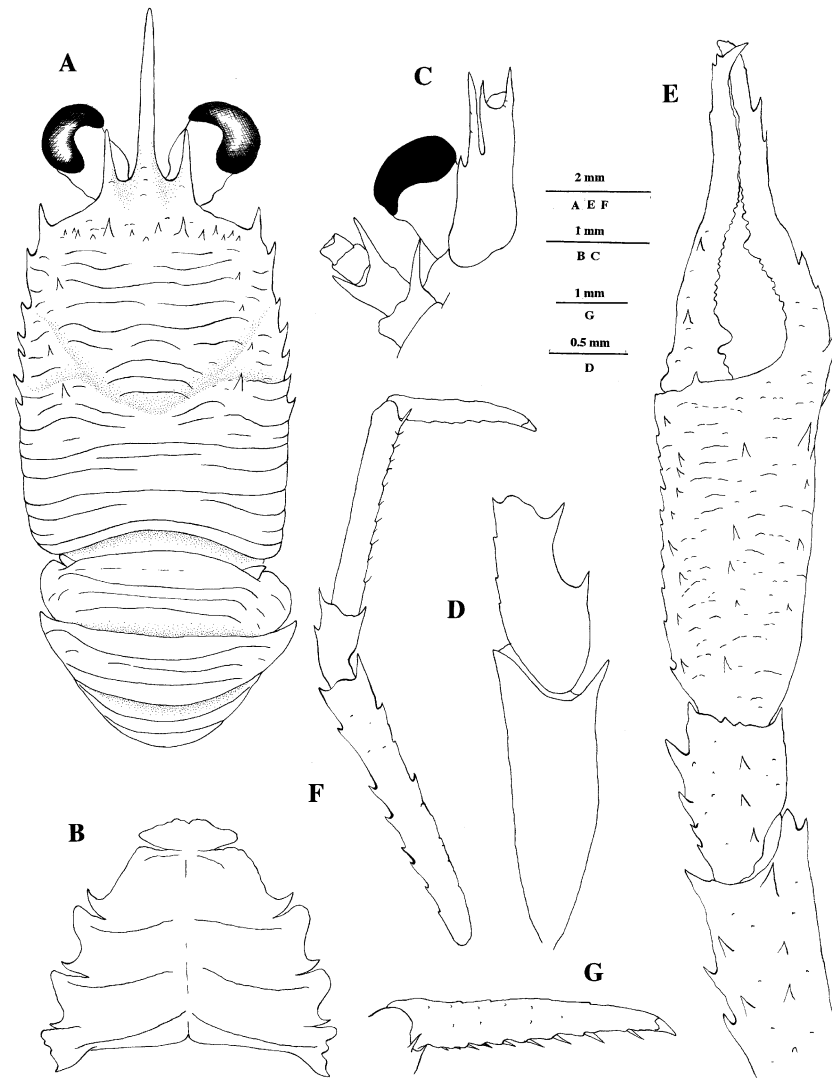


FIG. 9. *Munida pavonis* n. sp., holotype, male, 5.5 mm, Tonga, 229-232 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, right first walking leg, lateral view; G, dactylus of right first walking leg, lateral view.

FIG. 9. *Munida pavonis* n. sp., holotype, mâle, 5,5 mm, Tonga, 229-232 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncules antennulaires et antennaires ; D, troisième maxillipède droit, vue latérale ; E, chélopède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

slightly upwardly directed. Supraocular spines reaching midlength of rostrum and not overreaching end of corneas, parallel, slightly upwardly directed (Fig. 9A).

Thoracic sternites smooth, without striae, granules or carinae. Anterior part of fourth sternite as wide as third, slightly concave (Fig. 9B).

Second abdominal somite unarmed. Second to fourth somites each with 2 transverse striae.

Eyes moderately large, maximum corneal diameter about 1/3 distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/4 carapace length, elongate, slightly overreaching corneas, with 2 distal spines, mesial spine slightly longer than lateral spine; 2 spines on lateral margin, proximal spine short, located at midlength of segment, distal spine long, slightly overreaching distolateral spine (Fig. 9C).

First segment of antennal peduncle with 1 distal spine on mesial margin nearly reaching end of second segment; second segment with 2 distal spines, mesial spine longer than lateral spine, reaching end of antennal peduncle; penultimate segment unarmed (Fig. 9C).

Ischium of third maxilliped about twice length of merus (measured along dorsal margin), with distoventral spine. Merus of third maxilliped with 2 well developed spines on flexor margin, distal smaller; extensor margin with small distal spine (Fig. 9D).

Chelipeds subequal, squamous, with numerous short uniramous and plumose setae, some of them iridescent, densest on mesial borders of articles. Palm as long as fingers. Merus armed with a few spines, strongest spine on distal border short, not overreaching proximal quarter of carpus. Carpus with several spines on dorsal side and several spines scattered on mesial and ventral sides. Palm with several spines scattered on mesial and dorsal sides and 1 row of lateral spines, continuing onto along fixed finger. Fingers distally curving and crossing, ending in a sharp point; movable finger with a few spines along proximal half of mesial border; cutting edges with small teeth of different sizes (Fig. 9E).

Second pereiopod about twice carapace length; merus slightly shorter than carapace, about 6 x as long as high, about 5 x carpus length and 1.5 x as long as propodus; propodus 7 x as long as high, about 1.5 x dactylus length (Fig. 9F). Merus with small spines on dorsal border, increasing in size distally, ventral margin with few spines and 1 long distal spine. Carpus with few dorsal spines and 1 distoventral spine. Propodus with 10 or 11 movable ventral spines. Dactylus slightly curving distally, with 6-8 movable spinules along entire ventral margin (Fig. 9G). Third pereiopod similar to second; fourth pereiopod shorter than second and third. Merus of fourth pereiopod 3/4 length of second pereiopod.

DISTRIBUTION. — Tonga, 229-232 m.

REMARKS. — The new species resembles *M. notata* Macpherson, 1994. Both species have five spines on the branchial margin, the second abdominal segment unarmed, the intestinal region without striae, the thoracic sternites without striae, the distolateral spine of the basal antennular peduncle shorter than the distomesial spine, and the extensor border of the merus of the third maxilliped armed with a distal spine. However, they can be distinguished by the following characters:

- The first anterolateral spine of the carapace is shorter in the new species than in *M. notata*;
- The distomesial spines of the basal and second antennal segments are markedly longer in *M. notata* than in the new species;
- The distal third of the ventral margin of the dactylus of the walking legs is unarmed in *M. notata*, whereas the spinules are present in the entire border in *M. pavonis*.

ETYMOLOGY. — The name is from the Latin *pavonis* (peacock), and refers to one of the southern hemisphere constellations (Pavo).

Munida pumila n. sp.

Fig. 10

TYPE MATERIAL. — Tonga (holotype and paratypes). BORDAU 2: stn 1565, 869-880 m: holotype 1 ovig. ♀ 3.4 mm (MNHN Ga 4565); stn 1548, 476-478 m: 1 ♂ 2.7 mm, 1 ovig. ♀ 2.8 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Carapace slightly longer than wide. Transverse ridges mostly interrupted, with few, very short, non-iridescent setae. Main transverse striae on gastric area and posterior part of carapace interrupted. Few scales and secondary striae between main striae. No scales on intestinal region. Gastric region with 4 pairs of epigastric spines. One

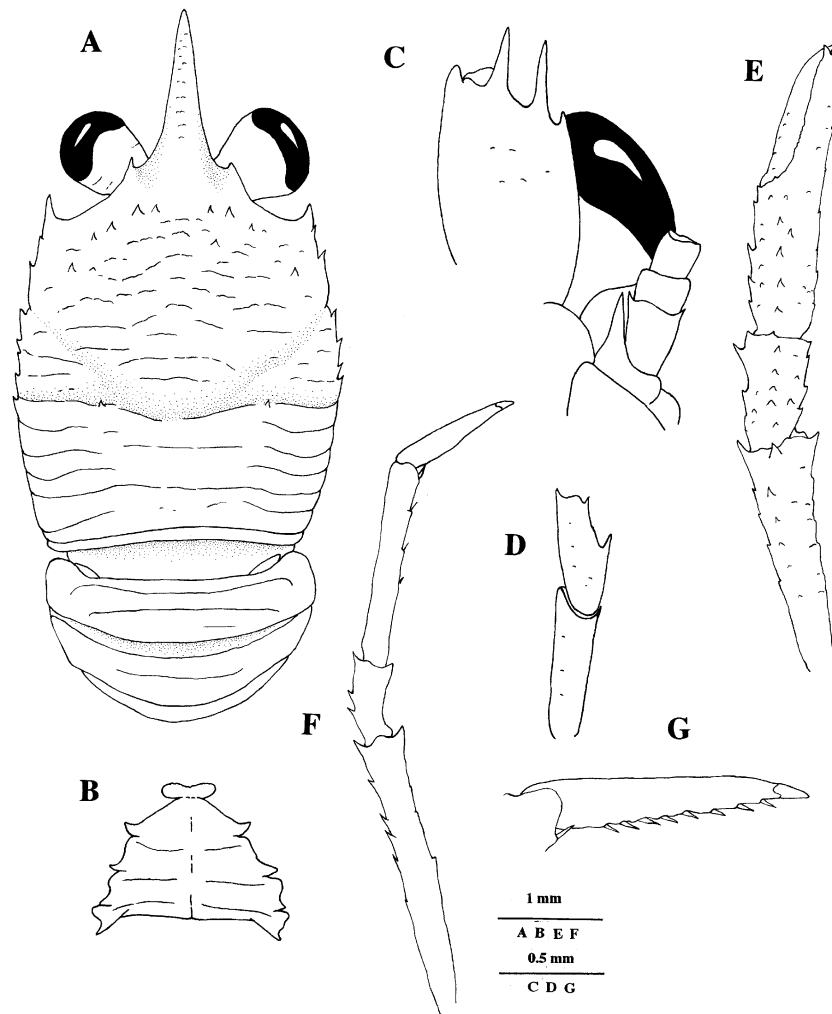


FIG. 10. *Munida pumila* n. sp., holotype, ovig. female, 3.4 mm, Tonga, 869-880 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, right first walking leg, lateral view; G, dactylus of right first walking leg, lateral view.

FIG. 10. *Munida pumila* n. sp., holotype, femelle ovigère, 3,4 mm, Tonga, 869-880 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncules antennaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélimpède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

parahepatic and 1 postcervical spine on each side. Frontal margins oblique. Lateral margins moderately convex. Anterolateral spine short, at anterolateral angle, not reaching level of sinus between rostrum and supraocular spines; 2 small marginal spines before cervical groove. Branchial margins with 5 small spines. Rostrum slightly triangular, half as long as remaining carapace, slightly carinated dorsally, horizontal. Supraocular spines very short, clearly not reaching midlength of rostrum and end of corneae (Fig. 10A).

Thoracic sternites smooth, without striae, granules or carinae. Anterior part of fourth sternite slightly narrower than third (Fig. 10B).

Second abdominal somite unarmed. Second and third somites each with 1 transverse stria. Fourth abdominal somite without stria.

Eyes moderately large, maximum corneal diameter about 1/3 distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/3 carapace length, slightly overreaching corneae, with 2 distal spines, mesial spine clearly shorter than lateral spine; 2 spines on lateral margin, proximal spine short, located at midlength of segment, distal spine long, not overreaching distolateral spine (Fig. 10C).

First segment of antennal peduncle with 1 distal spine on mesial margin reaching end of second segment; second segment with 2 small subequal distal spines, clearly not reaching end of penultimate segment; penultimate segment unarmed (Fig. 10C).

Ischium of third maxilliped about 1.5 x length of merus (measured along dorsal margin), with distoventral spine. Merus of third maxilliped with 2 well developed spines on flexor margin, distal smaller; extensor margin with small distal spine (Fig. 10D).

Chelipeds subequal, moderately squamous, with a few iridescent uniramous setae on mesial borders of articles. Palm as long as fingers. Merus armed with a few spines, strongest spine on distal border short, not overreaching proximal quarter of carpus. Carpus with several spines on dorsal side and several spines scattered on mesial and ventral sides. Palm with several spines scattered on mesial and dorsal sides. Fingers unarmed, except small distal spines, distally curving and crossing, ending in a sharp point (Fig. 10E).

Second pereopod about twice carapace length; merus shorter than carapace, about 6 x as long as high, about 3 x carpus length and 1.5 x as long as propodus; propodus 6.5 x as long as high, about 1.5 x dactylus length (Fig. 10F). Merus with small spines on dorsal border, increasing in size distally, ventral margin with 1 long distal spine. Carpus with few dorsal spines and 1 distoventral spine. Propodus with 5 or 6 movable ventral spines. Dactylus slightly curving distally, with 5-8 movable spinules along entire ventral margin (Fig. 10G). Third pereopod similar to second; fourth pereopod shorter than second and third. Merus of fourth pereopod 2/3 length of second pereopod.

DISTRIBUTION. — Tonga, 476-880 m.

REMARKS. — The new species is closely similar to *M. alonsoi* Macpherson, 1994 from New Caledonia and Chesterfield Islands. Both species have five spines on the lateral margins of the carapace behind the cervical groove, moderately large eyes, the second abdominal somite unarmed, the lateral parts of the posterior thoracic sternites without granules or carinae, the distolateral spine of the basal antennular segment clearly longer than the distomesial, and the dactylus of the walking legs bearing movable spinules along the entire ventral border.

The two species may distinguished as follows:

- The frontal margins are more oblique in *M. pumila* than in *M. alonsoi*;
- The rostrum is prominently dorsally carinated in *M. alonsoi*, whereas the carina is almost obsolete in the new species;
- The supraocular spines are very small in the new species, but well developed in *M. alonsoi*;
- The dactyli of the walking legs are longer and more slender in *M. pumila* than in *M. alonsoi*.

ETYMOLOGY. — From the Latin *pumilus*, little, in reference to the small size of the species.

Munida pygmaea Macpherson, 1996

Munida pygmaea Macpherson, 1996b: 426, fig. 2.

TYPE MATERIAL. — New Caledonia. BERYX 11: stn 09, 24°52'S, 168°22'E, 635-680 m: holotype ♀ 6.9 mm (MNHN Ga 3782).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1484, 680-723 m: 1 ♂ 10.3 mm.

Tonga. BORDAU 2: stn 1588, 630-710 m: 1 ♂ 8.9 mm; stn 1625, 824 m: 2 ♂ 7.6 and 8.6 mm; stn 1626, 220-249 m: 1 ♀ 6.6 mm.

DISTRIBUTION. — New Caledonia, 635-755 m (Macpherson 1996b); Fiji and Tonga, 220-824 m.

Munida rhodonia Macpherson, 1994

Munida rhodonia Macpherson, 1994: 517, figs 13a, 43, 81.

Munida rhodonia – Macpherson 1999: 422, fig. 4c, d.

TYPE MATERIAL. — New Caledonia. MUSORSTOM 4: stn 198, 18°49.4'S, 163°18.8'E, 590 m: holotype ♂ 11.5 mm (MNHN Ga 2963).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1316, 478-491 m: 3 ♂ 9.0-11.7 mm, 1 ovig. ♀ 12.6 mm, 2 ♀ 13.6 and 14.3 mm; stn 1317, 471-475 m: 4 ovig. ♀ 13.1-15.3 mm, 6 ♀ 10.0-15.6 mm; stn 1330, 567-699 m: 1 ♂ 7.7 mm, 5 ovig. ♀ 10.0-13.5 mm, 6 ♀ 7.8-11.1 mm; stn 1331, 694-703 m: 13 ♂ 9.3-12.2 mm, 14 ovig. ♀ 11.7-15.2 mm, 3 ♀ 8.4-16.5 mm; stn 1332, 640-687 m: 7 ♂ 9.2-14.0 mm, 8 ovig. ♀ 13.3-15.7 mm, 4 ♀ 10.8-13.2 mm; stn 1335, 729-753 m: 1 ♂ 8.8 mm, 1 ovig. ♀ 11.1 mm, 1 ♀ 11.0 mm; stn 1337, 635-670 m: 1 ♂ 9.9 mm, 2 ovig. ♀ 13.5 and 14.5 mm; stn 1341, 500-614 m: 10 ♂ 7.1-11.9 mm, 9 ovig. ♀ 9.4-13.6 mm, 7 ♀ 7.7-11.5 mm. — BORDAU 1: stn 1392, 545-651 m: 3 ♂ 11.2-12.5 mm, 2 ovig. ♀ 13.3 and 14.1 mm, 2 ♀ 5.6 and 11.1 mm; stn 1395, 423-500 m: 1 ♂ 9.9 mm, 3 ovig. ♀ 11.1-12.0 mm, 3 ♀ 7.9-14.6 mm; stn 1396, 591-596 m: 5 ♂ 10.9-12.6 mm, 5 ovig. ♀ 11.2-13.6 mm, 8 ♀ 5.7-13.2 mm; stn 1397, 674-688 m: 2 ♂ 10.2 and 12.6 mm, 2 ♀ 7.8 and 10.3 mm; stn 1409, 557-558 m: 6 ♂ 5.8-11.9 mm, 1 ovig. ♀ 11.7 mm, 5 ♀ 8.9-10.6 mm; stn 1420, 550-687 m: 5 ♂

6.5-9.1 mm, 1 ovig. ♀ 9.8 mm, 8 ♀ 6.6-12.3 mm; stn 1447, 420-513 m: 2 ♂ 9.2 and 10.2 mm, 1 ovig. ♀ 12.0 mm, 3 ♀ 9.5-12.2 mm; stn 1448, 410-500 m: 1 ♂ 10.7 mm; stn 1461, 560 m: 1 ♂ 8.1 mm, 1 ♀ 11.1 mm; stn 1462, 556-560 m: 8 ♂ 10.1-13.0 mm, 3 ovig. ♀ 10.4-112.5 mm, 7 ♀ 8.1-12.5 mm; stn 1467, 417-427 m: 1 ♂ 11.2 mm; stn 1468, 478-500 m: 1 ♀ 13.2 mm; stn 1502, 640-660 m: 4 ♂ 8.2-11.8 mm, 1 ovig. ♀ 13.0 mm, 7 ♀ 6.3-12.4 mm.

Tonga. BORDAU 2: stn 1528, 587-592 m: 8 ♂ 8.6-12.8 mm, 1 ovig. ♀ 13.6 mm, 2 ♀ 5.0 and 7.6 mm; stn 1539, 558-586 m: 10 ♂ 10.1-12.4 mm, 24 ovig. ♀ 10.6-13.9 mm; stn 1556, 589-591 m: 6 ♂ 7.1-13.6 mm, 4 ovig. ♀ 10.1-14.9 mm, 3 ♀ 6.8-10.5 mm; stn 1558, 580-593 m: 1 ♀ 12.1 mm; stn 1568, 431 m: 1 ovig. ♀ 13.3 mm; stn 1621, 570-573 m: 2 ♂ 11.1 and 13.0 mm; stn 1640, 564-569 m: 8 ♂ 7.5-12.6 mm, 8 ovig. ♀ 10.1-15.6 mm, 10 ♀ 5.6-9.3 mm, 1 juv. 5.5 mm; stn 1641, 395 m: 1 ♂ 9.4 mm, 2 ♀ 6.6 and 8.8 mm; stn 1642, 532 m: 2 ♂ 10.4 and 12.4 mm, 1 juv. 4.5 mm; stn 1644, 501 m: 1 ovig. ♀ 13.3 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands, Chesterfield Islands and Vanuatu, 459-705 m (Macpherson 1994, 1999); Fiji and Tonga, 395-753 m.

Munida rosula Macpherson, 1994

Munida rosula Macpherson, 1994: 521, figs 45, 82.

Munida rosula – Macpherson 1996a: 404; 1999: 422.

TYPE MATERIAL. — Loyalty Islands. MUSORSTOM 6: stn 438, 20°23.00'S, 166°20.10'E, 780 m: holotype ♂ 11.8 mm (MNHN Ga 2989).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1312, 660-666 m: 2 ♂ 12.2 and 13.9 mm, 1 ♀ 15.6 mm; stn 1342, 650-701 m: 1 ♂ 7.0 mm, 3 ♀ 8.1-11.0 mm; stn 1346, 673-683 m: 6 ♂ 11.4-14.5 mm, 5 ovig. ♀ 14.2-17.4 mm, 1 ♀ 9.0 mm. — BORDAU 1: stn 1397, 674-688 m: 2 ♂ 9.1 and 11.6 mm, 2 ♀ 10.2 and 14.4 mm; stn 1413, 669-676 m: 1 ♂ 11.3 mm; stn 1415, 670-682 m: 1 ♀ 13.5 mm; stn 1419, 654-656 m: 3 ♂ 7.5-15.3 mm; stn 1460, 750-767 m: 4 ♂ 7.1-

12.8 mm, 3 ovig. ♀ 13.6-16.3 mm, 9 ♀ 6.8-12.6 mm; stn 1490, 785-820 m: 1 ♂ 13.8 mm, 1 ovig. ♀ 13.3 mm, 1 ♀ 10.9 mm; stn 1491, 777-787 m: 7 ♂ 7.9-16.3 mm, 3 ovig. ♀ 11.9-14.9 mm, 3 ♀ 7.1-13.4 mm; stn 1502, 640-660 m: 1 ♂ 12.1 mm; stn 1504, 427-440 m: 1 ♀ 7.7 mm.

Tonga. BORDAU 2: stn 1565, 869-880 m: 8 ♂ 6.6-13.3 mm, 2 ovig. ♀ 12.9 and 13.3 mm, 3 ♀ 9.5-14.5 mm; stn 1625, 824 m: 2 ♂ 7.6 and 12.0 mm, 1 ovig. ♀ 14.7 mm, 2 ♀ 7.0 and 11.4 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands, Chesterfield Islands, Vanuatu and Wallis and Futuna area, 465-860 m (Macpherson 1994, 1996a, 1999); Fiji and Tonga, 427-880 m.

Munida rufiantennulata Baba, 1969

Figs 11, 18

Munida rufiantennulata Baba, 1969: 23, fig. 7.Not *Munida rufiantennulata* – Macpherson 1994: 523 (in part), figs 46, 83; 1997: 610 (= *M. ommata* n. sp.)

TYPE MATERIAL. — Japan. 32°13.6'N, 128°20.2'E, 167 m: holotype ♀ 6.4 mm (Zoological Laboratory, Kyushu University).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1395, 423-500 m: 1 ovig. ♀ 8.3 mm; stn 1447, 420-513 m: 2 ♂ 8.5 and 8.8 mm. New Caledonia. BATHUS 3: stn 807, 27.11.1993, 23°40'S, 167°59'E, 420-438 m: 1 ♂ 4.8 mm. — HALIPRO 1: stn 864, 22.03.1994, 21°29'S, 166°19'E, 430 m: 1 ♀ 8.3 mm.

Tonga. BORDAU 2: stn 1621, 570-573 m: 1 ovig. ♀ 6.8 mm.

DISTRIBUTION. — Provisionally (see below) Japan, Philippines and New Caledonia, 165-705 m (Baba 1969, 1988, 1989; Macpherson 1994, 1996a, 1997, 1999); present material 420-573 m.

REMARKS. — The study of abundant material that I have originally identified as *M. rufiantennulata* (Macpherson 1994, 1997), as well as excellent colour photographs and molecular data from different localities (manuscript in preparation), indicates the existence of at least two distinct species (*M. ommata* and *M. rufiantennulata*). They are easily distinguished by several constant characters (previously interpreted as variation), including the number of spines on the branchial borders of the carapace, the armature of the fixed finger of the chelipeds and the colour pattern (see Remarks on *M. ommata*, above).

Specimens from New Caledonia and Chesterfield Islands were all originally identified as *M. rufiantennulata* because of apparent accordance with the original description of the colour pattern, which was based on specimens preserved in formalin, with orange ground colour and the anterior branchial regions marked with red (Baba 1969). Additional photographs and the morphological characters mentioned above, however, indicate that some of the specimens from New Caledonia area, with two round spots, circled by white, on the anterobranchial regions, clearly belong to a different species (*M. ommata*).

The specimen illustrated here (figs 11, 18) has a carapace, abdomen and pereopod ground colour of reddish orange, and lacks spots. Although this pattern is slightly different from the model described by Baba (1969), no additional morphological differences have been observed. Accordingly, the new material recorded here is classified as *M. rufiantennulata*, although a more complete study of the specimens from different localities is strongly recommended.

Munida runcinata Macpherson, 1994*Munida runcinata* Macpherson, 1994: 525, fig. 47.*Munida runcinata* – Macpherson 1996a: 405, fig. 19; 1999: 423.

TYPE MATERIAL. — Loyalty Islands. MUSORSTOM 6: stn 464, 21°02.3'S, 167°31.6'E, 430 m: holotype ♂ 8.0 mm (MNHN Ga 3006).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1392, 327-420 m: 1 ovig. ♀ 7.5 mm, 1 ♀ 10.1 mm; stn 1475, 321-370 m: 1 ♂ 6.3 mm; stn 1411, 390-403 m: 1 ♀ 7.6 mm; stn 1412, 400-407 m: 1 ♂ 7.6 mm; stn 1421, 403-406 m: 2 ♂ 4.1 and 8.5 mm, 3 ovig. ♀ 6.5-9.1 mm, 1 ♀ 6.1 mm; stn 1431, 495-500 m: 1 ovig. ♀ 8.3 mm; stn 1434, 400-401 m: 9 ♂ 6.2-8.3 mm, 4 ovig. ♀ 6.4-8.6 mm; stn 1444, 398-409 m: 6 ♂ 5.5-9.2 mm, 8 ovig. ♀ 6.1-8.8 mm, 6 ♀ 6.1-8.9 mm; stn 1445, 350-365 m: 1 ovig. ♀ 7.2 mm, 2 ♀ 5.9 and 6.5 mm; stn 1450, 424 m: 1 ♂ 6.5 mm, 2 ovig. ♀ 6.5 and 6.7 mm; stn 1476, 310-420 m: 4 ♂ 5.7-6.7 mm, 3 ovig. ♀ 6.0-7.4 mm, 1 ♀ 5.0 mm; stn 1493, 429-440 m: 2 ovig. ♀ 7.5 and 8.1 mm, 1 ♀ 8.9 mm; stn 1496, 392-407 m: 1 ♂ 7.8 mm, 1 ovig. ♀ 7.2 mm.

Tonga. BORDAU 2: stn 1511, 384-402 m: 4 ♂ 5.4-10.0 mm, 3 ovig. ♀ 7.8-8.7 mm, 2 ♀ 7.6 and 7.9 mm; stn 1525, 349-351 m: 1 ♂ 7.3 mm, 2 ovig. ♀ 6.5 and 6.6 mm; stn 1526, 463-464 m: 3

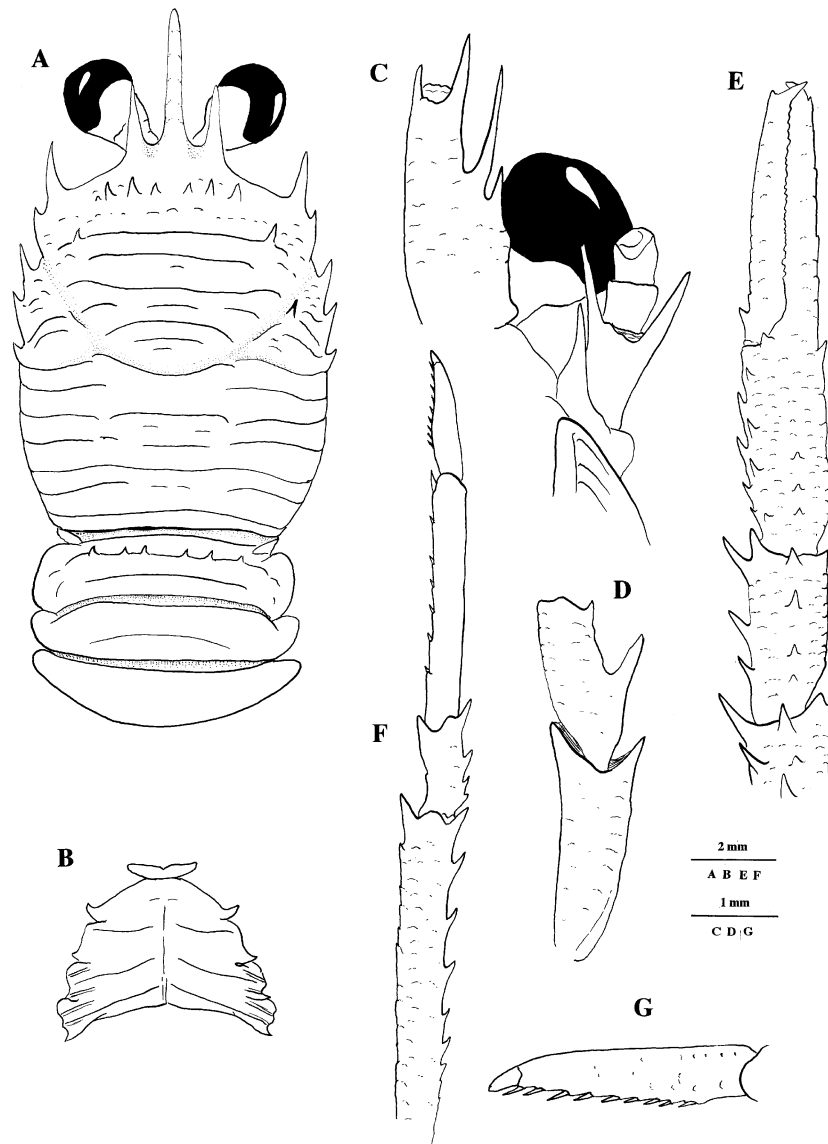


FIG. 11. *Munida rufiantennulata* Baba, 1969, ovig. female, 8.3 mm, Fiji, 423-500 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, left first walking leg, lateral view; G, dactylus of left first walking leg, lateral view.

FIG. 11. *Munida rufiantennulata* Baba, 1969, femelle ovigère, 8,3 mm, Fidji, 423-500 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncules antennaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélipède droit, vue dorsale ; F, première patte marcheuse gauche, vue latérale ; G, dactyle de la première patte marcheuse gauche, vue latérale.

♂ 7.4 and 8.4 mm, 1 ovig. ♀ 7.3 mm; stn 1527, 483-509 m: 1 ♂ 7.2 mm, 2 ovig. ♀ 7.6 and 8.0 mm; stn 1541, 319-333 m: 2 ♂ 7.5 and 8.2 mm, 2 ovig. ♀ 6.6 and 7.0 mm; stn 1562, 417-424 m: 1 ♂ 7.8 mm, 1 ovig. ♀ 7.4 mm, 1 ♀ 8.6 mm; stn 1572, 391-402 m: 6 ♂ 3.8-7.1 mm, 2 ovig. ♀ 6.6 and 6.9 mm, 1 ♀ 7.5 mm; stn 1587, 309-400 m: 2 ovig. ♀ 5.6 and 6.5 mm; stn 1592, 391-426 m: 2 ♂ 8.0 and 8.4 mm; stn 1596, 371-437 m: 1 ♂ 8.3 mm, 1 ovig. ♀ 7.2 mm; stn 1641, 395 m: 6 ♂ 4.7-6.9 mm, 2 ovig. ♀ 7.3 and 7.5 mm, 1 ♀ 6.9 mm; stn 1643, 487 m: 3 ♂ 7.6-8.6 mm, 1 ovig. ♀ 8.0 mm.

DISTRIBUTION. — New Caledonia, Loyalty Islands, Vanuatu and Wallis and Futuna area, 245-500 m (Macpherson 1994, 1996a, 1999); Fiji and Tonga, 309-509 m.

Munida semoni Ortmann, 1894

Fig. 19

Munida semoni Ortmann, 1894: 24, pl. 1, figs 4, 4i.*Munida semoni* – Macpherson & Baba 1993: 405, fig. 12 (references and synonymy). — Macpherson 1994: 530; 1996a: 405; 1999: 424.

TYPE MATERIAL. — Indonesia. Ambon (without position and depth): lectotype (Macpherson & Baba 1993) ♂ 5.5 mm (Strasbourg Museum).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1323, 143-173 m: 1 ♂ 8.8 mm, 1 ovig. ♀ 8.1 mm; stn 1334, 251-27 m: 3 ♂ 6.1-7.6 mm; stn 1349, 244-252 m: 11 ♂ 5.5-11.4 mm, 7 ovig. ♀ 8.8-10.1 mm, 4 ♀ 6.6-9.1 mm; stn 1351, 292-311 m: 2 ovig. ♀ 7.7 and 8.2 mm; stn 1363, 144-150 m: 2 ovig. ♀ 6.3 and 8.2 mm; stn 1366, 149-168 m: 3 ♂ 5.9-9.7 mm, 1 ovig. ♀ 7.2 mm; stn 1371, 135-151 m: 1 ♂ 7.0 mm, 3 ovig. ♀ 7.0-8.1 mm; stn 1383, 230-251 m: 1 ♂ 9.0 mm; stn 1385, 227-284 m: 16 ♂ 5.5-11.4 mm, 13 ovig. ♀ 7.4-10.5 mm, 2 ♀ 6.3 and 6.7 mm; stn 1387, 229-370 m: 14 ♂ 4.3-9.4 mm, 1 ovig. ♀ 7.1 mm, 1 ♀ 4.7 mm; stn 1389, 241-417 m: 24 ♂ 4.2-9.3 mm, 11 ovig. ♀ 7.1-10.0 mm, 8 ♀ 4.3-6.8 mm; stn 1390, 234-361 m: 10 ♂ 6.5-8.7 mm, 4 ovig. ♀ 6.9-8.1 mm, 3 ♀ 5.3-6.0 mm. — BORDAU 1: stn 1402, 260-279 m: 1 ♂ 9.5 mm; stn 1404, 180 m: 1 ♂ 8.2 mm, 1 ovig. ♀ 8.7 mm; stn 1405, 180 m: 1 ♂ 7.8 mm, 1 ovig. ♀ 8.4 mm; stn 1494, 240-319 m: 2 ♂ 4.3 and 7.6 mm, 2 ovig. ♀ 6.5 and 7.4 mm, 3 ♀ 3.4-6.7 mm; stn 1498, 300-307 m: 3 ♂ 7.7-10.3 mm, 8 ovig. ♀ 6.5-9.6 mm; stn 1507, 294-300 m: 4 ♂ 4.6-9.3 mm, 2 ♀ 4.4 and 5.8 mm. — Tonga. BORDAU 2: stn 1575, 232-295 m: 12 ♂ 4.7-9.0 mm, 8 ovig. ♀ 6.8-8.5 mm, 3 ♀ 5.2-6.9 mm; stn 1576, 253-263 m: 2 ♂ 7.8 and 9.0 mm, 6 ovig. ♀ 7.1-9.0 mm, 2 juv. 4.1 and 4.2 mm; stn 1578, 329-331 m: 1 ♂ 8.8 mm, 1 ♀ 8.5 mm; stn 1579, 332 m: 1 ♂ 8.5 mm, 1 ovig. ♀ 6.3 mm.

DESCRIPTION (supplemental to that of Ortmann 1894). — Ground colour of carapace and abdomen light orange, with large reddish spots scattered on dorsal surfaces. Rostrum and supraocular spines light orange. Chelipeds and walking legs with reddish and whitish bands. Base of fingers whitish; distal part of carpus, merus and hand reddish.

DISTRIBUTION. — Indonesia, New Caledonia, Vanuatu and Futuna islands 180-440 m (Macpherson & Baba 1993; Macpherson 1996a; 1999); Fiji and Tonga, 135-417 m.

Munida tuberculata Henderson, 1885

Fig. 20

Munida tuberculata Henderson, 1885: 413.*Munida tuberculata* – Henderson 1888: 145, pl. 15, figs 2a, b. — Baba 1988: 83. — Macpherson 1994: 547, fig. 58; 1996a: 408; 1999: 424; 2000: 419.

TYPE MATERIAL. — Fiji. *Challenger*: stn 173, 19°09'35"S, 179°41'50"E, 576 m: syntypes ♂ 5.4 mm, ♀ 3.7 (BMNH).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1408, 550-561 m: 1 ♀ 4.2 mm; stn 1433, 488-500 m: 3 ♂ 4.1-5.2 mm; stn 1479, 450-460 m: 1 ♀ 3.0. — 1510, 461-497 m: 5 ♂ 4.2-5.1 mm, 2 ovig. ♀ 3.5 and 4.1 mm; stn 1544, 441-443 m: 1 ovig. ♀ 2.6 mm; stn 1548, 476-478 m: 2 ♀ 3.2 and 4.3 mm; stn 1615, 482-504 m: 1 ♂ 3.7 mm, 1 ♀ 4.2 mm; — Tonga. BORDAU 2: stn 1509, 456-510 m: 1 ♂ 3.7 mm; stn 1621, 570-573 m: 1 ♂ 5.2 mm.

DESCRIPTION (supplemental to that of Henderson 1885). — Ground colour of carapace, abdomen and pereopods orange. One white spot on each bifurcation of cervical groove, between anterior branchial and cardiac regions. Tip of rostral spine red. Walking legs with a few light orange and whitish bands.

DISTRIBUTION. — Fiji, Vanuatu, New Caledonia, Matthew and Hunter islands, Vanuatu, Wallis and Futuna area and Marquesas Islands, 285-650 m (Henderson 1888; Baba 1988; Macpherson 1994, 1996a, 1999, 2000); Fiji and Tonga, 441-573 m.

Munida volantis n. sp.

Fig. 12

TYPE MATERIAL. — Fiji (holotype and paratypes). BORDAU 1: stn 1395, 423-500 m: holotype ovig. ♀ 13.0 mm (MNHN Ga 4566), 3 ♂ 10.0-13.7 mm, 3 ovig. ♀ 10.0-10.2 mm, 2 ♀ 8.6 and 12.9 mm; stn 1393, 426-487 m: 1 ♀ 8.5 mm; stn 1447, 420-513 m: 2 ♂ 9.8 and 9.9 mm, 2 ovig. ♀ 10.0 and 10.6 mm, 1 ♀ 8.1 mm; stn 1448, 410-500 m: 6 ♂ 8.7-11.4 mm, 1 ovig. ♀ 11.9 mm; stn 1450, 327-420 m: 1 ♂ 11.0 mm; stn 1451, 400-460 m: 5 ♂ 5.5-12.0 mm, 1 ovig. ♀ 10.3 mm; stn 1452, 420-508 m: 1 ♂ 9.7 mm; stn 1453, 411-510 m: 1 ovig. ♀ 9.3 mm, 2 ♀ 6.3 and 9.2 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Males 5.5-13.7 mm, females 6.3-13.0 mm, ovigerous females from 9.3 mm. Carapace longer than wide. Transverse ridges mostly interrupted, with very short, dense, non-iridescent setae and few long, iridescent setae. Main transverse striae on posterior part of carapace interrupted in cardiac region. A few scales and secondary striae between main striae. Scales on intestinal region present. Gastric region with 5 pairs of epigastric spines. One parahepatic, 1 anterobranchial and 1 postcervical spine on each side. Frontal margins transverse. Lateral margins slightly convex. Anterolateral spine long, at anterolateral angle, overreaching level of sinus between rostrum and supraocular spines. Second marginal spine before cervical groove 1/3 size of preceding one. Branchial margins with 4 spines. Rostrum spiniform, half as long as remaining carapace, straight and horizontal. Supraocular spines reaching midlength of rostrum and reaching end of corneae, parallel, directed upwards (Fig. 12A).

Lateral parts of sixth and seventh thoracic sternites with numerous small granules. Fourth sternites with a few arcuate striae. Anterior part of fourth sternite slightly narrower than third (Fig. 12B).

Second abdominal somite with row of 8-10 spines on anterior ridge. Second fourth somites each with a few transverse striae.

Eyes moderately large, maximum corneal diameter about 1/3 distance between bases of anterolateral spines.

Basal segment of antennule (distal spines excluded), about 1/4 carapace length, elongate, reaching end of corneae, with 2 subequal distal spines; 2 spines on lateral margin, proximal spine short, located at midlength of segment, distal spine long, reaching end of distal spines (Fig. 12C).

First segment of antennal peduncle with 1 long distal spine on mesial margin overreaching end of third segment; second segment with 2 long distal spines, mesial spine slightly longer than lateral spine, reaching or slightly exceeding antennal peduncle; penultimate segment unarmed (Fig. 12C).

Ischium of third maxilliped about 1.5 x length of merus (measured along dorsal margin), with distoventral spine. Merus of third maxilliped with 3 well developed spines on flexor margin, distal smaller; extensor margin unarmed (Fig. 12D).

Chelipeds subequal, squamous, with numerous uniramous setae, a few of them iridescent, densest on mesial borders of articles. Palm shorter than fingers. Merus armed with a few spines, strongest spine on distal border short, not overreaching proximal third of carpus. Carpus with several spines on dorsal side and several spines scattered on mesial and ventral sides. Palm with several spines scattered on mesial and dorsal sides and a few spines on lateral border. Fixed finger unarmed, except distal spines, movable finger with basal and distal spines only; fingers distally curving and crossing, ending in a sharp point (Fig. 12E).

Second pereopod slightly more than twice carapace length; merus slightly shorter than carapace, about 7 x as long as high, about 3 x carpus length and 1.5 x as long as propodus; propodus about 7.5 x as long as high, about twice dactylus length (Fig. 12F). Merus with well developed spines on dorsal border, increasing in size distally, ventral margin with few spines and 1 long distal spine. Carpus with a few dorsal spines and 1 distoventral spine. Propodus with 11 or 12 movable ventral spines. Dactylus slightly curving distally, with 8 or 9 movable spinules along entire ventral margin (Fig. 12G). Third pereopod similar to second; fourth pereopod shorter than second and third. Merus of fourth pereopod 2/3 length of second pereopod.

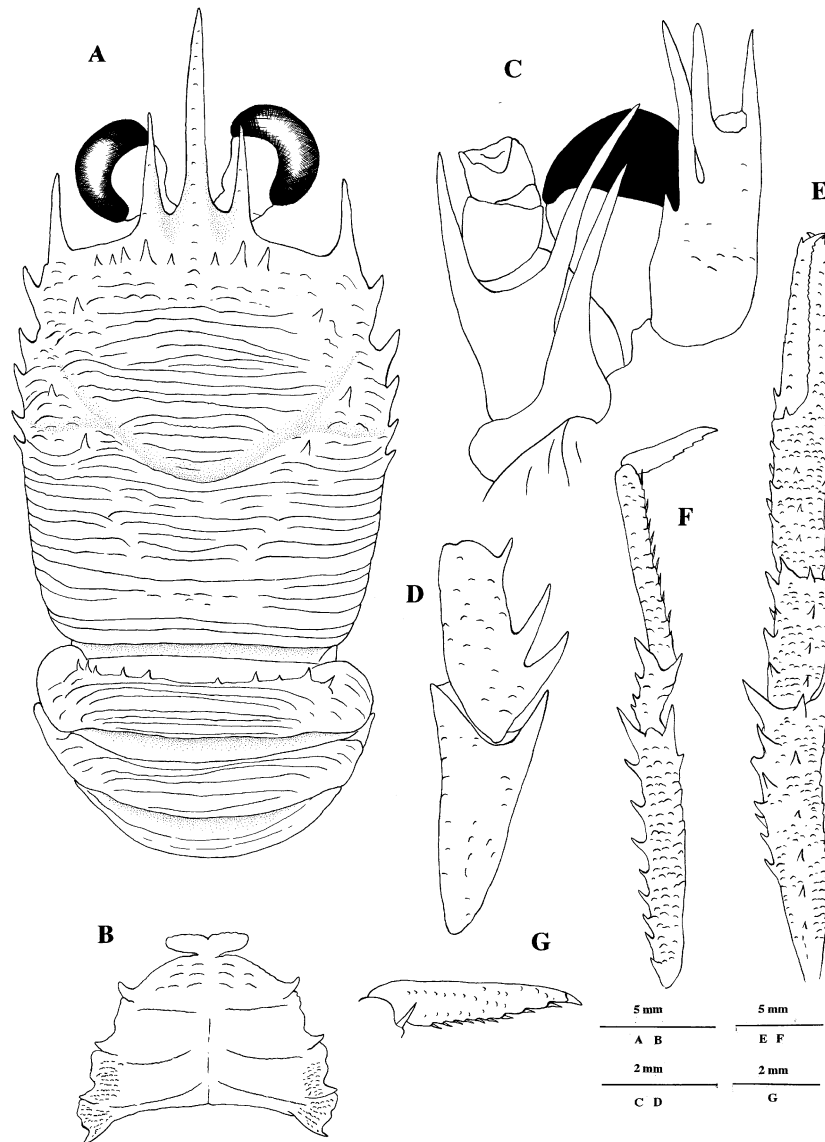


FIG. 12. *Munida volantis* n. sp., holotype, ovig. female, 13.0 mm, Fiji, 423-500 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right third maxilliped, lateral view; E, right cheliped, dorsal view; F, right first walking leg, lateral view; G, dactylus of right first walking leg, lateral view.

FIG. 12. *Munida volantis* n. sp., holotype, femelle ovigère, 13,0 mm, Fiji, 423-500 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncles antennaires et antennulaires ; D, troisième maxillipède droit, vue latérale ; E, chélipède droit, vue dorsale ; F, première patte marcheuse droite, vue latérale ; G, dactyle de la première patte marcheuse droite, vue latérale.

DISTRIBUTION. — Fiji, 327-513 m.

REMARKS. — *Munida volantis* belongs to the group of species having four spines on the lateral margins of the carapace behind the cervical groove, numerous small granules on the lateral parts of the sixth and seventh thoracic sternites, moderately large eyes, spines on the anterior ridge of the second abdominal somite, a spiniform rostrum, the distal spines of the basal antennular segment subequal and the dactylus of the walking legs bearing movable spinules along the entire

ventral border. The new species is closely similar to *M. rogeri* Macpherson, 1994, from New Caledonia, Loyalty Islands, Chesterfield Islands and Vanuatu (Macpherson 1994, 1999), and the two species differ as follows:

- The frontal margins are more oblique in *M. rogeri* than in the new species;
- The abdominal somites have more numerous secondary striae in the new species than in *M. rogeri*;
- The basal antennular segment clearly overreaches the corneae in *M. rogeri*, whereas this segment does not extend beyond the end of the corneae in *M. volantis*;
- The distal spines of the basal and second segments of the antennal peduncle are clearly longer in *M. volantis* than in *M. rogeri*;
- The fingers of the cheliped have lateral and mesial rows of spines in *M. rogeri*, whereas these rows are absent in the new species.

ETYMOLOGY. — The name is from the Latin *volantis* (flying fish), and refers to one of the southern hemisphere constellations (*Piscis Volans*).

Genus **PARAMUNIDA** Baba, 1988

Paramunida amphitrita Macpherson, 1996

Paramunida amphitrita Macpherson, 1996a: 409, fig. 7.

TYPE MATERIAL. — Futuna Island. MUSORSTOM 7: stn 517, 14°13.4'S, 178°10.4'W, 233-235 m: holotype ♀ 7.7 mm (MNHN Ga 3650).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1394, 416 m: 2 ovig. ♀ 11.3 and 12.4 mm; stn 1410, 400-410 m: 1 ♂ 10.5 and 11.2 mm. Tonga. BORDAU 2: stn 1583, 327-360 m: 1 juv. 4.8 mm. 12.2 mm, 1 ovig. ♀ 10.5 mm; stn 1412, 400-407 m: 2 ovig. ♀

DISTRIBUTION. — Futuna Island, 233-235 m (Macpherson 1996a); Fiji and Tonga, 327-416 m.

Paramunida belone Macpherson, 1993

Paramunida belone Macpherson, 1993b: 448, figs 1, 12.

Paramunida belone – Macpherson 1996a: 410.

TYPE MATERIAL. — Loyalty Islands. MUSORSTOM 6: stn 464, 21°02.3'S, 167°31.6'E, 430 m: holotype ♂ 15.0 mm (MNHN Ga 2853).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1445, 350-365 m: 1 ♂ 13.8 mm, 1 ovig. ♀ 11.9, 1 ♀ 12.4 mm; stn 1446, 350-367 m: 1 ♂ 14.4 mm, 2 ovig. ♀ 11.0 and 11.3 mm, 1 ♀ 9.0 mm; stn 1475, 321-424 m: 2 ♂ 8.1 and 9.7 mm, 2 ♀ 9.1 and 9.7 mm; stn 1476, 310-420 m: 2 ♂ 9.7 and 10.4 mm, 1 ♀ 10.0 mm; stn 1497, 335-350 m: 2 ♂ 11.1 and 11.2 mm, 2 ovig. ♀ 9.5 and 9.7 mm, 1 ♀ 9.7 mm. Tonga. BORDAU 2: stn 1511, 384-402 mm: 3 ♂ 10.0-10.9 mm, 5 ovig. ♀ 8.2-11.5 mm; stn 1586, 440-487 m: 1 ♂ 11.8 mm; stn 1643, 487 m: 1 ♂ 9.7 mm, 1 ♀ 9.6 mm.

DISTRIBUTION. — Loyalty Islands and Futuna Island, 245-437 m (Macpherson 1993b, 1996a); Fiji and Tonga, 310-487 m.

Paramunida cretata Macpherson, 1996

Paramunida cretata Macpherson, 1996a: 411, figs 8, 23.

TYPE MATERIAL. — Waterwitch Bank. MUSORSTOM 7: stn 569, 12°30.0'S, 176°51.2'W, 300-305 m: holotype ovig. ♀ 11.5 mm (MNHN Ga 3651).

OTHER MATERIAL EXAMINED. — Tonga. BORDAU 2: stn ♀ 11.5 mm; stn 1596, 371-437 m: 2 ovig. ♀ 9.1 and 9.5 mm; stn 1510, 461-497 m: 3 ♂ 9.0-10.7 mm, 3 ♀ 8.9-9.8 mm; stn 1545, 1643, 487 m: 2 ovig. ♀ 9.7 and 10.2 mm. 444-447 m: 2 ♂ 10.4 and 11.2 mm; stn 1586, 440-487 m: 1 ovig.

DISTRIBUTION. — Waterwitch Bank and Wallis Island, 300-365 m (Macpherson 1996a); Tonga, 371-497 m.

Paramunida cristata n. sp.

Fig. 13

TYPE MATERIAL. — Fiji (holotype and paratypes). BORDAU 1: stn 1411, 390-403 m: holotype ovig. ♀ 8.9 mm (MNHN Ga 4567); 2 ♂ 8.3 and 9.2 mm, 1 ovig. ♀ 11.2 mm; stn 1395, 423-500 m: 1 ♂ 10.6 mm, 1 ovig. ♀ 10.6 mm, 1 ♀ 6.0 mm; stn 1433, 488-500 m: 1 ♂ 9.8 mm; stn 1447, 420-513 m: 3 ♂ 10.2-11.8 mm; stn 1451, 400-460 m: 1 ♂ 11.1 mm; stn 1452, 420-508 m: 2 ♂ 8.4 and 10.8 mm.

Vanuatu. MUSORSTOM 8: stn 1044, 444-469 m: 1 ♂ 11.5 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Males 8.3-11.8 mm, females 6.0-11.2 mm, ovigerous females from 8.9 mm. Carapace, excluding rostrum, as long as broad. Dorsal surface covered with numerous spinules. Gastric region with 1 well developed median spine and 2 epigastric spines. Cervical groove distinct. Cardiac and anterior branchial regions slightly circumscribed. Cardiac region with a median row of 3 well-developed spines, first thicker than the others. Frontal margin slightly concave. Lateral margins convex, with a few spines and iridescent setae on anterior half. Anterolateral spine well developed, overreaching sinus between rostral and supraocular spines (Fig. 13A). Rostral spine triangular, with thick dorsal longitudinal carina; supraocular spines half as long and more slender than rostrum (Fig. 13B, C).

Thoracic sternites with numerous arcuate striae (Fig. 13D).

Second and third abdominal somites each with 4 well-developed spines on anterior ridge and 2 median well developed spines on posterior ridge. Fourth abdominal somite similar to preceding, but posterior ridge with distinct single median spine. A few small spiniform granules between spines.

Eye large, maximum corneal diameter about 1/3 distance between bases of external orbital spines.

Basal segment of antennule (distal spines excluded) slightly exceeding corneae, with distomesial spine shorter than distolateral. Anterior prolongation of first segment of antennal peduncle clearly overreaching antennular peduncle by about 1/4 of its length; second segment (spines excluded) about 1.5 x length of third segment and about 1.5 x longer than wide, distomesial spine slightly exceeding antennal peduncle, distolateral spine not reaching end of third segment; third segment slightly longer than wide and unarmed (Fig. 13E).

Chelipeds and walking legs long and slender. Palm of chelipeds as long as fingers (Fig. 13F). First walking leg with merus 1.3 x longer than carapace, about 10 x as long as high, about 4 x carpus length and nearly twice as long as propodus; propodus about 9 x as long as high, about 1.3 x dactylus length (Fig. 13G). Merus with well developed spines on dorsal border, increasing in size distally, ventral margin with few spines and 1 long distal spine. Carpus with a few dorsal spines and 1 distoventral spine. Propodus with 12-14 movable ventral spines. Dactylus sinuous, with longitudinal carinae along mesial and lateral sides, ventral border unarmed. Third pereopod similar to second; fourth pereopod shorter than second and third. Merus of fourth pereopod slightly shorter than second pereopod.

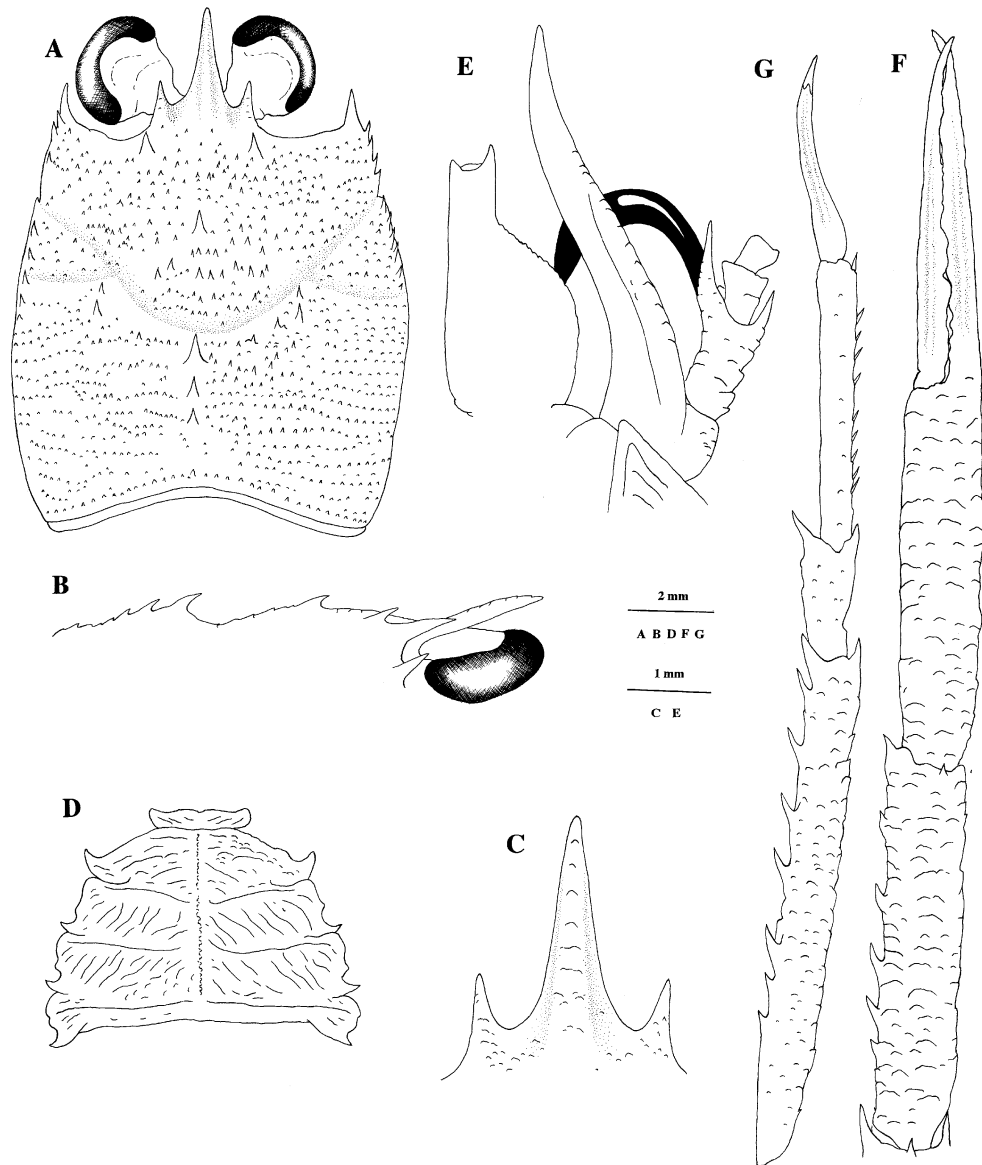


FIG. 13. *Paramunida cristata* n. sp., holotype, ovig. female, 8.9 mm, Fiji, 390-403 m: A, carapace, dorsal view; B, upper margin of carapace and rostrum, lateral view; C, rostrum, dorsal view; D, sternal plastron; E, ventral view of cephalic region, showing antennular and antennal peduncles; F, right cheliped, dorsal view; G, right first walking leg, lateral view.

FIG. 13. *Paramunida cristata* n. sp., holotype, femelle ovigère, 8,9 mm, Fidji, 390-403 m : A, carapace, vue dorsale ; B, bord supérieur de la carapace et rostre, vue latérale ; C, rostre, vue dorsale ; D, plastron sternal ; E, vue ventrale de la région céphalique, montrant les pédoncules antennaires et antennulaires ; F, chélicèpe droit, vue dorsale ; G, première patte marcheuse droite, vue latérale.

DISTRIBUTION. — Vanuatu and Fiji, 390-513 m.

REMARKS. — *Paramunida cristata* is closely related to *P. scabra* (Henderson, 1885) from the Philippines and Indonesia. Both species are characterized by having a rostral spine that is larger than the supraocular spines, the median gastric region with one median spine, the thoracic sternites with numerous arcuate striae and the distomesial spine on the second antennal segment not mucronated and not exceeding the antennal peduncle in length. The two species differ in several constant characters:

- The longitudinal carina on the rostral spine is thick in the new species, but clearly thinner in *P. scabra*;
- The distomesial spine of the second antennal segment slightly overreaches the antennal peduncle in *P. cristata*, whereas this spine only exceeds the third segment in *P. scabra*.

ETYMOLOGY. — From the Latin, *cristatus*, crest, in reference to the presence of a wide dorsal carina on the rostral spine.

Paramunida curvata n. sp.

Fig. 14

TYPE MATERIAL. — Fiji (holotype and paratypes). MUSORSTOM 10: stn 1389, 241-417 m: holotype ♂ 10.3 mm (MNHN Ga 4568), 3 ovig. ♀ 8.1-8.3 mm, 2 ♀ 6.3 and 7.5 mm; stn 1386, 230-344 m: 2 ovig. ♀ 9.1 and 10.0 mm; stn 1387, 229-370 m: 1 ♂ 5.6 mm, 1 ovig. ♀ 9.4 mm; stn 1390, 234-361 m: 4 ♂ 5.1-10.0 mm, 2 ovig. ♀ 9.9 and 10.0 mm, 3 ♀ 8.0-8.8 mm.

MATERIAL EXAMINED. — The type material (see above).

DESCRIPTION. — Males 5.1-10.3 mm, females 6.3-10.0 mm, females ovigerous from 8.1 mm. Carapace, excluding rostrum, as long as broad. Dorsal surface covered with minute spinules, with a few scattered small spines and short fine iridescent setae; lacking scaly striae and well developed spines. Two small epigastric spines behind supraocular spines. Cervical groove distinct. Gastric region distinctly separated from hepatic area, metagastric region well defined. Cardiac region circumscribed, weakly convex. Anterior branchial region separated from posterior branchial region. Frontal margin concave behind eye. Lateral margins convex, with a few spines and iridescent setae on anterior half. Anterolateral spine short, a few spines on branchial borders (Fig. 14A). Rostrum short, wide at base, ending in short spine, with smooth dorsal median carina; supraocular spines as long as rostral spine. Margin between rostral and supraocular spines clearly convex.

Fourth thoracic sternite with few arcuate striae, fifth to seventh smooth (Fig. 14B).

Two median well-developed spines on anterior and posterior ridges of second and third abdominal somites. Fourth abdominal somite similar to preceding, but posterior ridge with distinct single median spine. A few small spiniform granules along anterior and posterior ridges of each somite.

Eye large, maximum corneal diameter about 1/3 distance between bases of external orbital spines.

Basal segment of antennule (distal spines excluded) reaching end of corneae, with distomesial spine shorter than distolateral. Anterior prolongation of first segment of antennal peduncle reaching or slightly overreaching end of antennular peduncle; second segment (spines excluded) about 1.5 x length of third segment and about 2 x longer than wide, distomesial spine long, slightly exceeding antennal peduncle, distolateral spine not reaching level of first half of third segment; third segment elongate, 4 times longer than wide and unarmed (Fig. 14C).

Chelipeds and walking legs long and slender. Palm of chelipeds about 2.5 x finger length (Fig. 14D). First walking leg with merus 2.5 x longer than carapace, about 20 x as long as high, about 5.5 x carpus length and nearly 1.5 x as long as propodus; propodus about 15 x as long as high, about 1.5 x dactylus length (Fig. 14E). Propodus with small movable spines along ventral border. Dactylus with longitudinal carina on terminal part of mesial and lateral sides, unarmed on ventral border. Third pereopod similar to second; fourth pereopod shorter than second and third. Merus of fourth pereopod slightly shorter than merus of second pereopod.

DISTRIBUTION. — Fiji, 229-417 m.

REMARKS. — *Paramunida curvata* is closely similar to *P. setigera* Baba, 1988 from the Philippines, Indonesia and New Caledonia. Both species are characterised by having a rostral spine as long as or shorter than the supraocular spines, by

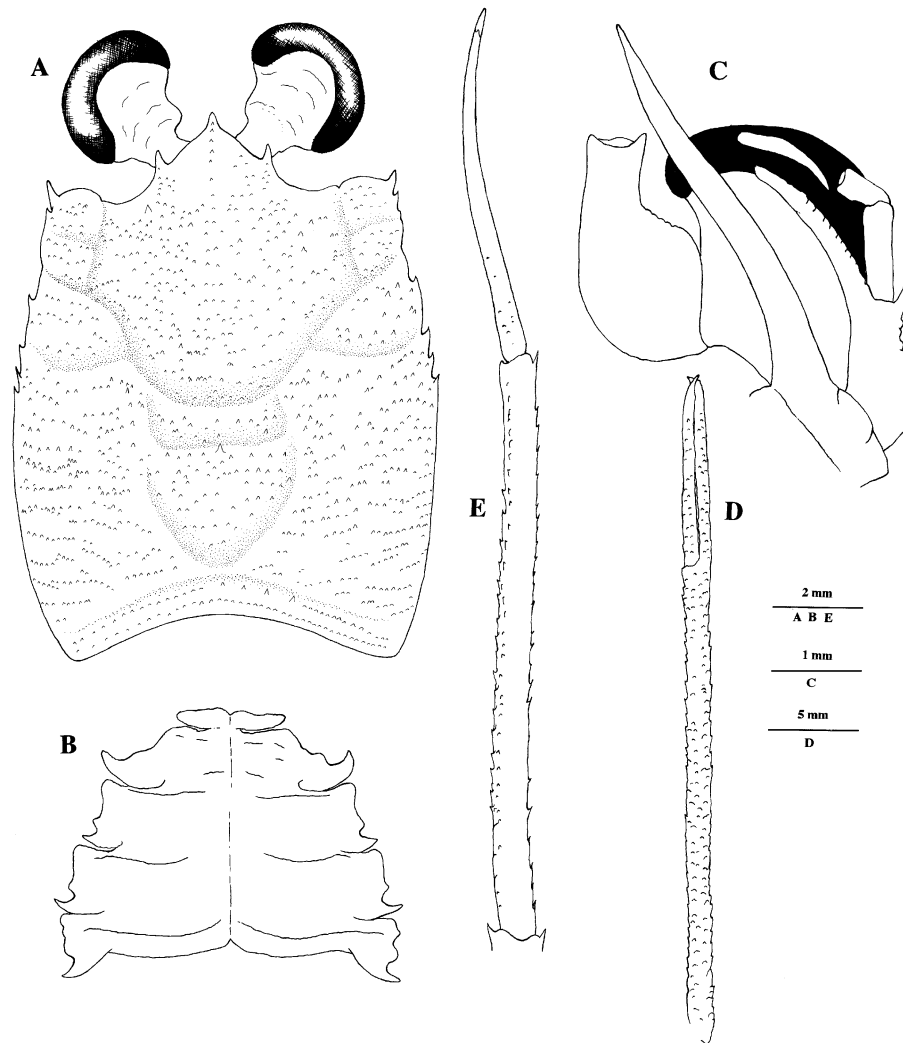


FIG. 14. *Paramunida curvata* n. sp., holotype, male, 10.3 mm, Fiji, 241-417 m: A, carapace, dorsal view; B, sternal plastron; C, ventral view of cephalic region, showing antennular and antennal peduncles; D, right cheliped, dorsal view; E, right first walking leg, lateral view.

FIG. 14. *Paramunida curvata* n. sp., holotype, mâle, 10,3 mm, Fidji, 241-417 m : A, carapace, vue dorsale ; B, plastron sternal ; C, vue ventrale de la région céphalique, montrant les pédoncules antennaires et antennulaires ; D, chélopède droit, vue dorsale ; E, première patte marcheuse droite, vue latérale.

having minute spinules on the carapace surface, by lacking major spines other than the two epigastric spines, and in having a longer distomesial spine on the second antennal segment. The two species differ as follows:

- The margin between the rostral and supraocular spines is clearly convex in *P. curvata*, but straight, or slightly concave in *P. setigera*;
- The anterolateral spine of the carapace is longer in *P. setigera* than in *P. curvata*;
- The thoracic sternites are smooth in *P. curvata*, but with numerous scales in *P. setigera*;
- The anterior ridge of the second, third and fourth abdominal somites each have four spines in *P. setigera*, rather than two median spines on each somite as in *P. curvata*.

ETYMOLOGY. — From the Latin *curvatus* (curve), in reference to the convex margin between the rostral and supraocular spines.

Paramunida granulata (Henderson, 1885)

Munida granulata Henderson, 1885: 409.

Munida granulata – Henderson 1888: 133, pl. 14, figs 3a, b.

Paramunida granulata – Baba 1988: 176, fig. 72. — Macpherson 1993b: 452, figs 3, 13; 1996: 412.

TYPE MATERIAL. — Fiji. *Challenger*: stn 173, 19°09'35"S, 179°41'50"E, 576 m: lectotype ♂ 10.8 mm (BMNH).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1409, 557-558 m: 2 ♂ 10.3 and 11.4 mm, 3 ♀ 6.8-11.4 mm; stn 1461, 560 m: 2 ♀ 8.1 and 8.4 mm.

Tonga. BORDAU 2: stn 1528, 587-592 m: 3 ♂ 9.3-9.5 mm; stn 1556, 589-591 m: 4 ♂ 8.4-10.6 mm, 14 ovig. ♀ 9.4-12.3 mm, 1 ♀ 7.5 mm; stn 1568, 431 m: 1 ♀ 8.2 mm; stn 1622, 569-573 m: 1 ♂ 4.9 mm; stn 1637, 464-507 m: 1 juv. 4.1 mm; stn 1638, 469-520 m: 2 ♂ 11.6 and 11.7 mm, 12 ovig. ♀ 9.2-12.0 mm; stn 1640, 564-569 m: 12 ♂ 8.6-11.5 mm, 3 ovig. ♀ 10.0-11.6 mm, 2 ♀ 6.1 and 6.8 mm; stn 1641, 395 m: 4 ♀ 6.3-7.5 mm; stn 1642, 532 m: 1 ♂ 10.5 mm.

DISTRIBUTION. — Indonesia, New Caledonia, Loyalty Islands, Wallis Island and Bayonnaise Bank, 400-650 m (Henderson 1888; Baba 1988; Macpherson 1993b, 1996a); Fiji and Tonga, 395-592 m.

Paramunida labis Macpherson, 1996

Paramunida labis Macpherson, 1996a: 413, figs 9, 24.

TYPE MATERIAL. — Futuna Island. MUSORSTOM 7: stn 505, 14°19.5'S, 178°04.3'W, 245-400 m: holotype ovig. ♀ 6.9 mm (MNHN Ga 3652).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1387, 229-370 m: 1 ♂ 9.9 mm; stn 1390, 234-361 m: 7 ♂ 9.5-10.3 mm, 3 ovig. ♀ 9.3-10.0 mm, 1 ♀ 10.0 mm. — BORDAU 1: stn 1446, 350-367 m: 1 ♀ 9.8 mm; stn 1475, 321-424 m: 2 ♀ 6.0 and 6.8 mm; stn 1497, 335-350 m: 1 ♀ 9.4 mm.

Tonga. BORDAU 2: stn 1518, 336-347 m: 1 ♂ 6.0 mm; stn 1519, 447 m: 1 ovig. ♀ 7.5 mm; stn 1523, 300-302 m: 1 ♂ 7.9 mm; stn 1526, 463-464 m: 1 ♀ 8.2 mm; stn 1537, 391-421 m: 1 ♂ 9.4 mm; stn 1572, 391-402 m: 3 ovig. ♀ 8.1 and 8.6 mm; stn 1587, 309-400 m: 2 ♂ 7.2 and 7.4 mm; stn 1612, 327-342 m: 1 ♀ 4.9 mm; stn 1631, 407-443 m: 1 ♂ 8.7 mm.

DISTRIBUTION. — Futuna and Wallis islands, 245-440 m (Macpherson 1996a); Fiji and Tonga, 229-424 m.

Paramunida longior Baba, 1988

Paramunida longior Baba, 1988: 177, fig. 73.

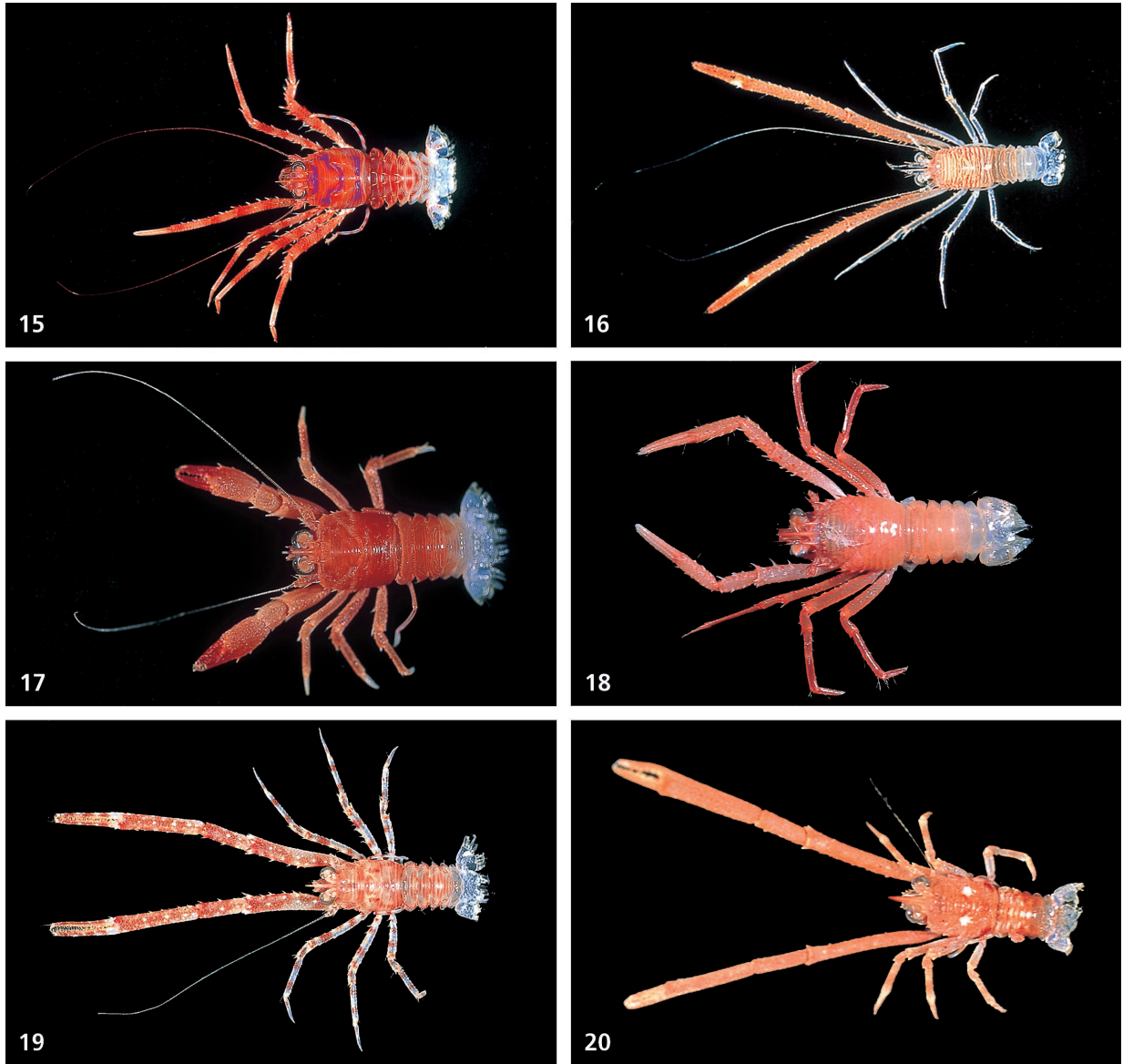
Paramunida longior – Macpherson 1993b: 454.

TYPE MATERIAL. — Philippines. *Albatross*: stn 5441, 16°38'N, 119°57'18"E, 340 m: holotype ♂ 10.1 mm (USNM 150403).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1505, 420-450 m: 1 ♂ 10.4 mm.

Tonga. BORDAU 2: stn 1511, 384-402 m: 1 ♂ 10.3 mm, 7 ovig. ♀ 7.8-10.1 mm; stn 1520, 447-450 m: 2 ♀ 7.0 and 8.4 mm; stn 1562, 417-424 m: 1 ♂ 9.5 mm, 1 ovig. ♀ 7.5 mm; stn 1568, 431 m: 3 ♂ 7.4-7.5 mm, 3 ovig. ♀ 7.8-8.6 mm; stn 1584, 439 m: 1 ♂ 4.8 mm; stn 1638, 469-520 m: 1 ♂ 11.3 mm.

DISTRIBUTION. — Philippines, Indonesia and New Caledonia, 250-502 m (Baba 1988; Macpherson 1993b); Fiji and Tonga, 384-520 m.



FIGS 15-20. **15**, *Agononida sabatesae* Macpherson, ovig. female, 14.9 mm, Tonga, 436-442 m. **16**, *Munida angusta* n. sp., holotype, male, 9.8 mm, Tonga, 384-402 m. **17**, *Munida cornuta* Macpherson, male, 12.5 mm, Tonga, 483-509 m. **18**, *Munida rufiantennulata* Baba, ovig. female, 8.3 mm, Fiji, 423-500 m. **19**, *Munida semoni* Ortmann, male, 9.0 mm, Tonga, 253-263 m. **20**, *Munida tuberculata* Henderson, male, 4.5 mm, Tonga, 461-497 m.

FIG. 15-20. **15**, *Agononida sabatesae* Macpherson, femelle ovigère, 14,9 mm, Tonga, 436-442 m. **16**, *Munida angusta* n. sp., holotype, mâle, 9,8 mm, Tonga, 384-402 m. **17**, *Munida cornuta* Macpherson, mâle, 12,5 mm, Tonga, 483-509 m. **18**, *Munida rufiantennulata* Baba, femelle ovigère, 8,3 mm, Fidji, 423-500 m. **19**, *Munida semoni* Ortmann, mâle, 9,0 mm, Tonga, 253-263 m. **20**, *Munida tuberculata* Henderson, mâle, 4,5 mm, Tonga, 461-497 m.

Paramunida pictura Macpherson, 1993

Paramunida pictura Macpherson, 1993b: 454, figs 4, 14.

Paramunida pictura – Macpherson 1996a: 416.

TYPE MATERIAL. — Chesterfield Islands. MUSORSTOM 5: stn 307, 22°11.1'S, 159°24.1'E, 345-350 m: holotype ♂ 9.5 mm (MNHN Ga 3235).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1417, 353 m: 6 ♂ 7.0-9.0 mm, 2 ovig. ♀ 9.1 and 9.3 mm, 1 ♀ 7.6 mm; stn 1434, 400-401 m: 1 ovig. ♀ 9.3 mm, 2 ♀ 9.2 and 9.3 mm; stn 1444, 398-409 m: 2 ♀ 9.1 and 9.8 mm; stn 1446, 350-367 m: 1 ovig. ♀ 8.0 mm; stn 1470, 316-323 m: 1 ♂ 7.6 mm; stn 1475, 321-424 m: 11 ♂ 5.7-9.8 mm, 4 ovig. ♀ 7.0-7.6 mm, 1 ♀ 5.8 mm; stn 1476, 310-420 m: 6 ♂ 4.0-9.5 mm, 5 ♀ 4.6-6.2 mm; stn 1481, 441-506 m: 1 ♂ 7.8 mm, 1 ♀ 7.1 mm; stn 1496, 392-407 m: 1 ♂ 7.2 mm.

Tonga. BORDAU 2: stn 1588, 630-710 m: 1 ovig. ♀ 10.2 mm; stn 1593, 436-442 m: 2 ♂ 8.2 and 10.4 mm, 1 ovig. ♀ 9.3 mm, 2 ♀ 8.6 and 8.9 mm; stn 1613, 331-352 m: 1 ovig. ♀ 6.6 mm.

DISTRIBUTION. — New Caledonia, Chesterfield Islands, Loyalty Islands, Matthew and Hunter islands and Wallis islands, 205-600 m (Macpherson 1993b, 1996a); Fiji and Tonga, 310-710 m.

Paramunida pronoe Macpherson, 1993

Paramunida pronoe Macpherson, 1993b: 458, fig. 6.

TYPE MATERIAL. — New Caledonia. MUSORSTOM 4: stn 238, 22°13.0'S, 167°14.0'E, 500-510 m: holotype ♀ 7.0 mm (MNHN Ga 3410).

OTHER MATERIAL EXAMINED. — Tonga. BORDAU 2: stn 1510, 461-497 m: 2 ovig. ♀ 7.0 and 7.5 mm; stn 1584, 439 m: 1 juv. 3.3 mm.

DISTRIBUTION. — New Caledonia, 500-510 m (Macpherson 1993b); Tonga, 439-497 m.

Paramunida setigera Baba, 1988

Paramunida setigera Baba, 1988: 181, figs 74, 75.

Paramunida setigera – Macpherson 1993b: 464.

TYPE MATERIAL. — Philippines. *Albatross*: stn 5117, 13°52'22"S, 120°46'22"E, 216 m: holotype ovig. ♀ 10.5 mm (USNM 150405).

OTHER MATERIAL EXAMINED. — Fiji. MUSORSTOM 10: stn 1318, 330-335 m: 12 ♂ 5.4-9.8 mm, 21 ovig. ♀ 8.3-9.2 mm, 4 ♀ 7.6-8.3 mm; stn 1320, 290-300 m: 15 ♂ 6.3-9.3 mm, 17 ovig. ♀ 6.0-9.5 mm, 3 ♀ 7.5-8.8 mm; stn 1322, 210-282 m: 1 ♂ 8.8 mm; stn 1325, 282-322 m: 18 ♂ 8.6-9.2 mm, 35 ovig. ♀ 7.5-9.4 mm, 4 ♀ 9.3-9.4 mm; stn 1326, 266-300 m: 2 ♂ 9.4 and 10.3 mm, 1 ovig. ♀ 9.6 mm, 1 ♀ 9.3 mm; stn 1348, 353-390 m: 15 ♂ 5.0-9.3 mm, 25 ovig. ♀ 6.9-9.3 mm; stn 1349, 244-252 m: 9 ♂ 5.7 and 9.0 mm, 6 ovig. ♀ 7.6-7.9 mm, 2 ♀ 8.0 and 9.2 mm; stn 1360, 402-444 m: 9 ♂ 8.7-9.6 mm, 6 ovig. ♀ 7.9-10.0 mm, 3 ♀ 7.3-9.3 mm; stn 1368, 380-469 m: 2 ♂ 8.8 and 8.9 mm, 5 ovig. ♀ 7.8 and 9.1 mm; stn 1369, 392-433 m: 3 ♂ 6.8-9.1 mm. — BORDAU 1: stn 1406, 360-380 m: 8 ♂ 7.7-10.3 mm, 6 ovig. ♀ 8.3-8.8 mm, 3 ♀ 9.1-9.2 mm; stn 1407, 499-527 m: 1 ♂ 9.7 mm.

DISTRIBUTION. — Philippines, Indonesia and New Caledonia, 134-865 m (Baba 1988; Macpherson 1993b); Fiji, 210-527 m.

Paramunida stichas Macpherson, 1993

Paramunida stichas Macpherson, 1993b: 465, figs 9, 15 (references and synonymy).

Paramunida stichas – Macpherson 1996: 417.

TYPE MATERIAL. — New Caledonia. CHALCAL 2: stn 73, 29°39.9'S, 168°38.1'E, 573 m: holotype ovig. ♀ 8.1 mm (MNHN Ga 3473).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1409, 557-558 m: 1 ♀ 6.9 mm; stn 1416, 441-450 m: 2 ♀ 8.2 and 11.3 mm; stn 1433, 488-500 m: 10 ♂ 9.1-11.4 mm, 10 ♀ 9.0-10.6 mm; stn 1434, 400-401 m: 3 ♂ 8.6-10.7 mm, 1 ovig. ♀ 10.5 mm, 4 ♀ 7.1-8.5 mm; stn 1444, 398-409 m: 4 ♂ 8.9-11.1 mm, 3 ovig. ♀ 10.3-10.7 mm, 1 ♀ 8.2 mm; stn 1481, 441-506 m: 3 ♂ 5.3-7.5 mm, 2 ♀ 6.2 and 8.8 mm; stn 1486, 395-540 m: 1 ♀ 8.5 mm.

Tonga. BORDAU 2: stn 1510, 461-497 m: 7 ♂ 9.2-12.1 mm, 5 ovig. ♀ 8.1-10.8 mm, 2 ♀ 6.4 and 10.4 mm, 1 juv. 5.3 mm; stn 1526, 463-464 m: 2 ♂ 8.4 and 8.6 mm, 4 ovig. ♀ 10.1-10.3 mm,

2 ♀ 5.5 and 8.8 mm; stn 1527, 483-509 m: 9 ♂ 6.4-10.5 mm, 7 ovig. ♀ 7.6-9.0 mm, 8 ♀ 7.6-9.4 mm, 2 juv. 4.5 and 5.6 mm; stn 1538, 471-508 m: 1 juv. 4.5 mm; stn 1543, 427-436 m: 1 ♂ 5.7 mm; stn 1545, 444-447 m: 3 ♂ 7.3-11.3 mm, 1 ovig. ♀ 9.4 mm; stn 1556, 589-591 m: 3 ovig. ♀ 8.9-10.4 mm, 1 ♂ 7.0 mm; stn 1593, 436-442 m: 20 ♂ 5.0-10.0 mm, 6 ovig. ♀ 8.4-9.3 mm, 16 ♀ 6.3-10.4 mm; stn 1596, 371-437 m: 4 ♂ 7.9-9.6 mm, 7 ovig. ♀ 8.6-11.3 mm, 1 ♀ 8.6 mm; stn 1621, 570-573 m: 3 ♂ 6.9-9.3 mm, 3 ovig. ♀ 7.4-11.5 mm, 1 ♀ 5.7 mm; stn 1638, 469-520 m: 2 ♂ 8.6 and 9.5 mm, 1 ♀ 6.4 mm; stn 1643, 487 m: 4 ♂ 8.2-11.8 mm, 1 ovig. ♀ 11.9 mm.

DISTRIBUTION. — Philippines, Indonesia, New Caledonia, and Wallis and Futuna area, 210-590 m (Henderson 1888; Macpherson 1993b, 1996a); Fiji and Tonga, 371-591 m.

Paramunida thalie Macpherson, 1993

Paramunida thalie Macpherson, 1993b: 467, figs 10, 16.

TYPE MATERIAL. — Loyalty Islands. MUSORSTOM 6: stn 417, 20°41.8'S, 167°03.6'E, 283 m: holotype ♀ 10.4 mm (MNHN Ga 3478).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1470, 316-323 m: 1 ♂ 8.7 mm; stn 1474, 316-340 m: 1 ♂ 8.4 mm; stn 1476, 310-420 m: 1 ♂ 10.1 mm, 1 ♀ 13.3 mm.

DISTRIBUTION. — Loyalty Islands, 245-283 m (Macpherson 1993b); Fiji, 310-420 m.

Genus ***Plesionida*** Baba & de Saint Laurent, 1996***Plesionida aliena*** (Macpherson, 1996)

Paramunida aliena Macpherson, 1996b: 429, fig. 3.

TYPE MATERIAL. — New Caledonia. MUSORSTOM 4: stn 200, 18°53.8'S, 163°14.1'E, 545 m: holotype ovig. ♀ 7.8 mm (MNHN Ga 3778).

OTHER MATERIAL EXAMINED. — Fiji. BORDAU 1: stn 1433, 488-500 m: 4 ♂ 7.5-9.8 mm, 1 ovig. ♀ 8.1 mm, 1 ♀ 7.8 mm. Tonga. BORDAU 2: stn 1545, 445-447 m: 1 ♀ 4.3 mm.

DISTRIBUTION. — New Caledonia, Fiji and Tonga, 445-545 m.

REMARKS. — This species was described from a unique ovigerous female taken off New Caledonia at 545 m. The study of additional material from Fiji and Tonga demonstrates the constancy of the characters recorded in the original description. On the other hand, the main characters of *P. aliena* suggest that the species should be included in the genus *Plesionida* rather than *Paramunida*. The general appearance of the carapace and abdominal somites, the shape of antennular and antennal peduncles, as well as the armature of the third maxilliped, chelipeds and walking legs, suggest that *P. aliena* is more closely related to *Plesionida psila* Baba & de Saint Laurent, 1996 (the monotypic type species) than to other species of the genus *Paramunida*.

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