

The crustaceans and pycnogonids of the Mariana Islands

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Abstract—The crustacean and pycnogonid fauna of the Mariana Islands is reviewed, and 839 crustacean and 15 pycnogonid species are documented from the archipelago based on literature records and new collections, including 272 new records. Voucher specimens are listed for 615 and photographic records (see <http://www.flmnh.ufl.edu/reefs>) for 358 species. The bulk of the fauna is marine, including 12 terrestrial and 12 freshwater decapods with marine larvae. Three copepods and 6 cladocerans comprise the known freshwater fauna, and 25 peracarids are currently documented on land. Coverage reflects a taxonomically uneven effort, and is strongly biased toward macrocrustaceans, with decapods accounting for 84% and crabs for 50% of the recorded marine crustacean diversity.

Introduction

The Mariana Islands form a chain of 15 major volcanic and limestone islands bordering the western margin of the Pacific plate between 13 and 21°N latitude

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(see Paulay 2003 for a more detailed description of the area). The archipelago is a classic island arc, formed by volcanic eruptions initiated by the subduction of the Pacific plate under the Philippine plate, on which the islands lie. The island group is composed of two geologically distinct chains, the volcanically-inactive and older islands of the Southern Mariana back-arc, extending from Guam to Farallon de Medinilla, and the volcanically-active, younger islands of the Northern Mariana fore-arc, extending from Anatahan to Uracas (Fig. 1). This geological separation should not be confused with the political division of the archipelago into the U.S. Territory of Guam, and the Commonwealth of the Northern Mariana Islands (CNMI) comprising all islands north of Guam. Thus, Rota, Tinian, Aguijan, Saipan and Farallon de Medinilla are part of the Southern Mariana back-arc but are under the jurisdiction of the CNMI.

The Southern Marianas were initiated ~43 Ma when the Pacific plate abruptly shifted spreading from NW to WNW. The archipelago has had a complex geological history since. The southern islands are composites of submarine and subaerial volcanics and marine sedimentary formations raised by uplift. Volcanic shorelines are uncommon while karstic shores of mostly Miocene to Pleistocene limestones dominate. Limestone cliffs line large tracks of shore, and reefs are generally narrow. Large sections of especially windward shores lack reef protection, with steep fore reefs abutting eroded cliffs, often fronted by supratidal limestone benches. Other areas have narrow, largely intertidal reef flats or shallow, moderately wide (100-1000 m) fringing reefs. Deep moat and lagoonal habitats are uncommon, the only significant ones being Apra Harbor and Cocos lagoon on Guam and Tanapag-Garapan lagoon on Saipan. Only Apra Harbor has substantial lagoonal habitats >10 m deep. Mangals are consequently poorly developed, and have undergone considerable reduction since the arrival of humans (Amesbury 1999). The main remaining mangals are in inner Apra Harbor and along the SW shore of Guam.

Subtidal habitats are dominated by oligotrophic reefs with interspersed sand pockets, with finer mobile sediments largely confined to small estuaries, Apra Harbor, and deep water. The fauna of soft bottoms remains poorly studied. The karstic limestones bordering and underlying reefs are riddled by caves and caverns both above and below water. Although marine caverns and crevices are fairly common, they are generally of limited horizontal extent. Large blocks fallen from cliff faces provide additional wall and crevice habitats. Rubble fields are also common, and have been the focus of considerable sampling that revealed a rich crustacean community, including many unusual, troglobitic forms living deep in rubble (e.g. Ng 2002b, Ng & Ng 2003, Ng & Takeda 2003).

The Northern Marianas are presently uninhabited, active, young volcanoes. They essentially lack reefs, having rocky shore and subtidal habitats with coral communities and incipient reefs growing on igneous outcrops and rubble. Consequently there are no lagoonal habitats except for the protected crater of Maug. Although poorly known, the biota of the Northern Marianas appears to be largely a less diverse version of that of the Southern Marianas, although some

species are clearly limited to the northern islands, likely specialized to uniquely northern habitats.

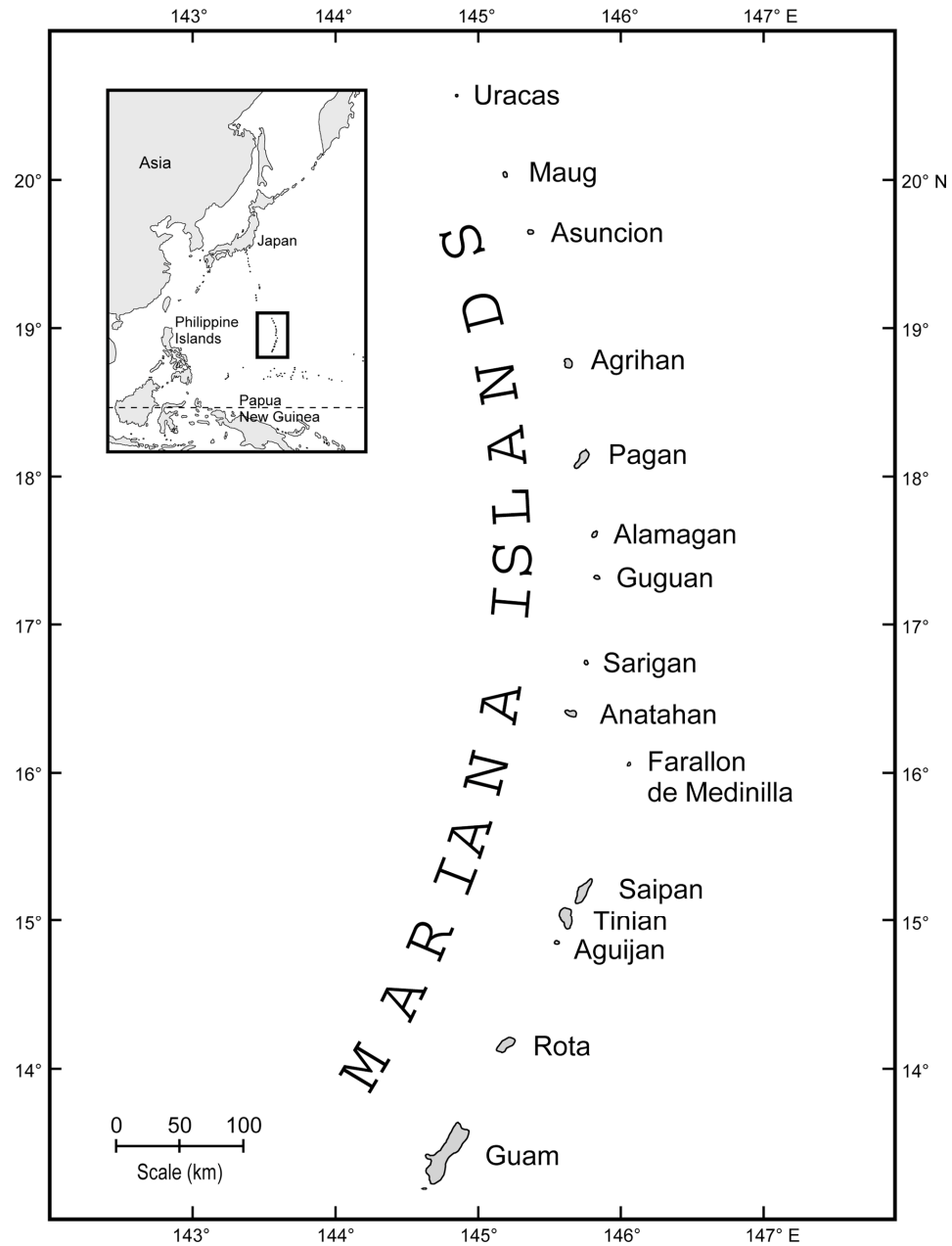


Figure 1. Map of the Mariana Islands.

CARCINOLOGICAL HISTORY

The first recorded collection of crustaceans from the Marianas was by Quoy & Gaimard (1824), who described the land crab *Thelphusa rotunda* (now *Discoplax rotundum*) and listed 5 additional species from Guam. In February 1900 the U.S.F.S. "Albatross" Expedition called on Guam, but only a single crab species (*Ocypode ceratophthalma*) was recorded from their visit (Rathbun 1907). William Edwin Safford, Assistant Botanist for the Department of Agriculture and Lieutenant U.S. Navy, was stationed on Guam between August 1899 to August 1900. He collected a number of crustaceans and wrote short notes on the crabs (Safford 1905). Alvin Seale of the U.S. War Department, spent several months on Guam in 1900, reported on the birds and fishes (Seale 1901), and deposited more than 30 lots of crustaceans in the Bishop Museum. Hans George Hornbostel, Lieutenant U.S. Naval Hospital, archaeologist, and collector for the Bishop Museum was on Guam between April 1922 and June 1928. He wrote primarily on archaeology, but also collected nearly 100 lots of crustaceans for the Bishop Museum. Naturalist Edwin H. Bryan Jr. collected extensively on Guam in 1936, his collections were also deposited at the Bishop Museum. In the wake of World War II Micronesia received considerable attention from the U.S. During 1951-1954, the U.S. Army Corps of Engineers and U.S. Geological Survey conducted field work on Guam for the "Military Geology of Guam", headed by Kenneth O. Emery. Substantial collections were made by several visitors at this time and deposited at the USNM; these served as the basis of subsequent studies on the marine biota (e.g. Stephenson & Rees 1967). A similar effort headed by Preston Cloud Jr. on Saipan in 1949 included an intensive survey of the marine biota. Cloud (1959) recorded 125 crustaceans, most identified to species by the authorities of the time, several of whom published papers based largely on this collection (Banner 1956, Holthuis 1953, 1981). Cloud's specimens, deposited at the USNM, have been the source of numerous Saipan records in subsequent taxonomic revisions as well (e.g. Chace & Bruce 1993, Clark & Galil 1993, Castro 2003).

Carcinological studies in the Marianas gained considerable momentum with the establishment of the University of Guam Marine Laboratory (UOGML) in 1970. Lu Eldredge was involved in a number of surveys focused both on shallow and deep water crustaceans, trained several M.S. students in carcinology, distributed material to specialists, and hosted visiting carcinologists. Deep-water marine resource surveys included an assessment of deep-water shrimp resources around Guam, funded by Sea Grant between 1973-1976 (Wilder 1977), and the Resource Assessment Investigation of the Mariana Archipelago (RAIOMA) of the National Marine Fisheries Service using the NOAA ship Townsend-Cromwell between May 1982 and June 1984 (Polovina et al. 1985). These efforts have led to a number of publications on the systematics and fisheries potential of deep-water crustaceans (Eldredge 1976, 1980, Wilder 1977, Moffitt 1983; King 1987, Williams & Moffitt 1991, Williams & Eldredge 1994). A visit by the submersible Alvin to the hydrothermal vents of the Mariana back arc resulted in

several papers on the crustacean biota of this isolated vent system (Hessler & Martin 1989, Humes 1990, Hessler & Lonsdale 1991, Child 1989), while a survey of the much shallower, hydrothermally-active volcano at Esmerelda Bank led to the record of two unusual decapods (Türkay & Sakai 1995).

Several graduate students have pursued carcinological theses at the University of Guam (Tseng 1972, Wortman 1976, Dickinson 1977, Wooster 1979, Kropp 1981, Donaldson 1981, Grimm 1983, Camacho 1997, Leberer 1997). Wooster's study culminated in a paper on the *Calcinus* fauna of Guam (Wooster 1982), while Leberer went on to review the taxonomy of the island's atyids (Leberer & Cai 2003). Roy Kropp and Jane Dominguez undertook an intensive collecting survey of the shallow water crustaceans of Guam; their large collection now at the USNM has been the basis of numerous publications (e.g. papers by Kropp and co-authors, Child 1991, Ahyong & Erdmann 2003, Tan & Ng 2003b).

During the 1990s the Gustav Paulay's laboratory has been active in marine biodiversity surveys on Guam. Material was collected during several organized surveys (see Paulay 2003), as well as incidentally by students, faculty, staff and friends of the University of Guam Marine Laboratory. Many specimens generated by these surveys have been sent to specialists for identification and study (e.g. McLay 2001, McLaughlin 2002a-b, Ng, 2002a-c). Harry Conley has contributed an especially large number of noteworthy specimens, collected from deep within rubble, a microhabitat whose exploration he pioneered. His collections have led to the discovery of numerous interesting new taxa (e.g. Kensley 2003, Ng et al. papers in this volume).

The Chiba Museum undertook an expedition to the Northern Marianas in 1992 and published a comprehensive checklist of their findings in a special volume, with several papers dealing with crustaceans (e.g. Asakura et al. 1994, Hayashi et al. 1994, Takeda et al. 1994, Asakura & Tachikawa 2000). Other visiting carcinologists also published on the fauna (e.g. Belk 1973, Odinetz 1984, Weissleader et al. 1989, Foster 1990, Asami & Yamaguchi 2001, Castro 2003). A visit by the third author and Chia-Hsiang Wang in 2000 led to a review of the crabs in the University of Guam's Invertebrate Collection, an effort that has already led to several papers that appear in this volume as well as many of the identifications listed in our checklist. A subsequent collecting visit by their team in 2001 together with ongoing studies of previously collected material (especially of the Grapsidae, Xanthidae and Parthenopidae) will undoubtedly lead to numerous studies on Guam's crustaceans in the future.

Methods

This paper is based on a compilation of records from the literature and identifications made on new collections. Both efforts are ongoing and certainly incomplete. Although we strove to check all papers dealing with the Micronesian fauna as well as major taxonomic revisions, additional records of the biota

undoubtedly appear in papers we did not consult. We did not include records listed in the voluminous gray literature of environmental surveys published on the area, as such records are usually difficult or impossible to verify. We have updated the nomenclature of literature records as much as possible; changes are given as notes in the Appendix. Numerous species listed here have not been previously recorded and comprise new additions to the Marianas' fauna. These are marked by the name of the identifier in the Appendix and identified with a specimen voucher and/or photograph.

New collections focused largely on stomatopods, decapods, and barnacles. Even among these groups efforts have been uneven, with larger species, crabs, hermit crabs, axiids, and lobsters receiving the greatest attention. Much of this material is housed at the Florida Museum of Natural History, University of Florida (UF), U.S. National Museum of Natural History, Smithsonian Institution (USNM), Zoological Reference Collection, Raffles Museum, National University of Singapore (ZRC), and the University of Guam (UGI). Most newly collected species were photo documented. Photo vouchers cited in the Appendix are available online at <http://www.flmnh.ufl.edu/reefs> and in the Marine Biodiversity of Guam CD-ROM co-publication.

In addition to the species listed here, numerous remain to be identified and the identification of many listed species improved. Work is ongoing on these and additions and modifications will be posted on the website as they are published. Major ongoing efforts include studies on barnacles (W. Newman, A. Ross), paguroids (P. McLaughlin), galatheoids (R. Kropp), and brachyurans (B. Galil, C. McLay, P. Ng et al.).

For the purposes of this checklist we define marine crustaceans as species that have at least one phase of their life cycle in the sea. These include all terrestrial and freshwater decapods in the Marianas, as all are known or presumed to have marine larvae. Truly terrestrial and freshwater crustaceans are listed below the marine taxa, and include isopods, talitrid amphipods, copepods, and cladocerans.

Results and Discussion

We documented 839 crustacean and 15 pycnogonid species from the Mariana Islands based on literature records and new collections supported by voucher specimens and/or photographic records (Tables 1, 2, Appendix). 483 species are based at least in part on literature records, 272 are recorded for the first time in this paper, while an additional 99 are new records from our recent biodiversity surveys that have been further documented in other papers in this volume, and in papers published recently or in press elsewhere.

358 species are photodocumented based on living or fresh specimens. 663 species are recorded from Guam, while the remainder only from the CNMI. Most of the species currently known only from the CNMI likely also occur on Guam, but remain undocumented there because of limited collecting or different

taxonomic emphasis. For example the alpheids of Saipan were reviewed in a substantial paper by Banner (1956), while those of Guam remain virtually unstudied.

Table 1. Diversity of marine arthropod taxa

Taxon	Number of spp.
Copepoda	4
Ostracoda	45
Amphipoda	17
Isopoda	3
Stomatopoda	36
Stenopodidea	1
Penaeoidea	4
Caridea	139
Palinura	11
Astacidea	2
Thalassinidea	16
Anomura	94
Brachyura	405
Ascothoracida	1
Cirripedia	27
Pycnogonida	15
TOTAL	820

The bulk (805 species) of the crustaceans are marine, including 12 species of land and hermit crabs with marine larvae and 12 species of anadromous decapods (Table 2). Three copepods and 6 cladocerans comprise the known freshwater fauna, and 25 species of peracarids are currently documented on land.

Taxonomic coverage is highly uneven, with macrocrustaceans comprising the vast majority of the records (Table 1). Thus decapods comprise 84% (674 species) and crabs 50% (405 species) of the marine crustaceans recorded. Other crustacean taxa remain poorly documented with the exception of stomatopods (36 species) and barnacles (27 species). For example only 20 peracarids and 4 copepods are currently recorded in the marine fauna. Even among decapods, coverage varies substantially among families, reflecting taxonomically focused collecting and study. Thus brachyurans have received much greater attention overall than carideans. Cryptochirids and porcellanids were intensively studied by Kropp, and are especially well known (see papers by Kropp et al.). The most species rich families are the Xanthidae (114 species), Alpheididae (61 species), Portunidae (55 species), Diogenidae (40 species), Palaemonidae (35 species), and Cryptochiridae (28 species).

Even groups that have been the focus of study harbor much undocumented diversity. Thus the known paguroid diversity of Guam has more than doubled (31 vs. 69 species) in the two decades following Wooster's (1979, 1982) thesis on the group, even though hermit crabs did not receive much specialized attention during this period.

It is difficult to estimate the actual diversity of marine arthropods in Guam or the Marianas, as even macrocrustaceans are but modestly known. Crabs are among the best studied overall, but the rapid rate of new encounters and backlog of unidentified material implies that perhaps not more than half of the crab diversity is currently documented. Decapod diversity as a whole will certainly much more than double with additional study and the diversity of microcrustaceans cannot be reliably estimated at present.

Table 2. Arthropod diversity by habitat

Habitat	Number of spp.
Shallow (<60m) marine	747
Deep (>60m) marine	49
Anadromous	12
Terrestrial with marine larvae	12
Freshwater	9
Terrestrial	25

Acknowledgements

We thank the students, faculty and staff at the UOG Marine Lab and naturalists from throughout the Marianas, especially Tim Allen, Scott Bauman, Ian Elliott, Bruce Henke, Lisa Kirkendale, Chris Meyer, Rob Myers, Raphael Ritson-Williams, Teina Rongo, John Starmer, and Linda Ward for bringing crustacean specimens, records, and photos to our attention. Special thanks to Harry Conley for his indefatigable collecting over the years. We thank Shane Ah Yong, Kiyoo Asami, Warren Blow, Yixiong Cai, Peter Castro, Tin-Yam Chan, Bill Dall, Mark Erdmann, Charles Fransen, Bella Galil, Yoshi Hisatsune, Brian Kensley, Hung-Chang Liu, Patsy McLaughlin, Colin McLay, Junji Okuno, John Starmer, Masatsune Takeda, and Chia-Hsiang Wang for help with identifications. We thank Rob Myers, Tim Allen, Hung-Chang Liu, and Ian Elliott for permission to use their photographs of species not otherwise recorded from Guam, and Alain Crosnier and Joseph Poupin for comments on the manuscript. Funding by the U.S. Dept. of Defense at COMNAVMARIANAS and NOAA Sea Grant (SG-NIS-35) to Gustav Paulay for biodiversity surveys is gratefully acknowledged. Contribution 485 of the University of Guam Marine Laboratory.

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Appendix: Checklist of the crustaceans and pycnogonids of the Marianas

Museum: vouchers specimens in AHF: Allan Hancock Foundation, now at Natural History Museum of Los Angeles County; AM: Australian Museum, Sydney; BMNH: The Natural History Museum (formerly British Museum of Natural History); BPPM: Bernice P. Bishop Museum, Honolulu; CBM: Natural History Museum and Institute, Chiba; KC: Roy Kropp Collection; to be deposited in an institutional collection in the future; MNHN: Muséum national d'Histoire naturelle, Paris; NNM: Nationaal Natuurhistorisch Museum, Leiden; NSMT: National Science Museum, Tokyo; SIO: Scripps Institution of Oceanography, La Jolla; SMF: Senckenberg Museum, Frankfurt; UF: Florida Museum of Natural History, University of Florida, Gainesville; UGI: University of Guam Invertebrate Collections; USNM: US National Museum of Natural History, Washington DC; USNPC: US National Parasite Collection, National Museum of Natural History, Washington; YPM: Yale University Peabody Museum of Natural History, New Haven; ZRC: National University of Singapore, UF/ZRC: specimen deposition undecided but will be UF and/or ZRC. Vouchers are from Guam unless parenthetically indicated otherwise; see under "Island" below for key to island name abbreviations.

Hab: Habitat: 1: marine, 0-60m, 2: marine, 60-200m, 3: marine, >200m, FW: freshwater, T: terrestrial

Island: Ag: Agrihan, Al: Alamagan, An: Anatahan, Ar: Arakane Reef, As: Asuncion, CNMI: Commonwealth of the Northern Mariana Islands, island unspecified, E: Esmeralda Bank, G: Guam, Gu: Guguan, M: Maug, MS: Mariana Islands, island unspecified, MTV: Mariana Trough vents, P: Pagan, R: Rota, S: Saipan, Sa: Sarigan, T: Tinian, U: Uracas.

Refs: References listed at end of Appendix

Notes: listed at end of Appendix

Taxon	Museum	Refs	Photo	Notes	Hab	Island
MARINE TAXA						
COPEPODA: DIRIVULTIDAE						
<i>Chasmatopontius thescalus</i> Humes, 1990		1, 2		3		MTV
<i>Sygiopontius pectinatus</i> Humes, 1987		2		3		MTV
<i>Sygiopontius stabilitus</i> Humes, 1990		1, 2		3		MTV
COPEPODA: ERGASILIDAE						
<i>Paeonodes subviridis</i> El-Rashidy & Boxshall, 2001	BMNH 1999.1529 (holotype)	140		1		G
OSTRACODA: PODOCOPIDA						
<i>Bair-doppilata cratericola</i> Maddocks, 1969		3		1		G
<i>Bishopina timorensis</i> (Fyan, 1916)		3		1		G
<i>Bosasella</i> cf. <i>macroloba</i> (Hu, 1981)		3		1		G
<i>Bythocypris</i> aff. <i>prolata</i> Maddocks, 1969		3		1		G
<i>Callistocythere arcuata</i> Bonaduce et al., 1980		3		1		G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Callistocythere</i> cf. <i>kejiii</i> (Hartmann, 1978)		3			1	G
<i>Caudites exmouthensis</i> Hartmann, 1978		3			1	G
<i>Cletocythereis rastromarginata</i> (Brady, 1880)		3			1	G
<i>Cytherelloida</i> sp. B		3			1	G
<i>Cytherelloida</i> sp. E		3			1	G
<i>Hemicythere</i> sp. B		3			1	G
<i>Hemicytherura</i> sp. 1		3		1	1	G
<i>Hermanites deltoidea</i> (Brady, 1890)		3			1	G
<i>Hermanites transoceanica</i> Teeter, 1975		3			1	G
<i>Keijia foveata</i> (Hartmann, 1978)		3			1	G
<i>Loxoconcha heronislansensis</i> Hartmann, 1981		3			1	G
<i>Loxoconcha hualineensis</i> Hartmann, 1984		3			1	G
<i>Loxoconcha</i> sp. 1		3		2	1	G
<i>Loxoconcha turnerae</i> Watson, 1988		3			1	G
<i>Loxoconchella anomala</i> (Brady, 1880)		3			1	G
<i>Loxoconchella</i> cf. <i>malaysiana</i> Keij, 1978		3			1	G
<i>Morkhovenia inconspicua</i> (Brady, 1880)		3			1	G
<i>Mydinobairdia schyroconcha</i> (Maddocks, 1969)		3			1	G
<i>Neonesidea</i> cf. <i>arenigera</i> Maddocks, 1969		3			1	G
<i>Neonesidea lentifila</i> Hartmann, 1984		3			1	G
<i>Neonesidea schulzi</i> (Hartmann, 1964)		3			1	G
<i>Ornatoleberis</i> sp. 1		3		3	1	G
<i>Paracytheridea</i> cf. <i>dissecta</i> Hu, 1983		3			1	G
<i>Paracytheridea tschoppi</i> Bold, 1946		3			1	G
<i>Paranesidea</i> cf. <i>algicola</i> Maddocks, 1969		3			1	G
<i>Paranesidea</i> sp. A		3			1	G
<i>Paranesidea spongicola</i> Maddocks, 1969		3			1	G
<i>Ponticytheres ichtyoderma</i> (Brady, 1890)		3			1	G
<i>Proponotocypris</i> sp. A		3			1	G
<i>Proponotocypris</i> sp. B		3			1	G
<i>Pterobairdia maddocksae</i> McKenzie & Keij, 1977		3			1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Radimella</i> sp. A		3			1	G
<i>Renadicypris? natans</i> Hartmann, 1984		3			1	G
<i>Saipanetta claudi</i> (McKenzie, 1967)	USNM 113437 (holotype, S)	132		68	1	S
<i>Semicytherura</i> cf. <i>cryptifera</i> (Brady, 1880)		3			1	G
<i>Tanella</i> cf. <i>gracilis</i> Kingma, 1948		3			1	G
<i>Triebelina bradyi</i> Triebel, 1948		3			1	G
<i>Triebelina sertata</i> Triebel, 1948		3		4	1	G
<i>Triebelina</i> sp. 1		3			1	G
<i>Xestoleberis</i> spp.						
AMPHIPODA: AMPHILOCHIDAE						
<i>Gitanopsis</i> sp. 1		4			1	M
AMPHIPODA: AMPITOIDAE						
<i>Ampithoe ramondi</i> Audouin, 1826		5			1	S
<i>Ampithoe</i> sp. 1		4			1	M
<i>Ampithoe</i> sp. 2		4			1	Gu
<i>Ampithoe</i> sp. 3		4			1	M
<i>Grubia filosa</i> (Savigny, 1826)		5			1	S
<i>Paradusa</i> sp. 1		4			1	M
AMPHIPODA: COLOPHIIDAE						
<i>Gammaropsis</i> sp. 1		4			1	M
AMPHIPODA: GAMMARIDAE						
<i>Ceradocus rubromaculatus</i> (Stimpson, 1855)		5			1	S
<i>Erasmops</i> sp. 1		4			1	M
<i>Maera insignis</i> (Chevreux, 1901)		5			1	S
<i>Maera</i> sp. 1		4			1	M
AMPHIPODA: HYALIDAE						
<i>Hyale</i> sp. 1		4			1	M
<i>Hyale</i> sp. 2		4			1	M
<i>Hyale</i> sp. 3		4			1	M
AMPHIPODA: ISCHYROCIDAE						
<i>Ambicholestes squamiferus</i> (Just, 1984)	UGI (paratype)	6			1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
AMPHIPODA: LEUCOTHOIDAE						
<i>Leucothoe</i> sp. 1		4			1	M
ISOPODA: CYMOTHOIDAE						
<i>Ceratothoa angulata</i> (Richardson, 1910)	USNPC 088995	7			1	G
<i>Cymothoa bychowyskyi</i> Avdeev, 1979	USNPC 088996	7			1	G
<i>Eithusa raynaudii</i> (Milne-Edwards, 1840)	USNPC 088997	7			1	G
STOMATOPODA: BATHYSQUILLIDAE						
<i>Bathysquilla microps</i> (Manning, 1961)	USNM 228146	8,9			3	G
STOMATOPODA: CORONIDIDAE						
<i>Mortensenenus paulay</i> Ahyong & Erdmann, 2003	AM P (holotype, M)	9			1	M
<i>Neocoronida martensi</i> Manning, 1978	AM P	9			1	M
STOMATOPODA: EURYSQUILLIDAE						
<i>Manningia zehntneri</i> Manning, 1974	USNM 307137	9			1	G
STOMATOPODA: GONODACTYLIDAE						
<i>Gonodactylaceus falcatus</i> (Forsskal, 1775)	UF 265, USNM 304400	5, 9, 10	GP694-14	5	1	G, S
<i>Gonodactylaceus tematensis</i> (de Man, 1902)	USNM 304416	9			1	G
<i>Gonodactylellus erdmanni</i> Ahyong, 2001	USNM 304403, USNM 304653 (R)	9			1	G, R
<i>Gonodactylellus espinosus</i> (Borradaile 1898)	USNM 304445	9			1	G
<i>Gonodactylus micronesianus</i> (Manning, 1971)	USNM 304408	9			1	G
<i>Gonodactylus childi</i> Manning, 1971	USNM 304444	9	RFM		1	G
<i>Gonodactylus chiragra</i> (Fabricius, 1781)	UF 239, USNM 304489	5, 9, 10	GP359-21		1	G, S
<i>Gonodactylus platysoma</i> Wood-Mason, 1895	UF 233, USNM 304455	9, 11	GP464-10	6	1	G
<i>Gonodactylus smithii</i> Pocock, 1893	UF 235, USNM 304453	9	GP404-30		1	G
<i>Hoplosquilla said</i> Erdmann & Manning, 1998	USNM 306080	9			1	G
STOMATOPODA: INDOSQUILLIDAE						
<i>Indosquilla manihinei</i> Ingle & Merrett, 1971	USNM 233477, USNM 228417 (P)	8, 9			3	G, P
STOMATOPODA: LYSIOSQUILLIDAE						
<i>Lysiosquillina maculata</i> (Fabricius, 1793)	UF 232, USNM 304425	9			1	G
<i>Lysiosquillina sulcata</i> (Manning, 1978)		12	RFM 226		1	G, S

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
STOMATOPODA: NANNOSQUILLIDAE						
<i>Pullosquilla litoralis</i> (Michel & Manning, 1971)	USNM 304502	9			1	G
<i>Pullosquilla malayensis</i> (Manning, 1968)	USNM 304529	9			1	G
<i>Pullosquilla thomassini</i> Manning, 1978	USNM 304500	9			1	G
STOMATOPODA: ODONTODACTYLIDAE						
<i>Odontodactylus scyllarus</i> (Linnaeus, 1758)	USNM 304435	9	RFM 98a		1	G
STOMATOPODA: PROTOSQUILLIDAE						
<i>Chorisquilla gyrosa</i> (Odhner, 1923)	USNM 304448	9	RK		1	G
<i>Chorisquilla kroppi</i> Ah Yong & Erdmann, 2003	USNM 304499 (holotype)	9			1	G
<i>Echinosquilla guerini</i> (White, 1861)	USNM 304424	9	RK		1	G
<i>Haptosquilla glyptocercus</i> (Wood-Mason, 1875)	UF 237, USNM 120271	9	GP467-33		1	G
<i>Haptosquilla tanensis</i> (Fukuda, 1911)	Neotype: USNM 304475	9			1	G
STOMATOPODA: PSEUDOSQUILLIDAE						
<i>Pseudosquilla ciliata</i> (Fabricius, 1787)	USNM 304428	9	RFM 206b		1	G
<i>Pseudosquilla ornata</i> Miets, 1880		5, 10			1	S
<i>Pseudosquillana richeri</i> (Moosa, 1991)	USNM 304432	9			1	G
<i>Raoulserenea hieroglyphica</i> (Manning, 1972)	USNM 304427	9			1	G
<i>Raoulserenea komaii</i> (Moosa, 1991)	UF 236, USNM 304430	9	GP650-32		1	G, As, M, Ag
<i>Raoulserenea oxyrhyncha</i> (Borradale, 1898)	USNM 304426	9			1	G
STOMATOPODA: SQUILLIDAE						
<i>Leptosquilla schmeltzii</i> (A. Milne-Edwards, 1873)	USNM 304446	9			1	G
<i>Oratosquilla fabricii</i> (Holthuis, 1941)	USNM 304447	9	GP396-30		1	G
<i>Parvisquilla dominguez Ah Yong & Erdmann, 2003</i>	USNM 304525 (holotype)	9			1	G
STOMATOPODA: TAKUIDAE						
<i>Mesacturus dtrurus</i> Kropp & Dominguez, 1990	USNM 244236 (holotype), USNM 244238 (paratype, S)	9, 13, 14			1	G, S, M
STENOPODIDEA: STENOPODIDAE						
<i>Stenopus hispidus</i> (Olivier, 1811)	USNM 171598, BPBM 2873	5, 10, 15	GP516-23		1	G, S, Gu, P, M

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
PENAEOIDEA: PENAEIDAE						
<i>Metapenaeopsis commensalis</i> Borradaile, 1898	UF 891	D	GP264-14		1	G
<i>Penaeus monodon</i> Fabricius, 1798		16		7	1	G
<i>Litopenaeus stylirostris</i> (Stimpson, 1874)		16		7, 69	1	G
<i>Litopenaeus vannaemeyi</i> (Boone, 1931)		17		7	1	G
CARIDEA: ALPHEIDAE						
<i>Alpheopsis diabolus</i> Banner, 1956	USNM (holotype, S)	18		8	1	S
<i>Alpheopsis equalis</i> Coutière, 1896	NNM D-48087 (As)	5, 18			1	As, S
<i>Alpheopsis tetraarthri</i> Banner, 1956	USNM (holotype, S)	18			1	S
<i>Alpheus bidens?</i> (Olivier, 1811)		15			1	Gu
<i>Alpheus bradypus</i> Coutière, 1905		18			1	S
<i>Alpheus brevipes</i> Stimpson, 1860	USNM	5, 18			1	S
<i>Alpheus bucephalus</i> Coutière, 1905	USNM	5, 18			1	S
<i>Alpheus cf. crinitus</i> Dana, 1852		15			1	Ag
<i>Alpheus chamorro</i> Banner, 1956	USNM (holotype, S)	18			1	S
<i>Alpheus coetivensis</i> Coutière, 1908		18		9	1	S
<i>Alpheus collumianus</i> Stimpson, 1860	NNM D-48070 (As), UGI 6629 (CNMI)	5, 18		10	1	As, S
<i>Alpheus crockeri</i> (Armstrong, 1941)	NNM D-48068 (As), UGI 6628 (CNMI)	18		11	1	As, S
<i>Alpheus deuteropus</i> Hilgendorf, 1878	UF 829, USNM 233401	5, 18	GP758-11		1	G, S
<i>Alpheus diadema</i> Dana, 1852	NNM-D48076 (Ag)	5, 18			1	Ag, S
<i>Alpheus doleris</i> Banner, 1956	USNM (holotype, S)	18			1	S
<i>Alpheus eulimene</i> de Man, 1911	USNM	5, 18			1	S
<i>Alpheus frontalis</i> H. Milne Edwards, 1837	UF 825, NNM D-48074 (Al)	15, 18	GP454-17		1	G, Al, S, P, M
<i>Alpheus gracilipes</i> Stimpson, 1860	USNM	5, 18			1	S
<i>Alpheus gracilis</i> Heller, 1862		18		12	1	S
<i>Alpheus haani</i> Ortmann, 1890		5			1	S
<i>Alpheus idiocheles</i> Coutière, 1905	USNM 255980	5, 18, 19		13	1	G, S
<i>Alpheus ladronis</i> Banner, 1956	USNM (holotype, S)	18			1	S

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Alpheus leptochirus</i> Coutière, 1905		18			1	S
<i>Alpheus lottini</i> Guérin, 1829	UF 939 (AI), UF 985 (As), UF 828, UGI 6627 (CNMI), NNM-D48064 (Ag), BPBM	5, 15, 18	GP784-26	14	1	G, Ag, AI, An, As, S
<i>Alpheus lutini</i> Coutière, 1905	USNM	5, 18			1	S
<i>Alpheus malleodigitus</i> (Bate, 1888)	UF 826, USNM 223423	5, 18, 19		15	1	G, S
<i>Alpheus microstylus</i> (Bate, 1888)	USNM	5, 18			1	S
<i>Alpheus oahuensis</i> (Banner, 1953)		18			1	S
<i>Alpheus obesomanus</i> Dana, 1852	USNM 255979	15, 19			1	G, M
<i>Alpheus ovaliceps</i> Coutière, 1905		18			1	S
<i>Alpheus pachychirus</i> Stimpson, 1860	USNM	5, 18			1	S
<i>Alpheus pacificus</i> Dana, 1852		15, 18			1	S, Gu, AI, M
<i>Alpheus paracrinus</i> Miers, 1881	USNM	5, 18		16	1	S
<i>Alpheus parvirostris</i> Dana, 1852	USNM	5, 18			1	S
<i>Alpheus percyi</i> Coutière, 1908		15		17	1	As
<i>Alpheus perplexus</i> Banner, 1956	USNM (holotype, S)	18, 20			1	G, S
<i>Alpheus rapax</i> Fabricius, 1798	BPBM S6850	18			1	G
<i>Alpheus stanleyi</i> Coutière, 1908		18		19	1	S
<i>Alpheus staphylianus</i> Coutière, 1908	UGI 6622 (CNMI)	F			1	CNMI
<i>Alpheus sulcatus</i> Kingsley, 1878	NNM D-48075 (AI)	F			1	AI
<i>Alpheus superciliaris</i> Coutière, 1905	UF 962 (Ag), UF 961 (As), UF 960 (M), NNM D-48078 (As)	F			1	As, M, Ag
<i>Alpheus</i> sp. 1 (n. sp.)		18			1	S
<i>Alpheus</i> sp. 2 (n. sp.)		18			1	S
<i>Alpheus</i> sp. 3 (n. sp.)		18			1	S
<i>Alpheus</i> sp. 4 (n. sp.)		18		18	1	S
<i>Arete iphianassa</i> de Man, 1910	USNM	5, 18			1	S
<i>Athanas areleformis</i> Coutière, 1903		15, 18		20	1	M, S
<i>Athanas djiboutiensis</i> Coutière, 1897	USNM	5, 18			1	S

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Athanas dorsalis</i> (Stimpson, 1861)	UF 968 (M), BPBM, NNM D-48088 (As)	F			1	G, As, M, Ag
<i>Athanas dubius</i> Banner, 1956	USNM (holotype, S), BPBM	18			1	G, S
<i>Automate dolicognatha</i> de Man, 1888	USNM	5, 15, 18		21	1	Ag, S
<i>Automate johnsoni</i> Chace, 1955	USNM	18			1	S
<i>Metalpheus paragracilis</i> (Coutière, 1897)	NNM D-48086 (M)	5, 18		22	1	M, S
<i>Metalpheus rostratipes</i> (Pocock, 1890)		5, 15, 18		23	1	M, U
<i>Racilius compressus</i> Paulson, 1875		15			1	Ag
<i>Synalpheus tumidomanus</i> (Paulson, 1875)		15			1	Gu, M
<i>Synalpheus anceps</i> Banner, 1956	USNM (holotype, S), BPBM	18			1	G, S
<i>Synalpheus charon</i> (Heller, 1861)	BPBM, NNM D-48084 (Ag)	15, 18		24	1	G, Ag, M, S
<i>Synalpheus exilipes</i> Coutière, 1905	USNM	18		25	1	S
<i>Synalpheus paraneomeris</i> Coutière, 1905	NNM D-48082 (As)	5, 15, 18			1	As, S, M
<i>Synalpheus stimpsonii</i> (de Man, 1888)	NNM D-48085 (As)	F	GP830-3		1	G, As
CARIDEA: ATYIDAE						
<i>Antecaridina lauensis</i> Edmondson, 1935	UF/ZRC	21				G
<i>Aryoida pilipes</i> (Newport, 1847)	UF 812	21				FW G
<i>Caridina brachydactyla</i> (de Man, 1908)	UF/ZRC	21				FW G
<i>Caridina mertoni</i> Roux, 1911	UF/ZRC	21				FW G
<i>Caridina typus</i> H. Milne Edwards, 1837	UF/ZRC	21				FW G
<i>Halocaridinides</i> sp. 1 (n. sp.)	UF/ZRC	21				FW G
CARIDEA: BRESILIIDAE						
<i>Chorocaris vandoverae</i> Martin & Hessler, 1990	USNM 94774 (holotype, S)	2, 22			3	MTV
<i>Discias musicus</i> Holthuis, 1981		5, 10, 24		26	1	S
CARIDEA: GNATHOPHYLLIDAE						
<i>Gnathophyllum americanum</i> Guérin-Méneville, 1855	UF 456, BPBM	5, 10	GP363-27		1	G, S
<i>Gnathophyllum precipuum</i> Titgen, 1989	UF 808	P			1	G
<i>Pycnocaris chagoae</i> Bruce, 1972	NNM D-48092	F	GP415-18		1	G
CARIDEA: HIPPOLYTIDAE						
<i>Thinora maldivensis</i> (Borradaile, 1915)		5, 10			1	S
<i>Hippolyte edmondsoni</i> Hayashi, 1982		15			1	Gu

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Hippolyte</i> sp. 1	UF 819	F			I	G
<i>Lysmata amboinensis</i> (de Man, 1888)		P	RFM		I	G
<i>Lysmata</i> sp. 1	UF 884	F	GP778-36		I	G
<i>Parhippolyte misticia</i> (Clark, 1989)	UF 807	P	GP826-1		I	G
<i>Saron marmoratus</i> (Olivier, 1811)	?UF 457	5, 10	GP516-28		I	G, S
<i>Saron neglectus</i> de Man, 1902		5, 10			I	S
<i>Saron</i> sp. 1	USNM?	P	RK		I	G
<i>Thor amboinensis</i> (de Man, 1888)	UF 821	P	RFM-186a		I	G
<i>Thor paschalis</i> (Heller, 1862)		5, 10, 25			I	S
CARIDEA: HYMENOCERIDAE						
<i>Hymenocera picta</i> Dana, 1852	UF 822	P	GP653-31		I	G
CARIDEA: PALAEMONIDAE						
<i>Brachycarpus biunguiculatus</i> (Lucas, 1846)	UF 935, NNM D-48096 (As)	F			I	G, As
<i>Conchodytes meleagrinae</i> Peters, 1852	NNM D-48095	F			I	G
<i>Coralliocaris graminea</i> (Dana, 1852)	UF 842	F	GP821-37		I	G
<i>Coralliocaris superba</i> (Dana, 1852)	NNM D-48066	5, 10			I	S
<i>Dactyлонia ascidicola</i> (Borradaile, 1898)	NNM D-48065	134			I	G
<i>Exopontonia malleatrix</i> Bruce, 1988		F			I	G
<i>Harpiliopsis beaupresii</i> (Audouin, 1826)		15			I	M
<i>Harpiliopsis depressa</i> (Stimpson, 1860)		15			I	M, Gu
<i>Harpiliopsis spinigera</i> (Ortmann, 1890)	NNM D-48079 (Ag)	F			I	Ag
<i>Ischnopontonia lophos</i> (Barnard, 1962)		15			I	Ag
<i>Jocaste japonica</i> (Ortmann, 1890)		15			I	Ag
<i>Jocaste lucina</i> (Nobili, 1901)		5, 10			I	S
<i>Leander plumosus</i> Bruce, 1993		P	TA 1999		I	G
<i>Leander tenuicornis</i> (Say, 1818)	UF 818, NNM D-48093 (S)	F	GP410-11		I	G, S
<i>Macrobrachium equidens</i> (Dana, 1852)	ZRC	N			I	G
<i>Macrobrachium lar</i> (Fabricius, 1798)	BPBM-S 117	27, 136			FW	G
<i>Macrobrachium rosenbergii</i> (de Man, 1879)		16		7	FW	G
<i>Macrobrachium</i> sp. 1		26		27	FW	G
<i>Onyccaris quadratophthalma</i> (Balss, 1921)		15			I	M

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Palaeon debilis</i> Dana, 1852		28			1	G
<i>Palaeonella rotumana</i> (Borradaile, 1898)		5, 10		28	1	S
<i>Palaeonella spinulata</i> Yokoya, 1936		15			1	Ag
<i>Pericimenaes quadridentatus</i> (Rathbun, 1906)		5, 10			1	S
<i>Pericimenaes tridentatus</i> (Miers, 1884)		10, 29			1	S
<i>Pericimella spinifera</i> (de Man, 1902)	NNMD-48067, UGI 6064	5, 10	GP363-37	29	1	G, S
<i>Pericimenes brevicarpalis</i> (Schenkel, 1902)	UF 905?	P	GP785-10		1	G
<i>Pericimenes elegans/grandis</i> (Paulson, 1875)/(Stimpson, 1860)	NNMD-48073	F	GP513-23		1	G
<i>Pericimenes imperator</i> (Schenkel, 1880)	UF 841, NNM D-48094	F	RFM 5-98		1	G
<i>Pericimenes soror</i> Nobili, 1904	NNMD-48071, UF 3031	30	GP739-18		1	G
<i>Pericimenes</i> sp. 1 (n. sp. aff. <i>holthuisi</i>)	UF 838	F	GP840-17		1	G
<i>Pliopontonia furtiva</i> Bruce, 1973	UF 843	F	GP741-19		1	G
<i>Pontonopsis comanthi</i> Borradaile, 1915		5, 10, 29			1	S
<i>Stegopontonia commensalis</i> Nobili, 1906		P	GP518-20		1	G
<i>Urocaridella antonbruunii/cyrtorhyncha</i> (Bruce, 1967) / Fujino & Miyake, 1969	UF 813	O	GP413-25		1	G
<i>Vir orientalis</i> (Dana, 1852)		5, 10, 29			1	S
CARIDEA: PANDALIDAE						
<i>Heterocarpus dorsalis</i> Bate, 1888		31			3	MS
<i>Heterocarpus ensifer</i> A. Milne Edwards, 1881		31, 32			3	G
<i>Heterocarpus gibbosus</i> Bate, 1888	USNM 233349	31			3	MS
<i>Heterocarpus laevigatus</i> Bate, 1888		31, 32			3	G
<i>Heterocarpus lepidus</i> de Man, 1917		31			3	MS
<i>Heterocarpus longirostris</i> MacGillchrist, 1905		31, 33			3	MS
<i>Heterocarpus sibogae</i> de Man, 1917		31			3	MS
<i>Heterocarpus tricarminatus</i> Alcock & Anderson, 1894		31			3	MS
<i>Plesionika edwardsii</i> (Brandt, 1851)		31			3	MS
<i>Plesionika ensis</i> (A. Milne Edwards, 1881)		31			3	MS
<i>Plesionika martia</i> (A. Milne Edwards, 1883)		31			3	MS
<i>Plesionika ocellus</i> (Bate, 1888)		31			3	MS

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
CARIDEA: PROCESSIDAE						
<i>Nikoidea sibogae</i> de Man, 1918		5, 25			1	S
<i>Nikoidea steinii</i> (Edmondson, 1935)		5, 10		30	1	S
CARIDEA: RHYNCHOCINETIDAE						
<i>Cinetorhynchus concolor</i> (Okuno, 1994)		O	GP815-21		1	G
<i>Cinetorhynchus hawaiiensis</i> Okuno & Hoover, 1998		O	GP648-8		1	G
<i>Cinetorhynchus hendersoni</i> (Kemp, 1925)		O	GP648-19		1	G
<i>Cinetorhynchus hiattii</i> (Holthuis & Hayashi, 1967)	?UF 824	34	GP815-2		1	G
<i>Cinetorhynchus reticulatus</i> Okuno, 1997	UF 903	O	GP516-25		1	G
<i>Cinetorhynchus striatus</i> (Nomura & Hayashi, 1992)		O	GP816-15		1	G
PALINURA: PALINURIDAE						
<i>Justitia longimanus</i> (H. Milne Edwards, 1837)	UF 563	P			2	G
<i>Palibythus magnificus</i> Davie, 1990	UF 1003	P	GP422-26		2	G
<i>Palinurellus wieneckii</i> (de Man, 1881)	UF 1234	P	GP826-10		1	G
<i>Panulirus femoristriga</i> (Von Martens, 1872)	UF 894, UGI 2960	P			1	G
<i>Panulirus longipes bispinosa</i> Borradaile, 1899	UF 705	P	GP826-8		1	G
<i>Panulirus ornatus</i> (Fabricius, 1798)		P	IE		1	G
<i>Panulirus penicillatus</i> (Olivier, 1791)	UGI 2959	15	GP812-29		1	G, M
<i>Panulirus versicolor</i> (Latreille, 1804)	UGI 2961	P			1	G
PALINURA: SCYLLARIDAE						
<i>Biarctus vitiensis</i> (Dana, 1852)	UF 2282	C	GP818-9		1	G
<i>Galearcus aurora</i> Holthuis, 1981	UF 2281	C	GP422-7		2	G
<i>Parribacus antarcticus</i> (Lund, 1793)	UF 895, BPBM	P	GP816-4		1	G
ASTACIDEA: ENOPLOMETOPIDAE						
<i>Enoplometopus holthuisi</i> Gordon, 1968		P	GP826-5		1	G
<i>Enoplometopus occidentalis</i> (Randall, 1840)		P	GP815-17		1	G
THALASSINIDEA: AXIIDAE						
<i>Allaxius clypeatus</i> (de Man, 1887)	USNM 243494	35			1	G
<i>Allaxius picteti</i> (Zehntner, 1894)	UF 468, USNM 243502	35	GP764-17		1	G
<i>Axiopsis pica</i> Kensley, 2003	USNM 296400 (holotype)	35	GP574-25		1	G
<i>Axiopsis</i> sp. 1 (aff. <i>pica</i> Kensley, 2003)	UF 59	P	GP864-13	31	1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Axiopsis serratifrons</i> (A. Milne Edwards, 1873)	USNM 243362	35	GP249-38		I	G
<i>Bouvieraxius springeri</i> Kensley, 1996	UF 58, USNM 296398	35	GP527-5		I	G
<i>Manaxius pitatucensis</i> (de Man, 1925)	USNM 243378	35			I	G
<i>Marianaxius kropki</i> Kensley, 1996	USNM 243530 (holotype)	35, 36			I	G
<i>Parascytoleptus tridens</i> (Rathbun, 1906)	USNM 239352	35			I	G
<i>Paraxiopsis bisquamosa</i> (de Man, 1905)		5, 10, 35			I	S
<i>Paraxiopsis paulayi</i> Kensley, 2003	USNM 296395 (holotype)	35	GP543:12		I	G
<i>Paraxiopsis plumosimanus</i> Kensley, 2003	USNM 296394 (holotype)	35			I	G
THALASSINIDEA: CALLIANASSIDAE						
<i>Corallichirus bayeri</i> Kensley, 2001	USNM 310677 (holotype), UF 1227	37			I	G
<i>Paraglypturus calderus</i> Türkay & Sakai, 1995		38			I	E
THALASSINIDEA: CALLIANIDEIDAE						
<i>Callianidea typa</i> H. Milne Edwards, 1837	UF 470, USNM 243605, BPBM 39, 40	39, 40	GP275-19		I	G, P
THALASSINIDEA: STRATHLAXIIDAE						
<i>Neaxius acanthus</i> (A. Milne Edwards, 1879)	UF 142, USNM 243604	5, 10, 35	GP575-4	32	I	G, S
ANOMURA: ALBUNEIDAE						
<i>Albunea speciosa</i> Dana, 1852	UF 3117	P			I-2	G
ANOMURA: COENOBITIDAE						
<i>Birgus latro</i> (Linnaeus, 1767)	ZRC	5, 40, 41, 42, 93	GP575-9	73	T	G, S, M, As, P, Gu, T
<i>Coenobita brevimanus</i> Dana, 1852	UF 283, UF 586 (S)	40, 42	GP811-8		T	G, S, An, Gu
<i>Coenobita cavipes</i> Stimpson, 1858	UF 230	40, 42	GP811-3		T	G, An, Ag
<i>Coenobita perlatus</i> H. Milne Edwards, 1837	UF 583, UF 600 (S)	40, 42	GP809-18		T	G, S, An, S, Gu, Al, P, Ag, As, M
<i>Coenobita purpureus</i> Stimpson 1858		40			I	M
<i>Coenobita rugosus</i> H. Milne Edwards, 1837	UF 581, UF 603 (S)	40, 42			T	G, S, An, Gu, Al, P, Ag, M

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
ANOMURA: DIOGENIDAE						
<i>Aniculus aniculus</i> (Fabricius, 1787)	UF	40	GP584-31	33	1	G, An, G, AI, Ag, M, As
<i>Aniculus maximus</i> Edmondson, 1952	UF	42	GP469-15		1	G
<i>Aniculus retipes</i> Lewinsohn, 1982	UF 430	42	GP453-13		1	G
<i>Aniculus ursus</i> (Olivier, 1811)	USNM 152475, UF	42	GP615-7	34	1	G
<i>Aniculus</i> sp. 1	UF 953	P			1	G
<i>Calcinus areolatus</i> Rahayu & Forest, 1999	UF 449	M	GP770-29		1	G
<i>Calcinus argus</i> Wooster, 1984	BPBM-S 10589 (holotype)	42, 43			1	G
<i>Calcinus elegans</i> (H. Milne Edwards, 1836)	UF 325	40, 42, 43	GP855-1		1	G, An, S, Gu, AI, P, Ag, As, M
<i>Calcinus guamensis</i> Wooster, 1984	BPBM-S 10588 (holotype), UF	40, 42, 43	GP864-23		1	G, Gu, Ag, M
<i>Calcinus haigae</i> Wooster, 1984	AHF	42, 43			1	G
<i>Calcinus isabellae</i> Poupin, 1997	UF 732	42, 43	GP737-5	35	1	G
<i>Calcinus kurozumii</i> Asakura & Tachikawa, 2000	CBM-ZC 4057 (holotype, P)	44			1	P
<i>Calcinus laevimanus</i> (Randall, 1840)	UF 601	40, 42, 43, 135	GP850-20		1	G, S, An, AI, Gu, P, Ag, M
<i>Calcinus latens</i> (Randall, 1840)	USNM 255985, UF 460	40, 42, 43, 45	GP770-36		1	G, An, AI, Gu, M
<i>Calcinus lineapropodus</i> Morgan & Forest, 1991	UF 1322	42, 43	GP751-24	37	1	G
<i>Calcinus minutus</i> Buitendijk, 1937	UF 1321	42, 43	GP590-33		1	G
<i>Calcinus morgani</i> Rahayu & Forest, 1999	UF	5, 10, 40, 42, 43	GP588-11	38	1	G, S, An, AI, M
<i>Calcinus pulcher</i> Forest, 1958	UF	M	GP519-26		1	G
<i>Calcinus revii</i> Poupin & McLaughlin, 1998		44			1	M, A, G, An, S, Gu, P, Ag, M, U
<i>Calcinus seurati</i> Forest, 1951	UF 562	40	GP854-28		1	

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Ciliopagurus major</i> Forest, 1995		46			2	G
<i>Ciliopagurus pacificus</i> Forest, 1995		46			2	G
<i>Ciliopagurus strigatus</i> (Herbst, 1804)	AHF 591-01, UF	42, 46	GP751-27		1	G
<i>Clibanarius corallinus</i> (H. Milne Edwards, 1848)	USNM 270096, UF	42	GP753b-10		1	G
<i>Clibanarius eurystermus</i> Hilgendorf, 1878	UF	42	GP850-25		1	G
<i>Clibanarius humilis</i> (Dana, 1851)	UF	40, 42	GP850-18		1	G, Gu, AI
<i>Clibanarius striolatus</i> Dana, 1852	UF	42	GP759-11		1	G
<i>Clibanarius virescens</i> (Krauss, 1843)	UF	42	GP850-9		1	G
<i>Dardanus crassimanus</i> (H. Milne Edwards, 1836)	UF	42	GP413-28		1	G
<i>Dardanus deformis</i> (H. Milne Edwards, 1836)	UF	42	GP833-13		1	G
<i>Dardanus gemmatus</i> (H. Milne Edwards, 1848)	UF	42	GP517-26		1	G
<i>Dardanus guttatus</i> (Oliver, 1811)	UF	42	GP764-31		1	G
<i>Dardanus lagopodes</i> (Forsskål, 1775)	UF 326	42	GP681-21		1	G
<i>Dardanus megistos</i> (Herbst, 1804)	UF 950	42	GP413-38		1	G
<i>Dardanus scutellatus</i> (H. Milne Edwards, 1848)	UF	42	GP770-25		1	G
<i>Diogenes pallescens</i> Whitelegge, 1897	UF 141	M	GP544-30		1	G
<i>Paguristes jalur</i> Morgan, 1992	UF	M	GP848-27		1	G
<i>Paguristes monopus</i> Morgan, 1987	UF	M	GP754-9		2	G
<i>Pseudopaguristes janetkae</i> McLaughlin, 2002		47	GP771-14		2	G
<i>Pseudopaguristes</i> sp. 2 (n. sp.)		M			2	G
ANOMURA: GALATHEIDAE						
<i>Allogalatea elegans</i> (White, 1847)	UF 277	P	GP762-27		1	G
<i>Galathea amamiensis</i> Miyake & Baba, 1966		40			1	M
<i>Munidopsis marianica</i> Williams & Baba, 1989		2, 55			3	MTV
ANOMURA: HIPPIDAE						
<i>Hippa pacifica</i> Dana, 1852	UF 252	40	GP254-15		1	G, Ag
ANOMURA: LITHODIDAE						
<i>Lithodes</i> sp. 1 (n. sp.)	UF 2283	C	GP527-27		3	G
<i>Paralomis haigae</i> Eldredge, 1976	BPBM-S 8524 (holotype)	48			3	G
<i>Paralomis seagranti</i> Eldredge, 1976	BPBM-S 8526 (holotype)	48			3	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
ANOMURA: PAGURIDAE						
<i>Catapaguroides foresti</i> McLaughlin, 2002	UF 5	49		1		G
<i>Paguritta kroppi</i> McLaughlin & Lemaitre, 1993	USNM 259396 (holotype)	50	GP469-25	39	1	G
<i>Pagurixus anceps</i> (Forest, 1954)		40		1		Gu, Ag, M, AI
<i>Pagurixus boninensis</i> (Melin, 1939)	UF 645	40	GP859-33	1		G, P
<i>Pagurixus</i> cf. <i>laevimanus</i> (Ortmann, 1892)	AHF	5, 10	GP846-18	36	1	G
<i>Pagurixus</i> cf. <i>tweediei</i> (Forest, 1956)		40		1		M
<i>Pagurixus maorus</i> (Nobili, 1906)	UF	M	GP751-32	1		G
<i>Pagurixus</i> sp. 2 (n. sp. fast purple)	UF 432	M	GP813-3	1		G
<i>Pagurixus</i> sp. 3 (slate)	UF	M	GP820-10	1		G
<i>Pagurixus</i> sp. 8 (pale)	UF	51	GP860-8	40	1	G
<i>Pagurixus</i> sp. 9 (n. sp., purple claw)	UF	M	GP860-21	1		G
<i>Pagurus hirtimanus</i> Miers, 1880	UF 307	M	GP846-13	1		G
<i>Pagurus?</i> sp. 1		M	GP867-2	1		G
<i>Porcellanopagurus</i> sp. 1 (n. sp.) Kropp & Eldredge, MS	RK	K		3		G
<i>Pylopaguropsis fimbriata</i> McLaughlin & Haig, 1989	USNM 231413 (holotype), UF 597	52	GP847-10	1		G
<i>Pylopaguropsis keiji</i> McLaughlin & Haig, 1989	USNM 231415 (paratype)	52	GP845-25	1		G
<i>Trichopagurus trichophthalmus</i> (Forest, 1954)	UF 644	M	GP867-5	1		G
ANOMURA: PARAPAGURIDAE						
<i>Sympagurus doffeini</i> (Bals, 1912)		53		41	3	G
<i>Tylaspis anomala</i> Henderson, 1885		54		3	3	G
ANOMURA: PORCELLANIDAE						
<i>Neopetrolisthes maculatus</i> (H. Milne Edwards, 1837)	USNM 255986	K	GP776-24	1		G
<i>Pachycheles garciaensis</i> (Ward, 1942)	USNM 255976	40	RK GUM-2181	1		G, M
<i>Pachycheles pisoides</i> (Heller, 1865)	USNM 255959	K		1		G
<i>Pachycheles spinipes</i> (A. Milne Edwards, 1873)	USNM 255955	K		1		G
<i>Petrolisthes asiaticus</i> (Leach, 1820)	USNM 233491	23		1		G, S

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Petrolisthes bispinosus</i> Borradaile, 1900	USNM 257207	56	RK GUM-221C		1	G, S
<i>Petrolisthes borradaiiei</i> Kropp, 1984	Paratype: USNM 210633	23, 40	RK GUM-214A		1	G, S, An, Gu, P, M
<i>Petrolisthes carinipes</i> (Heller, 1861)	USNM 257238	K			1	G
<i>Petrolisthes coccineus</i> (Owen, 1839)	UF 477, USNM 257230	40	GP750-28		1	G, M
<i>Petrolisthes decacanthus</i> Ortmann, 1897	USNM 210534	56	RK GUM-208P		1	G, S
<i>Petrolisthes donanensis</i> Osawa, 1997	KC	K	RK GUM-208M		1	G
<i>Petrolisthes eldredgei</i> Haig & Kropp, 1988	Paratype: USNM 222328	56			1	G
<i>Petrolisthes elegans</i> Haig, 1981	USNM 257218	K	RK GUM-221G		1	G
<i>Petrolisthes extremus</i> Kropp & Haig, 1994	AHF	57			1	G
<i>Petrolisthes heterochrous</i> Kropp, 1986	USNM 222529 (holotype)	58			1	G, Gu, S
<i>Petrolisthes lamarekii</i> (Leach, 1820)	USNM 189361	23, 40	GP751-5		1	G, S, An
<i>Petrolisthes masakii</i> Miyake, 1943	USNM 210539	K			1	G
<i>Petrolisthes mesodactylon</i> Kropp, 1984	USNM 210624 (holotype, P)	23, 40			1	P, Gu, An, M
<i>Petrolisthes miyakei</i> Kropp, 1984	USNM 210628 (holotype)	23, 40			1	G, M
<i>Petrolisthes pubescens</i> Stimpson, 1858	USNM 257240	40, 58			1	G, M, An
<i>Petrolisthes tomentosus</i> (Dana, 1852)	UF 334, USNM 257606	58	GP751-6		1	G, P, S
BRACHYURA: AETHRIDAE						
<i>Aethra edentata</i> Edmondson, 1951	UF 481, ZRC	72	GP780-10		1	G
<i>Aethra scruposa</i> (Linnaeus, 1764)	USNM 282895	P	GP366-7		1	G
BRACHYURA: BYTHOGRAEIDAE						
<i>Austinograea williamsi</i> Hessler & Martin, 1989		2, 59			3	MTV
BRACHYURA: CALAPPIDAE						
<i>Calappa calappa</i> (Linnaeus, 1758)	UF 75, BPBM	N	GP856-7		1	G
<i>Calappa gallus</i> (Herbst, 1803)	UF 82, USNM 277628, UGI 2580	G	GP814-26		1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Calappa hepatica</i> (Linnaeus, 1758)	UF 81, BPBM, UGI 2575	68, 137	GP410-7		1	G, S
<i>Calappa</i> cf. <i>matsuzawa</i> Galil, 1997	UF/ZRC	N	GP579-35		1	G
<i>Calappa</i> sp. 1 (aff. <i>sebastiani</i> Galil, 1997)	USNM	N	RK		3	G
<i>Calappa</i> sp. 2	UF 85	N	GP819-33		1	G
<i>Calappa</i> sp. 3 (n. sp.) Ng et al., in prep.	UF 3094, ZRC	N	GP739-27		1	G
<i>Cycloes granulosa</i> de Haan, 1837	USNM	K			1	G
BRACHYURA: CARPILIIDAE						
<i>Carpilius convexus</i> (Forsskål, 1775)	UF 869, USNM	K	GP831-36		1	G
<i>Carpilius maculatus</i> (Linnaeus, 1758)	UF 64, BPBM	81, 137	GP820-13		1	G
BRACHYURA: CRYPTOCHIRIDAE						
<i>Cryptochirus coralliodytes</i> Heller, 1861	USNM 257551	97			1	G
<i>Dacryomaia edmonsoni</i> (Fize & Serène, 1956)	USNM	98			1	G
<i>Dacryomaia japonica</i> (Takeda & Tamura, 1981)	KC	K			1	G
<i>Dacryomaia</i> sp. 1 (n. sp.) Kropp, MS	KC	K			1	G
<i>Dacryomaia</i> sp. 2 (n. sp.) Kropp, MS	KC	K			1	G
<i>Fizesereneia heimi</i> (Fize & Serène, 1956)	USNM	98			1	G
<i>Fizesereneia laisella</i> Kropp, 1994	KC	99			1	G
<i>Fizesereneia stimpsoni</i> (Fize & Serène, 1956)	USNM 257250	K			1	G
<i>Fungicola uitinomii</i> (Fize & Serène, 1956)	USNM	K			1	G
<i>Hapalocarcinus marsupialis</i> Stimpson, 1859	USNM 1004935	5, 98			1	G, S
<i>Hiroia krepffi</i> (Fize & Serène, 1956)	USNM 257245	K	GP644-23		1	G
<i>Lithoscaptus helleri</i> (Fize & Serène, 1957)	USNM 257345	K			1	G
<i>Lithoscaptus paradoxus</i> A. Milne Edwards, 1862	USNM 257368	97			1	G
<i>Lithoscaptus prionotus</i> Kropp, 1994	KC	99			1	G
<i>Lithoscaptus tri</i> (Fize & Serène, 1956)	USNM 257336	K			1	G
<i>Luciades agana</i> Kropp & Manning, 1996	USNM 268890 (holotype)	100			1	G
<i>Neotroglocarcinus hongkongensis</i> (Shen, 1936)	USNM 257311	K			1	G
<i>Opecarcinus aurantius</i> Kropp, 1989	USNM 234266 (holotype)	101			1	G
<i>Opecarcinus crescentus</i> (Edmondson, 1925)	USNM 257478	101			1	G
<i>Opecarcinus granulatus</i> (Shen, 1936)	USNM 234264	101			1	G
<i>Opecarcinus lobifrons</i> Kropp, 1989	USNM 234269 (holotype)	101			1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Opearcarinus pholeter</i> Kropp, 1989	USNM 234275 (holotype)	101			1	G
<i>Opearcarinus sierra</i> Kropp, 1989	USNM 234278 (holotype)	101			1	G
<i>Pelycomata minuta</i> (Edmondson, 1933)	USNM	K			1	G
<i>Pseudocryptochirus viridis</i> Hiro, 1938	USNM 257314	102			1	G
<i>Pseudohapalocarcinus ransonii</i> Fize & Serène, 1956	USNM 257285	98			1	G
<i>Utinomiella dimorpha</i> (Henderson, 1906)	USNM 257512	98			1	G
<i>Xynomaita sheni</i> (Fize & Serène, 1956)	USNM 257277	98			1	G
BRACHYURA: DAIRIDAE						
<i>Daira perlata</i> (Herbst, 1790)	UF 1953	5, 10, 62	GP845-4		1	G, S, Gu, P, AI
BRACHYURA: DROMIIDAE						
<i>Cryptodromia fallax</i> (Lamarck, 1818)	ZRC 2000.0751	60, 61, 62		42	1	G, M
<i>Cryptodromia hilgendorfi</i> de Man, 1888	USNM 128571, ZRC 2000.2119	61			1	G
<i>Cryptodromia pentagonalis</i> Hilgendorf, 1879	ZRC 2000.2115	61			1	G
<i>Cryptodromia pitiensis</i> McLay, 2001	MNH-B27303 (holotype)	61			1	G
<i>Cryptodromia tumida</i> Stimpson, 1858	ZRC 2000.2113	61			1	G
<i>Cryptodromiopsis plumosa</i> (Lewinsohn, 1984)	ZRC 2000.2112	61			1	G
<i>Cryptodromiopsis unidentata</i> (Rüppell, 1830)	UGI 6020	60, 61	GP380-32		1	G
<i>Dromia dormita</i> (Linnaeus, 1763)		60			1	S
<i>Dromidiopsis lethrinusae</i> (Takeda & Kurata, 1976)	ZRC 2000.2121	61			1	G
<i>Takedromia cristatipes</i> (Sakai, 1969)	ZRC 2000.0755	61			1	G
BRACHYURA: DYNOMENIDAE						
<i>Dynomene guamensis</i> McLay, 2001	MNH-B26474 (holotype)	61	RK GUM 221F		1	G
<i>Dynomene hispida</i> Guérin-Méneville, 1832		62			1	M
<i>Dynomene kroppii</i> McLay, 2001	MNH-B26476 (holotype), UF 401	61	GP832-18		1	G
<i>Dynomene praedator</i> Milne Edwards, 1879	ZRC 2000.0743	61, 63			1	G
<i>Hirsutodynomene spinosa</i> (Rathbun, 1911)	ZRC 2000.0745, UF 313	61, 63	GP532-31		1	G, As
<i>Paradynomene tuberculata</i> Sakai, 1963	ZRC 2000.2122, UF 21	61, 63	GP819-25		1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
BRACHYURA: ERIPHIIDAE						
<i>Dacryopilumnus eremita</i> Nobili, 1906	USNM	62			1	M
<i>Dacryopilumnus rathbunae</i> Balss, 1932		5, 10			1	G, S
<i>Epixanthoides anomalus</i> Balss, 1935	UF 70, USNM, ZRC	K	RK-GUM 208G		1	G
<i>Epixanthus corrosus</i> A. Milne Edwards, 1873		62			1	M
<i>Eriphia scabricula</i> Dana, 1852	UF 113, USNM 154148, BPBM	62	GP403-2		1	G, AI
<i>Eriphia sebana</i> (Shaw & Nodder, 1803)	USNM, ZRC	K	GP357-32		1	G
<i>Globopilumnus</i> sp. 1	UF/ZRC	N	GP829-20		1	G
<i>Hypothalassia armata</i> (de Haan, 1835)	USNM, UGI, UF 2842	128	RK		3	G
<i>Lydia annulipes</i> (H. Milne Edwards, 1834)	UF 282, BPBM, ZRC	62	GP414-4		1	G, An, Ag
<i>Ozius rugulosus</i> Stimpson, 1858	UF 293, USNM 154842	K	GP463-37		1	G
<i>Ozius tuberculatus</i> H. Milne Edwards, 1834	UF 868, USNM, UGI	62	GP786-17		1	G, An, Gu, Ag, As
BRACHYURA: GECARCINIDAE						
<i>Cardisoma carnifex</i> (Herbst, 1796)	UF 114	92	GP791-29		T	G
<i>Discoplax hirripes</i> (Dana, 1851)	UF 145, BPBM, ZRC	92	GP331-32		T	G
<i>Discoplax longipes</i> A. Milne Edwards, 1867	UF 147, USNM 181977, ZRC	92, 133	GP809-1		T	G
<i>Discoplax rotunda</i> (Quoy & Gaimard, 1824)	UF 144, USNM 155049, ZRC	62, 92, 93	GP275-29	64	T	G, M
<i>Epigrapsus notatus</i> (Heller, 1865)	UF 89, ZRC	92	GP333-34		T	G
<i>Epigrapsus</i> sp. 1 (n. sp.) Ng, 2003	ZRC	94	PKLN		1	G
BRACHYURA: GRAPSIDAE						
<i>Geograpsus crinipes</i> (Dana, 1851)	UF 111	62	GP810-7		1	G, Gu, M
<i>Geograpsus grayi</i> (H. Milne Edwards, 1853)		62			1	An, Gu, U
<i>Geograpsus stormi</i> de Man, 1895	UF 92	62	GP811-20		1	G, M
<i>Grapsus albolineatus</i> Lamarek, 1818	ZRC	L			1	G
<i>Grapsus longitarsis</i> Dana, 1851	UF 93	62	GP338-25		1	G, An, Ag
<i>Grapsus tenuicrustatus</i> (Herbst, 1783)		5, 62	GP809-30		1	G, S, An, Gu, Sa, P, Ag, M, AI
<i>Grapsus</i> sp. 1 (aff. <i>longitarsis</i> Dana, 1851)	UF 134	P	GP414-11		1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Metopograpsus latifrons</i> (White, 1874)	UF 101	P	GP409-34		1	G
<i>Metopograpsus oceanicus</i> (Jacquinot, 1852)	UF 103	P	GP526-28		1	G
<i>Metopograpsus thukuhar</i> (Owen, 1839)	UF 95, UF 591 (S)	P	GP409-7		1	G, S
<i>Pachygrapsus minutus</i> A. Milne Edwards, 1873	UF 123, UF 590 (S)	62	GP871-20		1	G, S, M, AI
<i>Pachygrapsus planifrons</i> de Man, 1888	UF 129	127			1	G
<i>Pachygrapsus plicatus</i> (H. Milne Edwards, 1837)	UF 130, UF 584 (S), BPBM	62	GP410-2		1	G, S, P
BRACHYURA: HOMOLIDAE						
<i>Homola dickinsoni</i> Eldredge, 1980	BPBM-S 8595 (holotype), ZRC, 64, 65 UGI 6767				3	G
<i>Homola orientalis</i> Henderson, 1888	BPBM S10479, UGI 6764	64			3	G
<i>Lamoha personata</i> (Guinot & Richer de Forges, 1981)	ZRC	66			3	G
<i>Lamoha williamsi</i> (Takeda, 1980)	BPBM (paratype)	142		71	3	S
BRACHYURA: GONEPLACIDAE						
<i>Conteleyus defodio</i> Ng & Ng, 2003	UF 2098 (holotype), ZRC 2002.17	82	GP694-21		1	G
<i>Intesius</i> sp. 1 (n. sp.) Crosnier & Ng, 2003	BPBM	143			3	G
<i>Parapilumnus oryctus</i> Ng, 2003	ZRC 2002.174 (holotype)	83	GP469-33		1	G
BRACHYURA: HYMENOSOMATIDAE						
<i>Elamena</i> sp. 1	UF 628	T	GP391-9		1	G
BRACHYURA: LEUCOSIIDAE						
<i>Alox rugosum</i> (Stimpson, 1858)	UF 729	P			1	G
<i>Drachiella angulata</i> (Ihle, 1918)	UF 1019	B	GP408-24		1	G
<i>Ebalia</i> (?) sp. 1	UF 728	N	GP537-1		1	G
<i>Ebalopsis erosa</i> (A. Milne Edwards, 1874)	UF 621	B	GP408-22		1	G
<i>Heteronucia venusta</i> Nobili, 1906	UF 610	B	GP533-12		1	G
<i>Leucostia</i> sp. 1	UF 67	B	GP596-23		1	G
<i>Myra fugax</i> (Fabricius, 1798)	UF 2937	P			1	G
New genus? sp. 1	UF 1021	B			1	G
<i>Nucia speciosa</i> Dana, 1852	UF 670	5, 10	GP597-26		1	G, S
<i>Nucia</i> ? sp. 1	UF 285	N	GP527-21		1	G
<i>Nucia</i> ? sp. 2	UF/ZRC	N	GP818-20		1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Oreoilos lagarodes</i> Tan & Ng, 1995	USNM 266801 (paratype)	69			1	G
<i>Oreotlos pala</i> Tan & Ng, 1995	USNM 255984 (holotype), UF 530	69			1	G
" <i>Randallia</i> " <i>serenei</i> Richer de Forges, 1983	UF 856	N	GP733-24		3	G
BRACHYURA: MAJIDAE						
<i>Achaeus laevioculus</i> ? Stimpson, 1907	UF 629	N	GP823-28		1	G
<i>Achaeus laevioculus</i> (de Man, 1905)	UF 690	N	GP583-6		1	G
<i>Bothromaia griffini</i> Williams & Moffitt, 1991	USNM 250884 (holotype, S)	67			3	S, E
<i>Camposcia retusa</i> Latreille, 1829	USNM 282898, UF 2918	P	GP367-13		1	G
<i>Criocarcinus superciliosus</i> (Linnaeus, 1767)	UF 855, ZRC, UGI 2945	N	GP692-22		1	G
<i>Cyclax suborbicularis</i> (Stimpson, 1858)	UF 15, UGI	N	GP463-1		1	G, As
<i>Cyrtomaia intermedia</i> Sakai, 1938	UF 857	70			3	G
<i>Dumea</i> sp. 1 (aff. <i>taiwanicus</i> (Loh & Wu, 1998))	ZRC	N	GP357-12		1	G
<i>Huenia proteus</i> ? de Haan, 1839	UF 394, UGI 2652	N	GP590-8		1	G
<i>Hyastenus convexus</i> Miers, 1884	UF 655	N			1	G
<i>Hyastenus hilgendorfi</i> de Man, 1887	UF 850	N			1	G
<i>Hyastenus planasius</i> (Adams & White, 1848)	UF 289, UGI	N	GP576-10		1	G
<i>Menaethius monoceros</i> (Latreille, 1825)	UF 79, USNM 134298, UGI 2646	5, 10, 62	GP814-13		1	G, S, Gu
<i>Micippa parca</i> Alcock, 1895	UF 666, UGI	5, 10			1	S
<i>Micippa platipes</i> Rüppell, 1830	UF 665	5, 10	GP414-23		1	G, S
<i>Perinia tumida</i> Dana, 1852	UF 665	5, 10, 62			1	S, M
<i>Pseudomicippe eldredgei</i> Griffin & Tranter, 1986	AHF (holotype), UF 425, ZRC	130	GP537-17		1	G
<i>Rochinia decipata</i> Williams & Eldredge, 1994	USNM 251434 (holotype)	71			3	G
<i>Schizophroida hilensis</i> (Rathbun, 1906)	UF 667, ZRC, UGI	N	GP540-6		1	G
<i>Schizophryys aspera</i> (H. Milne-Edwards, 1834)	UF 287, UGI	N	GP826-31		1	G
<i>Simocarcinus obtusirostris</i> (Miers, 1879)	UF 688, UGI	5, 10	GP405-3	43	1	G, S
<i>Tiarinia cornigera</i> (Latreille, 1825)	UF 312, UGI	N	GP837-22		1	G
<i>Tiarinia spinigera</i> Stimpson, 1907		62			1	Ag
<i>Tylocarcinus styx</i> (Herbst, 1803)		5, 10		44	1	S
<i>Xenocarcinus depressus</i> Miers, 1874	UF 659	N			1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
BRACHYURA: OCYPODIDAE						
<i>Macrophthalmus convexus</i> Stimpson, 1858	UF 118, BPBM, UGI 6737	K	GP412-13		1	G
<i>Macrophthalmus latreillei</i> (Desmarest, 1822)	UF 2846	N		72	1	G
<i>Macrophthalmus verreauxi</i> H. Milne Edwards, 1848	UF 98, BPBM, ZRC	K	GP412-25		1	G
<i>Macrophthalmus</i> sp. 1	UF 97	N	GP409-17		1	G
<i>Ocypode ceratophthalma</i> (Pallas, 1772)	UF 987, BPBM	5, 62	GP336-3		1	G, S, Ag
<i>Ocypode cordimana</i> Desmarest, 1825	UF 115, BPBM, USNM 168462, ZRC	62	GP336-17		1	G, P
<i>Uca crassipes</i> (Adams & White, 1848)	UF 96	T	GP408-31		1	G
<i>Uca vocans</i> (Linnaeus, 1758)	UF 119	T	GP412-34		1	G
Ocypodidae sp. 2	UF/ZRC	P			1	G
BRACHYURA: PALICIDAE						
<i>Crossotonotus spinipes</i> (de Man, 1888)	UF 517	T	GP540-29		1	G
<i>Exopalicus maculatus</i> (Edmondson, 1930)	UF 330	R	GP597-22		1	G
BRACHYURA: PARTHENOPIDAE						
<i>Aulacolambus hoplonotus</i> (Adams & White, 1848)	UF 2099, ZRC 2002.201	73	GP414-12		1	G
<i>Aulacolambus hystricosus</i> Tan & Ng, 2003	UF 2101 (holotype), ZRC 2002.204	73			1	G
<i>Ceritolambus pugilator</i> (A. Milne Edwards, 1873)	UF 9, ZRC 2002.206	73			1	G
<i>Daldorfia horrida</i> (Linnaeus, 1758)	UF 6, USNM	5, 10, 73, 74	GP836-3		1	G, S
<i>Daldorfia leprosa</i> (Nobili, 1905)	UF/ZRC	73, 74			1	G
<i>Furtipodia gemma</i> Tan & Ng, 2003	ZRC 2002.211 (holotype), UF 2103	73			1	G
<i>Furtipodia petrosa</i> (Klunzinger, 1906)	UF 8, ZRC 2002.213	73	GP540-8		1	G
<i>Lambrachaeus ramifer</i> Alcock, 1895	UF/ZRC	144			1	G
<i>Neikolambus polemistes</i> Tan & Ng, 2003	ZRC 2002.214 (holotype)	73			1	G
<i>Parthenopoides cariei</i> Bouvier, 1914	UF 37	73, 74	RK GUM- 221D		1	G
<i>Rhinolambus rudis</i> (Rathbun, 1916)	UF 2102, ZRC 2002.215	73	GP250-35		1	G
<i>Thyrolambus efflorescens</i> (Alcock, 1895)	UF 419	73, 74	GP836-8		1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
BRACHYURA: PILUMNIDAE						
<i>Actumnus</i> sp. 1 (n. sp.) Ng, in prep.	UF 358	N	GP534-2		1	G
<i>Caecopilumnus hirsutus</i> (Borradaile, 1903)	UF/ZRC	P	GP580-3		1	G
<i>Echinoecus pentagonus</i> (A. Milne Edwards, 1879)	USNM 154036	N		66	1	G
<i>Glabropilumnus dispar</i> (Dana, 1852)	UF 715	N	GP592-21		1	G
<i>Glabropilumnus laevimanus</i> (Dana, 1852)	UF 716	N	?GP532-19		1	G
<i>Lophoplax?</i> sp. 1	UF 785	N	GP858-15		1	G
<i>Nanopilumnus corallitophilus</i> (Takeda & Miyake, 1969)		62			1	M
<i>Permanotus purpurea</i> (Gordon, 1934)	UF 482	75	GP783-22	66	1	G
<i>Pilumnus cursor</i> A. Milne Edwards, 1873		5, 10			1	S
<i>Pilumnus</i> cf. <i>oahuensis</i> Edmondson, 1931	UF 723	N			1	G
<i>Pilumnus</i> cf. <i>scabriusculus</i> Adams & White, 1849	UF/ZRC	N	GP393-31		1	G
<i>Pilumnus longicornis</i> Hilgendorf, 1898	UF 724	N			1	G
<i>Pilumnus serenei</i> Ng, 1988	UF 787	N			1	G
<i>Pilumnus taeniola</i> Rathbun, 1906	UF 725	N	GP466-26		1	G
<i>Pilumnus vespertilio</i> (Fabricius, 1798)	USNM, UF/ZRC	K			1	G
<i>Pilumnus</i> sp. 1 (n. sp.) Ng, in prep.	UF/ZRC	N	GP466-22		1	G
<i>Pseudolithochira integer</i> (Miers, 1884)		5, 10		50	1	S
<i>Tanaocheles stenochilus</i> Kropp, 1984	USNM 210636 (holotype)	89, 131			1	G
<i>Tiaramedon spinosum</i> (Miers, 1879)	USNM, UF/ZRC	R	GP466-7	66	1	G
<i>Viaderiana aranea</i> (Tesch, 1918)		5, 10		45	1	S
<i>Viaderiana quadrispinosa</i> (Zehntner, 1894)	UF 80, UGI	N	GP814-17		1	G
<i>Viaderiana</i> sp. 4	UF 310	N	GP837-29		1	G
<i>Viaderiana typica?</i> Ward, 1942	UF/ZRC	N	GP528-2		1	G
<i>Viaderiana?</i> sp. 5	UF/ZRC	N	GP827-20		1	G
BRACHYURA: PINNOTHERIDAE						
<i>Aphanodactylus</i> sp. 1 (terebellid commensal)	UF/ZRC	N	GP786-13		1	G
BRACHYURA: PLAGUSIIDAE						
<i>Percnon abbreviatum</i> (Dana, 1851)	UF 106	P	GP808-21		1	G
<i>Percnon affine</i> (H. Milne Edwards, 1853)	UF 88	P	GP512-24		1	G
<i>Percnon guinotae</i> Crosnier, 1965	UF 104, ZRC	P	GP512-10		1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Percnon planissimum</i> (Herbst, 1804)	BPBM 1671	62	GP424-7		1	G, An, P, Ag, M
<i>Plagusia immaculata</i> Lamarck, 1818	ZRC	62?, 129	GP512-22	65	1	G, ?Ag
<i>Plagusia speciosa</i> Dana, 1851	UF 87, BPBM	125			1	G
<i>Plagusia squamosa</i> (Herbst, 1790)	ZRC	62?, 129	GP583-36	65	1	G, ?Ag
BRACHYURA: PORTUNIDAE						
<i>Atoportunus gustavi</i> Ng & Takeda, 2003	UF 2091 (holotype), ZRC 2002.173	76	GP832-12		1	G
<i>Caphyra rotundifrons</i> (A. Milne Edwards, 1869)	UF 167, UF 588 (S)	5, 10	GP790-23		1	G, S
<i>Caphyra</i> sp. 1 (on <i>Asterospicularia randalli</i>)	UF 2588	N			1	G
<i>Caphyra unidentata</i> ? Lenz, 1910	UF 411	S	GP834-34		1	G
<i>Carupa ohashii</i> Takeda, 1993	UF 152	P	GP818-32		1	G
<i>Carupa</i> sp. 2 (n. sp.) Ng & Takeda, in prep.	UF/ZRC	T	GP767-4		1	G
<i>Carupa tenuipes</i> Dana, 1851	UF 54	P	GP694-24		1	G
<i>Catoptrus nitidus</i> A. Milne Edwards, 1870	UF 182, USNM	P	GP571-4		1	G
<i>Charybdis erythrodactyla</i> (Lamarck, 1818)	UF 1915	62			1	G, Ag
<i>Charybdis hawaiiensis</i> Edmondson, 1954	UF 158	N	GP828-24		1	G
<i>Charybdis hellerii</i> (A. Milne Edwards, 1867)	UF 151	N	GP749-12		1	G
<i>Charybdis obtusifrons</i> Leene, 1936	UF 192	P	GP597-18		1	G
<i>Charybdis orientalis</i> Dana, 1852	UF 179	N	GP513-19		1	G
<i>Charybdis paucidentata</i> (A. Milne Edwards, 1861)	UF 3149	P			1	G
<i>Charybdis</i> sp. 1 (n. sp. aff. <i>omanensis</i> Leene, 1934)	UF/ZRC	N	GP422-1		2	G
<i>Coelocarcinus foliatus</i> Edmondson, 1930	UF 472	77	GP617-15		1	G
<i>Laleonectes nipponensis</i> (Sakai, 1938)	UF 2071, UF 972 (As)	P	GP592-12		1	G, As
<i>Libystes nitidus</i> ? A. Milne Edwards, 1867	UF	P	GP411-23		1	G
<i>Libystes villosus</i> Rathbun, 1924	UF 163	P	GP410-14		1	G
<i>Lissocarcinus laevis</i> Miers, 1886	UF 204	P	GP533-7		1	G
<i>Lissocarcinus orbicularis</i> Dana, 1852	UF 169, BPBM	5, 10	GP693-10		1	G, S
<i>Lupocyclus quinqueidentatus</i> Rathbun, 1906	UF/ZRC	P	GP598-16		1	G
<i>Podophthalmus vigil</i> (Weber, 1795)	UGI 6729	P	GP459-6		1	G
<i>Portunus alcocki</i> (Nobili, 1905)	UF 241	N	GP397-25		1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Portunus convexus</i> de Haan, 1833	UF 209	P	GP810-28		I	G
<i>Portunus granulatus</i> (H. Milne Edwards, 1834)	UF 166, BPBM	P	GP847-19		I	G
<i>Portunus longispinosus</i> Rathbun, 1906	UF 171	N	GP516-30		I	G
<i>Portunus macrophthalmus</i> Rathbun, 1906	UF 183	N	GP387-19		I	G
<i>Portunus petreus</i> (Alcock, 1899)	UF 188	N	GP580-16		I	G
<i>Portunus sanguinolentus</i> (Herbst, 1783)	USNM	78			I	G
<i>Portunus tuberculatus</i> (A. Milne Edwards, 1861)	UF 165	N	GP391-17		I	G
<i>Scylla serrata</i> (Forsskål, 1775)		79			I	G
<i>Thalamita admete</i> (Herbst, 1803)	UF 164, USNM 149616, BPBM	5, 10, 62, 78, 141	GP414-36		I	G, S, Gu, M, U
<i>Thalamita auauensis</i> Rathbun, 1906	USNM	78			I	G
<i>Thalamita</i> cf. <i>cerasma</i> Wee & Ng, 1995	UF 218	P	GP467-24		I	G
<i>Thalamita coeruleipes</i> Jaquinot, 1846	UF 149, USNM	78	GP850-30		I	G
<i>Thalamita corrugata</i> Stephenson & Rees 1961	UF 180	P	GP356-25		I	G
<i>Thalamita crenata</i> H. Milne Edwards, 1834	UF 205, BPBM	78	GP409-28		I	G
<i>Thalamita dakini</i> Montgomery, 1931	USNM	78			I	G
<i>Thalamita exetastica</i> Alcock, 1899	UF 206	N	GP412-30		I	G
<i>Thalamita gatavakensis</i> Nobili, 1906		80			I	S
<i>Thalamita integra</i> Dana, 1852	UF 200, UF 587 (S), USNM	78	GP749-24		I	G
<i>Thalamita medipacifica</i> Edmondson, 1954	UF 197	N			I	G
<i>Thalamita mitsiensis</i> Crosnier, 1962	UF 190	N			I	G
<i>Thalamita picta</i> Stumpson, 1958	UF 177, UGI	5, 10, 62, 5,10	GP540-12		I	G, S, AI
<i>Thalamita pilumnoides</i> Borradaile, 1903	UF 221, BPBM	78	GP576-19		I	G
<i>Thalamita prymna</i> (Herbst, 1803)	UF 156, UGI, ZRC	126	GP382-3		I	G
<i>Thalamita pseudopelsarii</i> Crosnier, 2002	UF 201	N	GP544-13		I	G
<i>Thalamita quadrilobata</i> Miers, 1884		141			I	G
<i>Thalamita sima</i> H. Milne Edwards, 1834	UF 208, USNM 255982	N	GP813-19		I	G
<i>Thalamita spinifera</i> Borradaile, 1902	USNM 112418 (holotype), UF 173	78	GP576-36		I	G
<i>Thalamita spinimera</i> Stephenson & Rees, 1967						
<i>Thalamita woodmasoni</i> Alcock, 1899		5, 10			I	S

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Thalmitoides quadridens</i> A. Milne Edwards, 1869	UF 170, USNM 255987	5, 10	GP361-14		1	G, S
BRACHYURA: POUPINIIDAE						
<i>Poupinia hirsuta</i> Guinot, 1991	USNM 250886	67			3	Ar
BRACHYURA: PSEUDOZOIIDAE						
<i>Euryozius?</i> sp. 1	UF 302	N	GP850-26	67	1	G
<i>Pseudozius caystrus</i> (Adams & White, 1848)	UF 294, BPBM, ZRC	62	GP836-23	67	1	G, Sa, Gu, M, U
BRACHYURA: RANINIDAE						
Raninidae sp. 1	UF 1013	P			1	P
BRACHYURA: SESARMIDAE						
<i>Chiromantes obtusifrons</i> (Dana, 1852)	UF 90, ZRC	N	GP423-8		1	G
<i>Clitocoeloma</i> sp. 1	UF/ZRC	N	GP758-28		1	G
<i>Labuanium rotundatum</i> (Hess, 1865)	UF 91, ZRC	N	GP656-11		T	G
<i>Metasesarma rousseauxi</i> H. Milne Edwards, 1853	UF 108, ZRC	5, 10	GP738-9		T	G, S
<i>Neosarmatium fourmanoiri</i> Serène, 1973	UF 99, ZRC	N	GP810-12		1	G
<i>Neosarmatium meineri</i> (de Man, 1887)	UF 107, ZRC	N			1	G
<i>Neosarmatium trispinosum</i> Davie, 1994	ZRC	N	GP409-22		1	G
<i>Parasesarma pictum</i> (De Haan, 1835)	UF 128	N	GP758-17		1	G
<i>Sesarma</i> s.l. sp. 2	UF/ZRC?	P			1	G
<i>Sesarmoides guamensis</i> Ng, 2002e	UF, ZRC	124	PKLN		1	G
<i>Stelgisra stormi</i> de Man, 1895	UF 125	N	HCL		1	G
BRACHYURA: TRAPEZIIDAE						
<i>Quadr ella</i> sp.	SMF 26927	85			1	G
<i>Tetralia cinctipes</i> Paulson, 1875	USNM (S)	85			1	G
<i>Tetralia fulva</i> Serène, 1984	USNM, SMF 26282	85			1	S
<i>Tetralia rubridactyla</i> Garth, 1971	USNM, SMF 26929	85			1	G, S
<i>Tetralia vanninii</i> Galil & Clark, 1988	USNM (S)	85	GP856-27		1	G
<i>Tetraloides heterodactyla</i> (Heller, 1861)	USNM 285980, SMF 26284	85			1	S
<i>Tetraloides nigrifrons</i> (Dana, 1852)	BPBM 1629, SMF 25171	85, 90			1	G, S
<i>Trapezia cymodoce</i> (Herbst, 1799)	SMF 26285	85			1	G
<i>Trapezia digitalis</i> Latreille, 1828					1	G, M

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Trapezia ferruginea</i> Latreille, 1828	BPBM-S 11880, SMF 26289	85	GP656-20		1	G, S, As, M
<i>Trapezia flavopunctata</i> Eydoux & Souleyet, 1842	ZRC	85	GP656-2		1	G, M
<i>Trapezia formosa</i> Smith, 1869	SMF 26286	85			1	G, M
<i>Trapezia garthi</i> Galil, 1984	MNHN-B 26132	85			1	G, S
<i>Trapezia guttata</i> Rüppell, 1830	USNM, SMF 25201, UGI 2607	85, 91			1	G, S
<i>Trapezia lutea</i> Castro, 1997	BPBM S1629, USNM	85	GP290-15		1	G, S
<i>Trapezia neglecta</i> Castro, 2003	SMF 26290 (holotype)	85			1	G
<i>Trapezia plana</i> Ward, 1941	USNM 260835 (S)	85			1	S, Ag
<i>Trapezia rufopunctata</i> (Herbst, 1799)	BPBM-S 11879, USNM	85	GP644-31		1	G, S
<i>Trapezia septata</i> Dana, 1852	USNM 286485, MNHN-B 9714	85, 91			1	G
<i>Trapezia serenei</i> Odinetz, 1984	MNHN B-9681 (holotype), USNM 285933	85, 91	GP656-26		1	G
<i>Trapezia speciosa</i> Dana, 1852	USNM	85			1	G, S
BRACHYURA: VARUNIDAE						
<i>Cyclograpsus integer</i> H. Milne Edwards, 1837						
<i>Cyclograpsus</i> sp. 1	UF 133	62	GP738-2		1	M
<i>Cyclograpsus</i> sp. 2	UF/ZRC	P	GP738-30		1	G
<i>Helice subquadrata</i> (Dana, 1851)	UF/ZRC	N			1	G
<i>Orcovita mollitia</i> Ng, Guinot, Iliffe, 1996	UF 112, ZRC	95	GP733-22		FW	G
<i>Ptychognathus</i> sp. 1	UGI 2621	P			FW	G
<i>Ptychognathus</i> sp. 2 (cf. <i>barbatus</i> (A. Milne Edwards, 1873))	UF 126	N	GP738-18		1	G
<i>Scutumara</i> sp. 1	UF/ZRC	N	PKLN		1	G
<i>Varuna literata</i> (Fabricius, 1798)	UGI 2626	P			FW	G
<i>Xenograpsus novaeinsularis</i> Takeda & Kurata, 1977	SMF 22945	96			1	E
BRACHYURA: XANTHIDAE						
<i>Actaea polyacantha</i> (Heller, 1861)	UF 386	5, 10	GP858-23		1	G, S
<i>Actaea spinosissima</i> Borradaile, 1902	UF 758	N			1	G
<i>Actaeodes hirsutissimus</i> (Rüppell, 1830)	USNM 154036, UF 2991	5, 10		46	1	G, S
<i>Actaeodes tomentosus</i> (H. Milne Edwards, 1834)	UF 585, BPBM, UGI 2593	K	GP782-12		1	G
<i>Atergatis dilatatus</i> de Haan, 1835		5, 10		47	1	S
<i>Atergatis floridus</i> (Linnaeus, 1767)	UF 1977, BPBM 1616	5, 10, 137	GP366-27		1	G, S

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Atergatis granulatus</i> de Man, 1889	UF 874	P	GP598-31		I	G
<i>Atergatis latissimus</i> (H. Milne Edwards, 1834)	UF 706	P	GP367-18		I	G
<i>Atergatis nitidus</i> A. Milne Edwards, 1865	UF 714	N		48	I	G
<i>Atergatis subdentatus</i> de Haan, 1835	UF 272	P	GP598-6		I	G
<i>Atergotopsis granulatus</i> A. Milne Edwards, 1861	UF 3147	P			I	G
<i>Atergotopsis lucasi</i> Montrouzier, 1865	UF 875, UGI 6753	N	GP819-16		I	G
<i>Atergotopsis signatus</i> (Adams & White, 1848)	UF 880	P			I	G
<i>Banareia</i> cf. <i>armata</i> A. Milne Edwards, 1869	UF 797	N			I	G
<i>Chlorodiella barbata</i> (Borradaile, 1900)		5, 10			I	S
<i>Chlorodiella cytherea</i> (Dana, 1852)	UF 391	5, 10, 62	GP859-21		I	G, S, P, M
<i>Chlorodiella laevis</i> (Dana, 1852)		5, 10			I	S
<i>Cymo andreosyi</i> (Audouin, 1826)	UF 788	5, 10			I	G, S
<i>Cymo quadrilobatus</i> Miers, 1884	UF 863	P	GP656-6		I	G, S
<i>Domecia glabra</i> Alcock, 1899	UF 711	5, 10, 62			I	G, S, M
<i>Domecia hispida</i> Eydoux & Souleyet, 1842		62			I	As
<i>Etisia molokaiensis</i> (Rathbun, 1906)		5, 10			I	S
<i>Etisia anaglyptus</i> H. Milne Edwards, 1834	UF 76, USNM	N	GP827-25		I	G
<i>Etisia bifrontalis</i> (Edmondson, 1935)	UF 804	N			I	G
<i>Etisia demani</i> Odhner, 1925	UF 341, UGI	N	GP808-9		I	G
<i>Etisia dentatus</i> (Herbst, 1785)	UF 740, USNM 154153, BPBM	P	RFM-145N		I	G
<i>Etisia electra</i> (Herbst, 1801)	USNM 154154	5, 10			I	G, S
<i>Etisia frontalis</i> (Dana, 1852)	UF 757	N			I	G
<i>Etisia laevimanus</i> Randall, 1840	UF 589 (S), UGI	P			I	G
<i>Etisia splendidus</i> Rathbun, 1906	UF 871	P	GP597-33		I	G
<i>Etisia utilis</i> Lacquinot, 1854	UF 3560, USNM	K			I	G
<i>Euxanthus exsculptus</i> (Herbst, 1790)	UF 862, BPBM	K	GP319-32		I	G
<i>Forestia depressa</i> (White, 1847)		62			I	P, M
<i>Gaillardiiellus orientalis</i> (Odhner, 1925)	UF 861	N	GP414-17		I	G
<i>Gaillardiiellus superciliosus</i> (Odhner, 1925)		5, 10		49	I	S
<i>Hypocolopus abbotti</i> (Rathbun, 1894)	UF 726	P	GP828-18		I	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Jonesius triunguiculatus</i> (Borradaile, 1902)	USNM	84, 85			1	G
<i>Juxtaxanthias lividus</i> (Lamarek, 1818)	USNM	K			1	G
<i>Juxtaxanthias tetraodon</i> (Heller, 1865)		86			1	G
<i>Kraussia rugulosa</i> (Krauss, 1843)	UF 886	5, 10, 62	GP814-28		1	G, S, AI
<i>Lachnopus bidentatus</i> (A. Milne Edwards, 1867)	USNM 134551	K			1	G
<i>Lachnopus rodgersi</i> Stimpson, 1858	UF 860	62	GP751-21		1	M
<i>Lachnopus subacutus</i> (Stimpson, 1858)	USNM, UGI	N			1	G
<i>Leptodius exaratus</i> (H. Milne Edwards, 1834)	UF 423, USNM	K			1	G
<i>Leptodius nudipes</i> (Dana, 1852)	UF 292, USNM 134558, UGI	K			1	G
<i>Leptodius sanguineus</i> (H. Milne Edwards, 1834)		62	GP836-31		1	G, Aan, Gu, P, Ag, M, AI
<i>Liocarpilodes armiger pacificus</i> Balss, 1938	USNM 154716	5, 10		51	1	G, S
<i>Liocarpilodes harmsi</i> Balss, 1934		62		52	1	Gu, M
<i>Liocarpilodes integerrimus</i> (Dana, 1852)	USNM 154732	5, 10			1	G, S
<i>Liomera bella</i> (Dana, 1852)	USNM 154139	5, 10		55	1	G, S
<i>Liomera cinctimana</i> (White, 1847)	UF 568, USNM	K	GP832-24		1	G
<i>Liomera monticulosa</i> (A. Milne Edwards, 1873)		5, 10		53	1	S
<i>Liomera rugata</i> (H. Milne Edwards, 1834)		62	RK-GUM-208F		1	G, P, M
<i>Liomera semigranosa</i> de Man, 1888		5, 10		54	1	S
<i>Liomera stimpsoni</i> (A. Milne Edwards, 1865)	UF 718	N	GP456-26		1	G
<i>Liomera striolata</i> (Odhner, 1925)	USNM 155973	K			1	G
<i>Liomera tristis</i> (Dana, 1852)	UF 777, USNM 93940	5, 10	GP357-3	56	1	G, S
<i>Liomera?</i> sp. 1	UF/ZRC	N	GP865-5		1	G
<i>Liomera</i> sp. 2 (n. sp.? aff. <i>tristis</i> (Dana, 1852))	UF 779	N	GP615-9		1	G
<i>Lophozymus bertonciniae</i> Guinot & Richer de Forges, 1981	UF 896	N	GP422-29		2	G
<i>Lophozymus edwardsi</i> (Odhner, 1925)	UF 805	N	GP519-18		1	G
<i>Lophozymus incisus</i> (H. Milne Edwards, 1834)	UF 803, USNM 286496	N	GP544-10		1	G
<i>Lophozymus pictor</i> (Fabricius, 1798)	BPBM S1615	K			1	G
<i>Lophozymus pulchellus</i> A. Milne Edwards, 1867		5, 10, 62			1	S, Ag

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Lybia tessellata</i> (Latreille, 1812)	UF 770, BPBM	5, 10, 62	GP538-24		1	G, S, M
<i>Lybia</i> sp. 1	UF 383	P	GP858-5		1	G
<i>Macromedaeus crassimanus</i> (A. Milne Edwards, 1867)	UF/ZRC	N	GP467-18		1	G
<i>Macromedaeus nudipes</i> (A. Milne Edwards, 1867)	UF 398	62	GP851-10		1	G, M
<i>Medaeus? ornatus</i> Dana, 1852		5, 10			1	S
<i>Neoliomera richtersoides?</i> Sakai, 1969	UF 495	P	GP402-32		1	G
<i>Neoliomera</i> sp. 1 (pink-red)	UF 29	K	GP829-28		1	G
<i>Neoliomera</i> sp. 2 (orange)	UF 2010	K	GP829-18		1	G
<i>Neoliomera</i> sp. 3 (flesh)	UF 420	N	GP829-34		1	G
<i>Neoliomera striata</i> Buitendijk, 1941	UF 500, USNM, ZRC	K			1	G
New genus (aff. <i>Paramedaeus</i>) sp. 1 (n. sp.) Ng, in prep.	UF 42	N	GP832-22		1	G
<i>Olenothus uogi</i> Ng, 2003	UF 2096 (holotype), ZRC 2002.171	87	GP576-30		1	G
<i>Palapedia</i> sp. 1	UF 396	P	GP851-16		1	G
<i>Palapedia</i> sp. 2	UF 461	P	GP786-23		1	G
<i>Paractaea rufopunctata</i> complex (H. Milne Edwards, 1834)	UF 3	N	GP847-13		1	G
<i>Paramedaeus noelensis</i> (Ward, 1934)	UF 756	N	GP457-5		1	G
<i>Paramedaeus simplex</i> (A. Milne Edwards, 1873)	UF 380	N	GP836-15		1	G
<i>Paraxanthias notatus</i> (Dana, 1852)	UF 416, USNM 154846	5, 10, 62	GP751-16		1	G, S, M
<i>Paraxanthias parvus</i> (Borradaile, 1900)	USNM	5, 10		57	1	G, S
<i>Plymodius nitidus</i> (Dana, 1852)		5, 10			1	S
<i>Plymodius unguilatus</i> (H. Milne Edwards, 1834)	UF 881, USNM 154954	5, 10			1	G, S
<i>Pilodius areolatus</i> (H. Milne Edwards, 1834)	UF 36, USNM	K	GP273-22		1	G
<i>Pilodius granulatus</i> Stimpson, 1859	UF 712	N	GP463-18		1	G
<i>Pilodius melanospinus</i> (Rathbun, 1911)	UF 764	N			1	G
<i>Pilodius paumotensis</i> Rathbun, 1907	USNM 134593	62, 88			1	G, M
<i>Pilodius pilumnoides</i> (White, 1848)	UF/ZRC	5, 10, 88		58	1	G, S
<i>Pilodius pubescens</i> Dana, 1852		5, 10, 88		59	1	S
<i>Pilodius pugil</i> Dana, 1852		5, 10, 88		60	1	S
<i>Pilodius scabriculus</i> Dana, 1852		88			1	S
<i>Pilodius serenei</i> Miyake & Takeda, 1968	UF 780	N		61	1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Pilodius</i> sp. 1	UF/ZRC	N	GP766-11		I	G
<i>Pilodius spinipes</i> Heller, 1861	UF 767, USNM	K	GP534-16		I	G
<i>Platypodia anaglypta</i> (Heller, 1861)	UF 774	N	?GP791-11		I	G
<i>Platypodia semigranosa</i> (Heller, 1861)	UF 776	5, 10			I	G, S
<i>Polydectus cupulifer</i> (Latreille, 1812)	UF 783	P			I	G
<i>Psaumis cavipes</i> (Dana, 1852)	UF 765	5, 10	?GP859-24	62	I	G, S
<i>Pseudoliomera granosimana</i> (A. Milne Edwards, 1865)		62			I	M
<i>Pseudoliomera helleri</i> (A. Milne Edwards, 1865)		62			I	M, U
<i>Pseudoliomera lata</i> (Borradaile, 1902)		5, 10		63	I	S
<i>Pseudoliomera remota</i> (Rathbun, 1907)	UF 864	62	GP533-8		I	G, M
<i>Pseudoliomera ruppeltoioides</i> (Odlner, 1925)	UF 775	N	GP821-2		I	G
<i>Pseudoliomera speciosa</i> (Dana, 1852)		62			I	M, U
<i>Tweedieia laysani</i> (Rathbun, 1906)	UF 763	N	GP466-21		I	G
<i>Xanthias</i> aff. <i>cherbonnieri</i> Guinot, 1964	UF/ZRC	N			I	G
<i>Xanthias canaliculatus</i> Rathbun, 1906	UF 721	N			I	G
<i>Xanthias gilbertensis</i> (Balss, 1938)		62			I	M
<i>Xanthias lamarcki</i> (H. Milne Edwards, 1834)	UF 717	5, 10	GP463-23		I	G, S
<i>Xanthias latifrons</i> (de Man, 1888)	UF 792	N	GP456-19		I	G
<i>Xanthias lividus</i> (Lamarck, 1818)		62			I	M
<i>Xanthias punctatus</i> (H. Milne Edwards, 1834)	UF 865, USNM	5, 10	GP401-4		I	G, S
<i>Zosimus aeneus</i> (Linnaeus, 1758)	USNM, UGI 2608	K	GP596-24		I	G
ASCOTHORACIDA: SYNAGOGIDAE						
<i>Sessiloga elongata</i> Grygier, 1990	USNM 228258 (holotype)	103			I	G
CIRRIPIEDIA: ARCHAEOBALANIDAE						
<i>Conopea folliculus</i> Hiro, 1937		106, 110			I?	S
CIRRIPIEDIA: BALANIDAE						
<i>Balanus amphirrite</i> Darwin, 1854	UF 336	106			I	G
<i>Balanus eburneus</i> Gould, 1841	UF 223	106	GP842-13		I	G
CIRRIPIEDIA: CHTHAMALIDAE						
<i>Chthamalus malayensis</i> Pilsbry, 1916	USNM, SIO	105, 106			I	G
<i>Chthamalus proteus</i> Dando & Southward, 1980	UF 264, SIO	106, 107			I	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Euraphia hembeli</i> Conrad, 1837	USNM	106, 107, 108			1	G
<i>Pseudoeuraphia montgomeryi</i> (Foster, 1990)	USNM 237820 (holotype)	105, 106			1	G
<i>Nesochthamalus intertextus</i> (Darwin, 1854)	UF 222	107, 108			1	G
CIRRIPIEDIA: CRYPTOPHIALIDAE						
<i>Cryptophialus coronophorus</i> Smyth, 1986	USNM 222986 (holotype)	106, 112, 113			1	G
<i>Cryptophialus</i> cf. <i>zulloi</i> Tomlinson, 1973		106, 113, 114			1	G
CIRRIPIEDIA: LITHOGLYPTIDAE						
<i>Lithoglyptes mitis</i> Tomlinson, 1969		106, 113, 114			1	G
CIRRIPIEDIA: NEOVERRUCIDAE						
<i>Neoverruca brachylepadoformis</i> Newman, 1989	USNM	2, 104			3	MTV
CIRRIPIEDIA: PACHYLASMATIDAE						
<i>Tetrapachylasma ornatum</i> Jones, 2000	YPM 9303 (holotype, S), SIO, UF 480	106, 109	GP768-2		1	G, S
CIRRIPIEDIA: PYRGOMATIDAE						
<i>Cantellius euspinulosum</i> (Broch, 1931)		106			1	G
<i>Cantellius pallidus</i> (Broch, 1931)		106			1	S
<i>Cantellius septimus</i> (Hiro, 1938)		106			1	G
<i>Neotrevathana elongata</i> (Hiro, 1931)		106			1	G
<i>Savignium crenatum</i> (Sowerby, 1823)		106			1	G
<i>Trevathana dentata</i> (Darwin, 1854)		106, 111	GP263-2		1	G
<i>Trevathana orientale</i> (Ren, 1986)		106	GP529-20		1	G
<i>Trevathana paulayi</i> Asami & Yamaguchi, 2001		106, 111	GP263-6		1	G
<i>Wanella milleporae</i> (Darwin, 1854)		106	GP263-9		1	G
CIRRIPIEDIA: SCALPELLIDAE						
<i>Lithotrya nicobarica</i> Reinhardt, 1850	SIO	106			1	G
CIRRIPIEDIA: TETRACLITIDAE						
<i>Tetraclitella divisa</i> (Nilsson-Cantell, 1921)	USNM	105, 106			1	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Tesseropora pacifica</i> Pilsbry, 1928	USNM	105, 106	GP420-21		1	G
<i>Tesseropora</i> sp. 1		106			1	G
CIRRIPEDIA: VERRUCIDAE						
<i>Ferruca cooki</i> Pilsbry, 1928						
PYCNOGONIDA: AMMOTHEIDAE						
<i>Achelia assimilis</i> (Haswell, 1884)	USNM	105, 106			1	G
<i>Ammothella</i> sp. indet.	USNM	115			1	G
<i>Ammothella tippula</i> Child, 1983	USNM	115, 116, 117			1	G
<i>Anoplodactylus chamorrois</i> Child, 1983	USNM	115, 116, 117			1	G
<i>Anoplodactylus glandulifer</i> Stock, 1954	USNM	115			1	G
<i>Anoplodactylus longiceps</i> Stock, 1951	USNM	115			1	G
<i>Anoplodactylus pycnosoma</i> (Helfer, 1938)	USNM	115, 117			1	G
<i>Anoplodactylus tenuicarpus</i> Child, 1991	USNM	115			1	G
<i>Eurycyde sertula</i> Child, 1991	USNM	115			1	G
<i>Sericosura cochleifovea</i> Child, 1989	USNM	2, 118			3	MTV
<i>Tanystylum rehderi</i> Child, 1970	USNM	115, 117			1	G
PYCNOGONIDA: CALLIPALLENIDAE						
<i>Callipallene novaezealandiae</i> (Thomson, 1884)	USNM	115			1	G
<i>Seguapallene micronesica</i> Child, 1983	USNM	115			1	G
PYCNOGONIDA: ENDEIDIDAE						
<i>Endeis mollis</i> (Carpenter, 1904)	USNM	115			1	G
PYCNOGONIDA: NYMPHONIDAE						
<i>Nymphon diabolis</i> Child, 1988	USNM	115			1	G
FRESHWATER TAXA						
COPEPODA: PHYLLOGNATHOPODIDAE						
<i>Phyllognathopus viguieri</i> (Maupas, 1892)		120			FW	G, Ag
COPEPODA: CYCLOPIDAE						
<i>Bryocyclops anninae</i> (Menzel, 1926)		139			FW	G
<i>Mesocyclops leuckartii</i> (Claus, 1857)		139			FW	G

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
CLADOCERA: SIDIDAE						
<i>Diaphanosoma sarsi</i> Richard, 1894 s. l.	USNM 141128	138			FW	G
<i>Latonopsis australis</i> Sars, 1888	USNM 141128	119, 138			FW	G
CLADOCERA: MACROTHRICIDAE						
<i>Macrothrix laticornis</i> (Jurine, 1820)		119			FW	G
CLADOCERA: MOINIDAE						
<i>Moina australiensis</i> Sars, 1896		119			FW	G
<i>Moina macrocopa macrocopa</i> (Straus, 1820)		119			FW	G
<i>Moina weismanni</i> Ishikawa, 1896		119			FW	G
TERRESTRIAL TAXA						
AMPHIPODA: TALITRIDAE						
<i>Floresorchestia anomala</i> (Chevreux, 1901)		121			T	Ag, Al
<i>Floresorchestia</i> sp. 1		121			T	Sa
ISOPODA: ARMADILLIDAE						
<i>Cubaris</i> sp. 1		122			T	S
<i>Hybodillo</i> sp. 1		123			T	P, An, Gu
<i>Sphaerillo</i> sp. 1		123			T	P
<i>Sphaerillo</i> sp. 2		123			T	M, As, Ag, Sa, An
<i>Sphaerillo</i> sp. 3		123			T	Gu
<i>Sphaerillo</i> sp. 4		123			T	P, An
ISOPODA: LIGIIDAE						
<i>Ligia</i> sp. 1 (aff. <i>yamanis/hii</i>) Nunomura, 1990		123			T	Ag
ISOPODA: ONISCIDAE						
<i>Oniscidae</i> sp. 1		123			T	P
ISOPODA: PHILOSCIIDAE						
<i>Burmoniscus bicolor</i> Nunomura, 2001		122			T	S
<i>Philosciidae</i> sp. 1		123			T	Ag
<i>Setaphora</i> sp. 1		123			T	As, Ag, P, Al, Gu, Sa

Appendix: Checklist of the crustaceans and pycnogonids of the Marianas / (continued)

Taxon	Museum	Refs	Photo	Notes	Hab	Island
<i>Setaphora</i> sp. 2		123			T	M, Ag, Al, Sa
<i>Setaphora</i> sp. 3		123			T	Ag
ISOPODA: PORCELLIONIDAE						
<i>Porcellionides pruinosus</i> (Brandt, 1833)		123			T	M, As
ISOPODA: SCYPHACIDAE						
<i>Alloniscus</i> sp. 1 (aff. <i>boninensis</i>) Nunomura, 1984		123			T	As
<i>Alloniscus</i> sp. 2		123			T	M, Al
<i>Alloniscus saipanensis</i> Nunomura, 2001		122			T	S
<i>Alloniscus allspachi</i> Nunomura, 2001		122			T	S
ISOPODA: TRACHELIPIDAE						
<i>Nagurus</i> sp. 1		123			T	M, Ag, Gu
<i>Nagurus</i> sp. 2		123			T	M, An
<i>Nagurus</i> sp. 3		123			T	M
<i>Nagurus</i> sp. 4		123			T	Al
ISOPODA: TRICHONISCIDAE						
<i>Trichoniscidae</i> sp. 1		123			T	Ag, Al, An, P

References: Literature records listed by numeric code, while identifier of species not previously documented from the Marianas listed by alphabetic code as follows: B) W. Blow, C) T.-Y. Chan, D) W. Dall, F) C. Fransen, G) B. Galil, K) R. Kropp, L) H.-C. Liu, M) P. McLaughlin, N) P. Ng, O) J. Okuno, P) G. Paulay, R) P. Castro, S) J. Starmer, T) M. Takeda. 1) Humes 1990, 2) Hessler & Lonsdale 1991, 3) Weissleder et al. 1989, 4) Komai 1994, 5) Cloud 1959, 6) Just 1998, 7) Williams et al. 2000, 8) Manning et al. 1990, 9) Ahyong & Erdmann 2003, 10) Holthuis 1953, 11) Edmondson 1921, 12) Manning 1978, 13) Kropp & Dominguez 1990, 14) Hamano 1994, 15) Hayashi et al. 1994, 16) Eldredge 1994, 17) Vic Camacho, Univ. of Guam, pers. comm. 2000, 18) Banner 1987, 20) Banner & Banner 1985, 21) Leberer & Cai 2003, 22) Martin & Hessler 1990, 23) Kropp 1983[1984], 24) Holthuis 1981, 25) Chace 1997, 26) Camacho 1997, 27) Grimm 1983, 28) Best & Davidson 1981, 29) Chace & Bruce 1993, 30) Bruce & Coombes 1995, 31) King 1987, 32) Wilder 1977, 33) Moffitt 1983, 34) Okuno 1994, 35) Kensley 2003, 36) Kensley 1996, 37) Kensley 2001, 38) Turkey & Sakai 1995, 39) Kensley & Heard 1991, 40) Asakura et al. 1994, 41) Amesbury 1980, 42) Wooster 1979, 43) Wooster 1982, 44) Asakura & Tachikawa 2000, 45) Asakura 1987, 46) Forest 1995, 47) McLaughlin 2002a, 48) Eldredge 1976, 49) McLaughlin 2002b, 50) McLaughlin & Lemaitre 1993, 51) McLaughlin & Haig 1984, 52) McLaughlin & Haig 1989, 53) Dunn et al. 1980, 54) Lemaitre 1998, 55) Williams & Baba 1990, 56) Haig & Kropp 1987, 57) Kropp & Haig 1994, 58) Kropp 1986, 59) Hessler & Martin 1989, 60) McLay 1993, 61) McLay 2001, 62) Takeda et al. 1994, 63) McLay 1999, 64) Eldredge 1980, 65) Guinot &

Richer de Forges 1995, 66) Ng & Wang 2001, 67) Williams & Moffitt 1991, 68) Galil 1997, 69) Tan & Ng 1995, 70) Guinot & Richer de Forges 1985, 71) Williams & Eldredge 1994, 72) Ng & Takeda 1998, 73) Tan & Ng 2003a, 74) Tan & Ng 2003b, 75) Stevcic et al. 1988, 76) Ng & Takeda 2003, 77) Ng 2002a, 78) Stephenson & Rees 1967, 79) Dickinson 1977, 80) Wee & Ng 1995, 81) Vermeij 1978, 82) Ng & Ng 2003, 83) Ng 2002b, 84) Galil & Takeda 1986, 85) Castro 2003, 86) Takeda 1976, 87) Ng 2002c, 88) Clark & Galil 1993, 89) Kropp 1984, 90) Galil & Clark 1990, 91) Odinetz 1984, 92) Ng & Guinot 2001, 93) Quoy & Gaimard 1824, 94) Ng 2003, 95) Ng et al. 1996, 96) Türkay & Sakai 1995, 97) Kropp 1988a, 98) Kropp 1990, 99) Kropp & Manning 1996, 100) Kropp & Manning 1996, 101) Kropp 1989, 102) Kropp 1988b, 103) Grygier 1990, 104) Newman & Hessler 1989, 105) Foster 1990, 106) Paulay & Ross 2003, 107) Southward et al. 1998, 108) Foster & Newman 1987, 109) Jones 2000, 110) Hiro 1937, 111) Asami & Yamaguchi 2001, 112) Smyth 1986, 113) Smyth 1989, 114) Smyth 1990, 115) Child 1991, 116) Child 1983, 117) Stock 1994, 118) Child 1989, 119) Belk 1973, 120) Kikuchi 1994, 121) Morino 1994, 122) Nunomura 2001, 123) Nunomura 1994, 124) Ng 2002d, 125) Ng et al. 2000, 126) Crosnier 2002, 127) Edmondson 1959, 128) Koh & Ng 2000, 129) Schubart & Ng 2000, 130) Griffin & Tranter 1986, 131) Ng & Clark 2000, 132) McKenzie 1967, 133) Ng 1998a, 134) Franssen 2002, 135) Moreira & Nelson 1990, 136) Nelson & Kropp 1985, 137) Yamaguchi 1975, 138) Korovchinsky 2001, 139) Watkins & Belk 1975, 140) El-Rashidy & Boxshall 2001, 141) Edmondson 1954, 142) Takeda 1980, 143) Crosnier & Ng 2003, 144) Ng & McLay 2003.

Notes:

- 1) as *H. poorei* Cronin in Weissleader et al. (1989), a nomen nudum (T. M. Cronin pers. comm. 2001)
- 2) as *L. henryi* Cronin in Weissleader et al. (1989), a nomen nudum (T. M. Cronin pers. comm. 2001)
- 3) as *O. rossi* Cronin in Weissleader et al. (1989), a nomen nudum (T. M. Cronin pers. comm. 2001)
- 4) as *T. weissleaderae* Cronin in Weissleader et al. (1989), a nomen nudum (T. M. Cronin pers. comm. 2001)
- 5) as *Gonodactylus f.* in Holthuis (1953) and Cloud (1959), see Ahyong & Erdmann (2003) for generic reassignment
- 6) as *G. chiragra* var. *acutus* in Edmondson (1921), see Ahyong & Erdmann. (2003) for reidentification
- 7) introduced to Guam in fish ponds
- 8) Original spelling as *A. diabilus* in Banner (1956) as a result of typographical error, see Chace (1988)
- 9) as *A. edmondsoni* in Banner (1956), see Banner & Banner (1983) for synonymy
- 10) as *A. c. inermis*, *A. c. medius*, and *A. c. probabilis* in Banner (1956), see Banner & Banner (1982) for synonymy
- 11) as *A. tuthilli* in Banner (1956), see Banner & Banner (1982) for synonymy
- 12) as *A. gracilis* var. *simplex* in Banner (1956), see Banner & Banner (1982) for synonymy
- 13) as *Thunor i.* in Banner (1956), see Banner & Banner (1982) for generic reassignment
- 14) as *A. ventrosus* in Banner (1956) and Cloud (1959), see Banner & Banner (1982) for synonymy
- 15) as *A. phygianus* in Banner (1956) and Cloud (1959), see Banner & Banner (1982) for synonymy
- 16) as *A. p. bengalensis* in Banner (1956) and Cloud (1959), see Banner & Banner (1982) for synonymy
- 17) misspelled as *A. pearcyi* in Hayashi et al. (1994)
- 18) as *Thunor* sp. 1 (n. sp.) in Banner (1956), see Banner & Banner (1982) for generic reassignment
- 19) as *A. claudi* in Banner (1956), see Chace (1988) for synonymy
- 20) as *A. dubius* in Banner (1956), see Banner & Banner (1973) for synonymy

- 21) as *A. gardineri* in Cloud (1959) and as *A. johnsoni* in Banner (1956), see Banner & Banner (1973) for synonymy
- 22) as *Alpheus p.* in Cloud (1959), see Banner & Banner (1982) for generic reassignment
- 23) as *A. nanus* in Banner (1956) and Cloud (1959), see Banner & Banner (1982) for synonymy
- 24) as *A. c. obscurus* in Banner (1956), see Banner & Banner (1975) for synonymy
- 25) as *A. coutierei exilipes* in Banner (1956), see Banner & Banner (1975) for synonymy
- 26) as *D. n. sp.* in Cloud (1959), described in Holthuis (1981)
- 27) as *M. latimanus* in Camacho 1997, reidentified by Cai & Ng (unpublished data)
- 28) as *P. vestigiatus* in Holthuis (1953) and Cloud (1959), see Chace & Bruce (1993) for generic reassignment
- 29) as *P. periclymenes s.* in Holthuis (1953) and Cloud (1959), see Duris & Bruce (1995) for generic reassignment
- 30) as *Nikoïdes nanus* in Holthuis (1953) and Cloud (1959), see Chace & Bruce (1993) for synonymy
- 31) This is a third color form of *Axiopsis* on Guam that likely represents yet another sibling species in the *A. serratifrons*-complex, so separated by Paulay
- 32) as *Axius a.* in Holthuis (1953) and Cloud (1959), see Kensley (2003) for generic reassignment
- 33) erroneously recorded in Wooster (1979); Wooster's *Aniculus* corresponds to *A. ursus*, checked and corrected by Paulay
- 34) as *A. aniculus* in Wooster (1979), checked and corrected by Paulay
- 35) as *Calcinus imperialis* in Wooster (1982), see Poupin (1997) for reidentification
- 36) as *Pagurus laevimanus* in Holthuis (1953) and Cloud (1959); see McLaughlin & Haig (1984) for generic reassignment. Identification of Cloud's specimens need to be verified, as *Pagurixus* is a diverse genus in the Marianas; see comment 40. McLaughlin's current concept of this species is known on Guam, see photo and specimen vouchers.
- 37) as *Calcinus* sp. 1 in Wooster (1982), checked and corrected by Paulay
- 38) as *C. gainardi* in all refs. cited, separated out by Rahayu & Forest (1999); Guam material reidentified by McLaughlin
- 39) as *Orthopagurus harmsi* in Wooster (1979), see McLaughlin & Lemaitre (1993) for description of new species
- 40) as *Pagurixus laevimanus* in McLaughlin & Haig (1984), reidentified by McLaughlin
- 41) as *Parapagurus d.* in Dunn et al. (1980), see Lemaitre (1989) for generic reassignment; associated with the deep water shell-forming anemone *Sylobates aeneus*
- 42) as *Cryptodormia canaliculata* in Takeda et al. (1994), see McLay (1993) for synonymy
- 43) as *Trigonothir o.* in Holthuis (1953) and Cloud (1959), see Griffin & Tranter (1986) for synonymy
- 44) identification of Cloud's specimens not checked; potentially *Tiarinia cornigera*
- 45) as *Litocheira aranea* in Holthuis (1953), Cloud (1959), generic reassignment by Ng (1987)
- 46) as *Actaea h.* in Cloud (1959), see Serène (1984) for generic reassignment
- 47) likely corresponds to *Atergatis subdentatus* recorded here
- 48) may be juvenile of *A. granulatus*
- 49) as *Actaea s.* in Holthuis (1953) and Cloud (1959), see Serène (1984) for generic reassignment
- 50) as *Heteropilumnus i.* in Holthuis (1953), Cloud (1959), generic reassignment by Ng (1987)

- 51) as *L. a.* in Holthuis (1953) and Cloud (1959), subspecific identification by Kropp (unpublished data)
- 52) as *Pilodius h.* in Takeda et al. (1994), see Clark & Galil, 1993 for generic reassignment
- 53) as *Carpilodes m.* in Holthuis (1953) and Cloud (1959), see Serène (1984) for generic reassignment
- 54) as *Carpilodes s.* in Holthuis (1953) and Cloud (1959), see Serène (1984) for generic reassignment
- 55) as *Carpilodes b.* in Holthuis (1953) and Cloud (1959), see Serène (1984) for generic reassignment
- 56) as *Carpilodes t.* in Holthuis (1953) and Cloud (1959), see Serène (1984) for generic reassignment
- 57) spelling corrected from *P. parvus* in Cloud (1959)
- 58) as *Chlorodopsis p.* in Holthuis (1953) and Cloud (1959), see Clark & Galil, 1993 for generic reassignment
- 59) as *Chlorodopsis melanodactyla* in Holthuis (1953) and Cloud (1959), see Clark & Galil, 1993 for synonymy and generic reassignment
- 60) as *Chlorodopsis p.* in Holthuis (1953) and Cloud (1959), see Clark & Galil, 1993 for generic reassignment
- 61) considered a syn. of *P. granulatus* by Clark & Galil (1993), but not Ng
- 62) as *Actaea cavipes* in Holthuis (1953) and Cloud (1959), see Serène (1984) for generic reassignment
- 63) as *Actaea l.* in Holthuis (1953) and Cloud (1959), see Serène (1984) for generic reassignment
- 64) as *Theiphusa r.* in Quoy & Gaimard (1924) and as *Cardisoma r.* in Takeda et al. (1994), see Ng & Guinot (2001) for generic reassignment
- 65) Takeda et al. (1994) record *P. tuberculata*, now considered a species complex of *P. immaculata* and *P. squamosa* (Ng et al. 2000)
- 66) The Eumedonidae has been synonymised with the Pilumnidae by Ng & Clark (2002) and now regarded only as a subfamily within it.
- 67) Ng & Liao (2002) recently recognised the Pseudozidae as a distinct family and formally transferred *Euryozius* to this taxon as well.
- 68) as *Saipanella cloudi* in McKenzie (1967), generic reassignment by McKenzie (1970)
- 69) as *Penaeus s.* in Eldredge (1994), generic reassignment by Pérez Farfante & Kensley (1997)
- 70) as *Thor maldivensis* in Cloud (1959) and Holthuis (1953), generic reassignment by Bruce (1997, 1998)
- 71) describe as *Hypsophrys williamsi*, generic reassignment by Ng (1998b)
- 72) This species is common in Pleistocene deposits in Apra Harbor (Kesling 1958), but was never seen by us alive. However a single, unlabeled specimen (UF 2846) of this species was found in the UOGML teaching collection. This specimen likely came from Guam, but additional specimens are needed to ascertain this. The crustacean fauna of Apra harbor is still poorly sampled.
- 73) as *Pagurus latro* in Quoy & Gaimard (1824), now in monotypic *Birgus* (Amesbury 1980)