

Catalog of Type Specimens of Recent
Fishes in the National Museum of Natural
History, Smithsonian Institution, 7:
Chaenopsidae, Clinidae, Dactyloscopidae,
Labrisomidae, and Tripterygiidae

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ABSTRACT

Springer, Victor G., and Thomas M. Orrell. Catalog of Type Specimens of Recent Fishes in the National Museum of Natural History, Smithsonian Institution, 7: Chaenopsidae, Clinidae, Dactyloscopidae, Labrisomidae, Tripterygiidae. *Smithsonian Contributions to Zoology*, number 576, 38 pages, 1 table, 1996.—This study treats the putative type specimens included in all the families of blennioid fishes, except those of the Blenniidae (which were treated previously), known or believed to have been deposited in the USNM collections and whose descriptions were published prior to 1 December 1995. These include 2365 specimens in 415 lots, which comprise 112 holotypes, eight lectotypes, three neotypes, 14 syntypes, 2215 paratypes, and 13 paralectotypes of 222 nominal species and subspecies. Among the eight lectotypes, the following are designated by us in the present study: *Emblemaria markii* Mowbray, *Cryptotrema corallinum* Gilbert; *Labrosomus xanti* Gill; and *Tripterygion ellioti*, Herre (located in the California Academy of Sciences, CAS-SU 38840). The holotypes or syntypes of five other nominal species that were, or could be expected to be, deposited in the USNM collections appear to be lost, and the holotype of one other species has been exchanged. We list each nominal taxon together with its original literature citation and, for primary types, include published collecting associated data and length measurements. USNM accession numbers, where known, are given for all types. Discrepancies between original descriptions and putative types are discussed, as well as miscellaneous other relevant problems encountered during the course of preparing this listing.

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Catalog of Type Specimens of Recent Fishes in the National Museum of Natural History, Smithsonian Institution, 7: Chaenopsidae, Clinidae, Dactyloscopidae, Labrisomidae, and Tripterygiidae

*Victor G. Springer
and Thomas M. Orrell*

Introduction

This report continues a sequentially numbered series of catalogs of type specimens in the collections of the Division of Fishes, National Museum of Natural History, Smithsonian Institution (USNM; former United States National Museum), the most recent previously being that of D.G. Smith (1994). Herein, we treat the putative type specimens included in all the families of blennioid fishes (Springer, 1993), except those of the Blenniidae (which were treated by Springer et al., 1991), known or believed to have been deposited in the USNM collections and whose descriptions were published prior to 1 December 1995. These include 2365 specimens in 415 lots, which comprise 112 holotypes, eight lectotypes, three neotypes, 14 syntypes, 2215 paratypes, and 13 paralectotypes of 222 nominal species and subspecies. The holotypes or syntypes of five other nominal species appear to be lost, and the holotype of one other species has been exchanged.

METHODS.—A list of all included species and subspecies, alphabetized by species (as originally spelled), with family assignment for each, is presented in Table 1, followed by the family accounts in alphabetical order. The species within each family are presented in alphabetical order, and each is given in the exact form in which it appeared in its original description followed, in brackets, by the corrected spelling of the genus or species group name, if mandated by the rules in the 1985

edition of the *International Code of Zoological Nomenclature*. All subsequent information we provide on each taxon is essentially identical with that given in the original description or available elsewhere in the publication containing the original description. Any corrected or additional information we provide that augments that given in the original description is included in brackets. Where known, we provide the USNM accession number for each type lot. The accession numbers refer to files in the Office of the Registrar, National Museum of Natural History. These files often include important information (letters, invoices, etc.) that have bearing on the types and that is not included in the USNM catalog. Museum acronyms follow those given by Leviton et al. (1985). The following standard abbreviations are used: SL = standard length; TL = total length. We remeasured the lengths of many of the earliest described primary types for comparison with lengths given in original descriptions and as an aid to verifying their type status. We present our measurements in brackets.

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TABLE 1.—Combined alphabetical listing of all included species and subspecies with family allocations.

Species/Subspecies	Family	Species/Subspecies	Family
<i>abditus</i> , <i>Gilloblennius</i>	Tripterygiidae	<i>destai</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>acon</i> , <i>Leurochilus</i>	Dactyloscopidae	<i>diaphana</i> , <i>Emblemariopsis</i>	Chaenopsidae
<i>afuerae</i> , <i>Labrisomus</i>	Labrisomidae	<i>diphyodontis</i> , <i>Emblemaria</i>	Chaenopsidae
<i>afuerae multipunctatus</i> , <i>Malacoctenus</i>	Labrisomidae	<i>ebisui</i> , <i>Malacoctenus</i>	Labrisomidae
<i>albicaudus</i> , <i>Auchenopterus</i>	Labrisomidae	<i>elegans erroli</i> , <i>Gibbonsia</i>	Clinidae
<i>albigenys</i> , <i>Labrisomus</i>	Labrisomidae	<i>elegans montereyensis</i> , <i>Gibbonsia</i>	Clinidae
<i>alepidota californiensis</i> , <i>Chaenopsis</i>	Chaenopsidae	<i>elegans velifera</i> , <i>Gibbonsia</i>	Clinidae
<i>alepidotus</i> , <i>Lucioblennius</i>	Chaenopsidae	<i>elliotti</i> , <i>Tripterygion</i>	Tripterygiidae
<i>alleni</i> , <i>Tanyemblemaria</i>	Chaenopsidae	<i>elongata</i> , <i>Starksia</i>	Labrisomidae
<i>altipinnis</i> , <i>Enneapterygius</i>	Tripterygiidae	<i>erroli</i> , <i>Gibbonsia</i> (see <i>Gibbonsia elegans</i>)	Clinidae
<i>altivelis sini</i> , <i>Paraclinus</i>	Labrisomidae	<i>erythra</i> , <i>Gibbonsia</i>	Clinidae
<i>amnis</i> , <i>Dactyloscopus</i>	Dactyloscopidae	<i>erythrosoma</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>aquila</i> , <i>Helcogramma</i>	Tripterygiidae	<i>etheostoma</i> , <i>Tripterygium</i>	Tripterygiidae
<i>arborescens</i> , <i>Acanthemblemaria</i>	Chaenopsidae	<i>fajardo</i> , <i>Auchenopterus</i>	Labrisomidae
<i>arenicola</i> , <i>Gillellus</i>	Dactyloscopidae	<i>fehlmanni</i> , <i>Paraclinus</i>	Labrisomidae
<i>argus</i> , <i>Cremnobates</i>	Labrisomidae	<i>filamentosus</i> , <i>Labrisomus</i> (<i>Gobioclinus</i>)	Labrisomidae
<i>asper</i> , <i>Auchenopterus</i>	Labrisomidae	<i>fimbriata</i> , <i>Cokeridia</i>	Dactyloscopidae
<i>aspera</i> , <i>Parablemaria</i>	Chaenopsidae	<i>flavoccipitis</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>ascensionis</i> , <i>Helcogramma</i>	Tripterygiidae	<i>foraminosus</i> , <i>Dactyloscopus</i>	Dactyloscopidae
<i>atelestos</i> , <i>Nemaclinus</i>	Labrisomidae	<i>fulva</i> , <i>Starksia</i>	Labrisomidae
<i>atlantica</i> , <i>Emblemaria</i>	Chaenopsidae	<i>furcata</i> , <i>Somersia</i>	Labrisomidae
<i>atriceps</i> , <i>Tripterygium</i>	Tripterygiidae	<i>fuscinna</i> , <i>Helcogramma</i>	Tripterygiidae
<i>australis</i> , <i>Gillellus</i>	Dactyloscopidae	<i>galapagensis</i> , <i>Starksia</i>	Labrisomidae
<i>beebei</i> , <i>Paraclinus</i>	Labrisomidae	<i>gigas</i> , <i>Malacoctenus</i>	Labrisomidae
<i>belone</i> , <i>Myxodagnus</i>	Dactyloscopidae	<i>gracilis</i> , <i>Crocodilichthys</i>	Tripterygiidae
<i>bicirrus</i> , <i>Emblemaria</i>	Chaenopsidae	<i>gracilis</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>billi</i> , <i>Helcogramma</i>	Tripterygiidae	<i>grammifera</i> , <i>Starksia</i>	Labrisomidae
<i>bimaculata</i> , <i>Lepidonectus</i>	Tripterygiidae	<i>greyae</i> , <i>Gillellus</i>	Dactyloscopidae
<i>biocellata</i> , <i>Emblemaria</i>	Chaenopsidae	<i>guadalupae</i> , <i>Starksia</i>	Labrisomidae
<i>blanchardi</i> , <i>Neoclinus</i>	Chaenopsidae	<i>guttata</i> , <i>Emblemaria</i>	Chaenopsidae
<i>boehlkei</i> , <i>Coralliozetus</i>	Chaenopsidae	<i>gymnodermis</i> , <i>Stathmonotus</i>	Chaenopsidae
<i>boehlkei</i> , <i>Dactyloscopus</i>	Dactyloscopidae	<i>habena</i> , <i>Helcogramma</i>	Tripterygiidae
<i>botomei</i> , <i>Emblemariopsis</i>	Chaenopsidae	<i>hancocki</i> , <i>Acanthemblemaria</i>	Chaenopsidae
<i>brachylepis</i> , <i>Tripterygion</i>	Tripterygiidae	<i>haitiensis</i> , <i>Labrisomus</i>	Labrisomidae
<i>bristolae</i> , <i>Emmion</i>	Labrisomidae	<i>healae</i> , <i>Gillellus</i>	Dactyloscopidae
<i>bryope</i> , <i>Zacalles</i>	Chaenopsidae	<i>helenae</i> , <i>Ceratobregma</i>	Tripterygiidae
<i>byersi</i> , <i>Dactyloscopus</i>	Dactyloscopidae	<i>hemimelas</i> , <i>Tripterygium</i>	Tripterygiidae
<i>californiensis</i> , <i>Chaenopsis</i> (see <i>alepidota</i> , <i>Chaenopsis</i>)	Chaenopsidae	<i>hemphilli</i> , <i>Stathmonotus</i>	Chaenopsidae
<i>capitata</i> , <i>Helcogramma</i>	Tripterygiidae	<i>holderi</i> , <i>Starksia</i>	Labrisomidae
<i>cardonae</i> , <i>Coralliozetus</i>	Chaenopsidae	<i>hollemanni</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>carminale</i> , <i>Tripterygium</i>	Tripterygiidae	<i>hsiojenae</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>castroi</i> , <i>Acanthemblemaria</i>	Chaenopsidae	<i>hubbsi hubbsi</i> , <i>Malacoctenus</i>	Labrisomidae
<i>catherinae</i> , <i>Mnierpes</i> (see <i>macrocephalus</i> , <i>Mnierpes</i>)	Labrisomidae	<i>hubbsi polyporosus</i> , <i>Malacoctenus</i>	Labrisomidae
<i>cerasinus</i> , <i>Enneapterygius</i>	Tripterygiidae	<i>hudsoni</i> , <i>Emblemaria</i>	Chaenopsidae
<i>chica</i> , <i>Helcogramma</i>	Tripterygiidae	<i>hudsoni</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>cingulatus</i> , <i>Auchenopterus</i>	Labrisomidae	<i>hutchinsi</i> , <i>Ophiclinops</i>	Clinidae
<i>clarkae</i> , <i>Enneapterygius</i>	Tripterygiidae	<i>hyltoni</i> , <i>Emblemaria</i>	Chaenopsidae
<i>cleophens</i> , <i>Paraclinus</i> (see <i>mexicanus</i> , <i>Paraclinus</i>)	Labrisomidae	<i>hypacanthus</i> , <i>Pseudoblennius</i>	Chaenopsidae
<i>comptus</i> , <i>Dactyloscopus</i>	Dactyloscopidae	<i>hystrix</i> , <i>Acanthanectes</i>	Tripterygiidae
<i>corallicola</i> , <i>Enneapterygius</i>	Tripterygiidae	<i>integripinnis</i> , <i>Cremnobates</i>	Labrisomidae
<i>corallicola</i> , <i>Stathmonotus</i>	Chaenopsidae	<i>integripinnis zaca</i> , <i>Paraclinus</i>	Labrisomidae
<i>corallinum</i> , <i>Cryptotrema</i>	Labrisomidae	<i>jordani</i> , <i>Gillias</i>	Tripterygiidae
<i>cremnobates</i> , <i>Labrisomus</i>	Labrisomidae	<i>kalisherai</i> , <i>Ericteis</i>	Labrisomidae
<i>crossota</i> , <i>Cokeridia</i>	Dactyloscopidae	<i>kermadecensis</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>culebrae</i> , <i>Malacoctenus</i>	Labrisomidae	<i>kulbickii</i> , <i>Gracilopterygion</i>	Tripterygiidae
<i>culmenis</i> , <i>Emblemaria</i>	Chaenopsidae	<i>lapillum</i> , <i>Forsterygion</i>	Tripterygiidae
<i>delicata</i> , <i>Tagusa</i>	Labrisomidae	<i>leptocirris</i> , <i>Emblemariopsis</i>	Chaenopsidae
<i>deltarrhis</i> , <i>Chaenopsis</i>	Chaenopsidae		
<i>dendriticus</i> , <i>Odontoclinus</i>	Labrisomidae		

TABLE 1.—Continued.

Species/Subspecies	Family	Species/Subspecies	Family
<i>lesleyae</i> , <i>Bellapiscis</i>	Tripterygiidae	<i>punctulatus</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>lira</i> , <i>Ekemblemaria</i>	Chaenopsidae	<i>pyramis</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>lucasana</i> , <i>Protemblemaria</i>	Chaenopsidae	<i>reticulatus</i> , <i>Enneanectes</i>	Tripterygiidae
<i>lucius</i> , <i>Lucioblennius</i>	Chaenopsidae	<i>rhinoceros</i> , <i>Helcogramma</i>	Tripterygiidae
<i>lugubris</i> , <i>Myxodes</i>	Labrisomidae	<i>rhodopyga</i> , <i>Xenomedeia</i>	Labrisomidae
<i>lunaticus</i> , <i>Dactyloscopus</i>	Dactyloscopidae	<i>rivasi</i> , <i>Acanthemblemaria</i>	Chaenopsidae
<i>macrocephalus catherinae</i> , <i>Mnierpes</i>	Labrisomidae	<i>rosenblatti</i> , <i>Coralliozetus</i>	Chaenopsidae
<i>macrognathus</i> , <i>Myxodagnus</i>	Dactyloscopidae	<i>roseola</i> , <i>Chaenopsis</i>	Chaenopsidae
<i>magdalenae</i> , <i>Paraclinus</i>	Labrisomidae	<i>rostratus</i> , <i>Heterostichus</i>	Clinidae
<i>malcolmi</i> , <i>Forsterygion</i>	Tripterygiidae	<i>rubellulus</i> , <i>Gillellus</i>	Dactyloscopidae
<i>maldivensis</i> , <i>Helcogramma</i>	Tripterygiidae	<i>rubescens</i> , <i>Auchenopterus</i>	Labrisomidae
<i>margaritae mexicanus</i> , <i>Malacoctenus</i>	Labrisomidae	<i>rubicauda</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>markii</i> , <i>Emblemaria</i>	Chaenopsidae	<i>rubinoffi</i> , <i>Axoclinus</i>	Tripterygiidae
<i>maryannae</i> , <i>Obliquichthys</i>	Tripterygiidae	<i>rubrocinctus</i> , <i>Gillellus</i>	Dactyloscopidae
<i>medusa</i> , <i>Acanthemblemaria</i>	Chaenopsidae	<i>rufus</i> , <i>Acanthanectes</i>	Tripterygiidae
<i>melanospilus</i> , <i>Enneapterygius</i>	Tripterygiidae	<i>sandae</i> , <i>Mccoskerichthys</i>	Chaenopsidae
<i>metzi</i> , <i>Gibbonsia</i>	Clinidae	<i>satiricus</i> , <i>Neoclinus</i>	Chaenopsidae
<i>mexicanus</i> , <i>Malacoctenus</i> (see <i>margaritae</i> , <i>Malacoctenus</i>)	Labrisomidae	<i>schmitti</i> , <i>Chaenopsis</i>	Chaenopsidae
<i>mexicanus cleophens</i> , <i>Paraclinus</i>	Labrisomidae	<i>schmitti</i> , <i>Myxodes</i>	Clinidae
<i>microlepidotus</i> , <i>Labrosomus</i>	Labrisomidae	<i>seftoni</i> , <i>Cryptotrema</i>	Labrisomidae
<i>mirabilis</i> , <i>Enneapterygius</i>	Tripterygiidae	<i>semicinctus</i> , <i>Gillellus</i>	Dactyloscopidae
<i>montereyensis</i> , <i>Gibbonsia</i> (see <i>elegans</i> , <i>Gibbonsia</i>)	Clinidae	<i>signata</i> , <i>Grahamina</i>	Tripterygiidae
<i>moorei</i> , <i>Malacoctenus</i>	Labrisomidae	<i>signata</i> , <i>Taboguilla</i>	Tripterygiidae
<i>multicinctus</i> , <i>Axoclinus</i>	Tripterygiidae	<i>signifer</i> , <i>Emblemaria</i>	Chaenopsidae
<i>multiporosus</i> , <i>Labrisomus</i> (<i>Labrisomus</i>)	Labrisomidae	<i>simulus</i> , <i>Hemiemblemaria</i>	Chaenopsidae
<i>multipunctatus</i> , <i>Malacoctenus</i> (see <i>afuerae</i> , <i>Malacoctenus</i>)	Labrisomidae	<i>sini</i> , <i>Paraclinus</i> (see <i>altivelis</i> , <i>Paraclinus</i>)	Labrisomidae
<i>mundus</i> , <i>Dactylagnus</i>	Dactyloscopidae	<i>spatulatus</i> , <i>Clinus</i> (<i>Clinus</i>)	Clinidae
<i>myae</i> , <i>Pavoclinus</i>	Clinidae	<i>springeri</i> , <i>Helcogramma</i>	Tripterygiidae
<i>myersi</i> , <i>Ekemblemaria</i>	Chaenopsidae	<i>springeri</i> , <i>Norfolkia</i>	Tripterygiidae
<i>nanus</i> , <i>Tripterygion</i>	Tripterygiidae	<i>stahli</i> , <i>Auchenistius</i>	Chaenopsidae
<i>niger</i> , <i>Enneapterygius</i>	Tripterygiidae	<i>starcki</i> , <i>Starksia</i>	Labrisomidae
<i>nigra</i> , <i>Emblemaria</i>	Chaenopsidae	<i>steinitzii</i> , <i>Helcogramma</i>	Tripterygiidae
<i>nigricaudus</i> , <i>Axoclinus</i>	Tripterygiidae	<i>stephensae</i> , <i>Neoclinus</i>	Chaenopsidae
<i>nivipes</i> , <i>Emblemaria</i>	Chaenopsidae	<i>stephensi</i> , <i>Paraclinus</i>	Labrisomidae
<i>norae</i> , <i>Gibbonsia</i>	Clinidae	<i>stewarti</i> , <i>Karalepis</i>	Tripterygiidae
<i>nox</i> , <i>Cremnobates</i>	Labrisomidae	<i>striata</i> , <i>Helcogramma</i>	Tripterygiidae
<i>nudus</i> , <i>Neoclinus</i>	Chaenopsidae	<i>striatus</i> , <i>Labrisomus</i> (<i>Brockius</i>)	Labrisomidae
<i>obscurus</i> , <i>Enneapterygius</i>	Tripterygiidae	<i>sudensis</i> , <i>Malacoctenus</i> (see <i>zonifer</i> , <i>Malacoctenus</i>)	Labrisomidae
<i>occidentalis</i> , <i>Starksia</i>	Labrisomidae	<i>tanygnathus</i> , <i>Paraclinus</i>	Labrisomidae
<i>ocellatus</i> , <i>Chaenopsis</i>	Chaenopsidae	<i>tetranemus</i> , <i>Blennius</i>	Labrisomidae
<i>oculocirris</i> , <i>Emblemaria</i>	Chaenopsidae	<i>thysanotus</i> , <i>Dactyloscopus</i>	Dactyloscopidae
<i>olsoni</i> , <i>Storrsia</i>	Dactyloscopidae	<i>tortugae</i> , <i>Emblemaria</i>	Chaenopsidae
<i>opercularis</i> , <i>Myxodagnus</i>	Dactyloscopidae	<i>triangulatus</i> , <i>Malacoctenus</i>	Labrisomidae
<i>ornatus</i> , <i>Gillellus</i>	Dactyloscopidae	<i>tridigitatus</i> , <i>Dactyloscopus</i>	Dactyloscopidae
<i>pallidus</i> , <i>Enneapterygius</i>	Tripterygiidae	<i>tusitalae</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>pandionis</i> , <i>Emblemaria</i>	Chaenopsidae	<i>tutuillae</i> , <i>Enneapterygius</i>	Tripterygiidae
<i>pardochir</i> , <i>Enneapterygius</i>	Tripterygiidae	<i>uninotatus</i> , <i>Neoclinus</i>	Chaenopsidae
<i>paula</i> , <i>Acanthemblemaria</i>	Chaenopsidae	<i>variabilis</i> , <i>Starksia</i>	Labrisomidae
<i>pectoralis</i> , <i>Dactyloscopus</i>	Dactyloscopidae	<i>variegata</i> , <i>Acanthemblemaria</i>	Chaenopsidae
<i>pectoralis</i> , <i>Ophiclinus</i>	Clinidae	<i>varius</i> , <i>Myxodes</i>	Labrisomidae
<i>piratica</i> , <i>Emblemaria</i>	Chaenopsidae	<i>velifera</i> , <i>Gibbonsia</i> (see <i>Gibbonsia elegans</i>)	Clinidae
<i>piratula</i> , <i>Emblemaria</i>	Chaenopsidae	<i>veliger</i> , <i>Histioclinus</i>	Chaenopsidae
<i>poeyi</i> , <i>Dactyloscopus</i>	Dactyloscopidae	<i>vulcana</i> , <i>Helcogramma</i>	Tripterygiidae
<i>polyporatus</i> , <i>Springeratus</i>	Clinidae	<i>walkeri</i> , <i>Emblemaria</i>	Chaenopsidae
<i>polyporosus</i> , <i>Malacoctenus</i> (see <i>hubbsi</i> , <i>Malacoctenus</i>)	Labrisomidae	<i>walkeri</i> , <i>Paraclinus</i>	Labrisomidae
<i>pomaspilus</i> , <i>Labrisomus</i> (<i>Labrisomus</i>)	Labrisomidae	<i>whero</i> , <i>Ruanoho</i>	Tripterygiidae
<i>posthon</i> , <i>Starksia</i>	Labrisomidae	<i>wigginsi</i> , <i>Labrisomus</i> (<i>Odontoclinus</i>)	Labrisomidae
<i>profundum</i> , <i>Forsterygion</i>	Tripterygiidae		
<i>puertoricensis</i> , <i>Malacoctenus</i>	Labrisomidae		

TABLE 1.—Continued.

Species/Subspecies	Family	Species/Subspecies	Family
<i>xanti</i> , <i>Labrosomus</i>	Labrisomidae	<i>zacae</i> , <i>Malaccoctenus</i>	Labrisomidae
<i>xenogrammus</i> , <i>Ucla</i>	Tripterygiidae	<i>zacae</i> , <i>Paraclinus</i> (see <i>integripinnis zacae</i>)	Labrisomidae
<i>yaldwyni</i> , <i>Notoclinus</i>	Tripterygiidae	<i>zelotes</i> , <i>Dactyloscopus</i>	Dactyloscopidae
<i>y-lineata</i> , <i>Starksia</i>	Labrisomidae	<i>zonifer</i> , <i>Clinus</i>	Labrisomidae
		<i>zonifer sudensis</i> , <i>Malaccoctenus</i>	Labrisomidae

Annotated List of Type Specimens

CHAENOPSIDAE

Chaenopsis alepidota californiensis Böhlke, 1957:99.

Holotype

USNM 56396, 153.0 mm SL, collected by Miss F. Lauderbach from Avalon, Santa Catalina Island, California (acc. no. 46605).

Remarks: Tag reading "DRAWN" attached to specimen.

Lucioblennius alepidotus Gilbert, 1890:103 [Chaenopsidae].

[Syntype] [Paralectotype]

[USNM 48264, 31 mm SL] collected by the Steamer *Albatross* from sta 3005 [Gulf of California, 25°02'45"N, 11°043'30"W, 17 Mar 1989], in 21 fathoms [about 38.4 m].

Remarks: Gilbert (1890:104) based his description on two specimens taken by the *Albatross* at station 3005. Böhlke (1953:93) lists SU 72 (now CAS-SU 72) from *Albatross* station 3005 as a syntype of *Lucioblennius alepidotus*, thus accounting for both syntypes. Jordan (1896:244) effectively designated a lectotype when he used the word "type" in attribution to an illustrated specimen (plate 37, middle illustration), and the lectotype must be SU 72 because Jordan (1896:201) stated that all his material was in the Stanford collections. Schultz (1942:155) erroneously indicated that USNM 44373 (one specimen from *Albatross* station 3006) was a cotype [syntype in his usage] of *L. alepidotus*, but, as hinted at by Böhlke (1957:98), USNM 44373 was taken at *Albatross* station 3006 and cannot be a syntype. Stephens' (1963:129) indication that USNM 48264 is the "holotype" of this species is clearly in error.

Tanyemblemaria alleni Hastings, 1992a:149.

Holotype

USNM 309963, male, 54.3 mm SL, Isla del Rey, Islas Perlas, Panama (about 8°17'30"N, 78°52'30"W), 17 m, 4 May 1990, G.R. Allen, D.R. Robertson, and R. Steene [acc. no. 392230].

Acanthemblemaria arborescens Beebe and Tee-Van, 1928:244.

Type [Holotype]

NYZS 6923 [USNM 170566], 22 mm SL, Lamentin

Reefs, Port-au-Prince Bay, 22 Feb 1927 [acc. no. 215651].

Remarks: The original description designates the type [holotype] as New York Zoological Society [NYZS] No. 6923 and the final depository of the type and paratypes as the collections of the Department of Tropical Research of the New York Zoological Society. These specimens were donated to USNM by William Beebe in 1958 (Mead, 1958:131).

Paratypes

Remarks: All with same collection data and accession number as holotype.

NYZS 7201 [USNM 170567] (1).

NYZS 7278 [USNM 170568] (2).

Parembelmaria aspera Longley, 1927:224.

Type [Holotype]

USNM [88629], male, 33 mm long [26.8 mm SL; 30.0 mm TL], from Tortugas [Florida] [acc. no. 98218].

Remarks: Longley (1927:224) gave USNM as the depository of the type but gave no catalog number. Hildebrand (in Longley and Hildebrand, 1940:273) indicated, for the first time, that the "type" was cataloged as USNM 88629 (and gave the same length for the specimen as did Hildebrand).

[Paratypes?]

Remarks: The original description indicates the presence of an unspecified number of specimens, both male and female. Longley (posthumously, in Longley and Hildebrand, 1940:271) described characters of 16 specimens of *P. aspera* from Tortugas, but it is unclear if any or all of these formed part of his paratypic series. Hildebrand (in Longley and Hildebrand, 1940:273) indicated that he examined a female paratype, 28 mm long, but gave no catalog number nor indication that other paratypes existed. There are only two lots of specimens identified as *Parembelmaria aspera* at USNM that might be considered as possible paratypes, USNM 116801 and USNM 116826.

[USNM 116801, (8) same locality as holotype, acc. no. 144662].

[USNM 116826, (1) same locality as holotype, acc. no. 144662].

Remarks: We found a handwritten note, now almost

disintegrated, which bears the word "type" in the jar containing this specimen. The specimen (female?) is much too small to have been Longley's type, but it may be the "female paratype" mentioned by Hildebrand (in Longley and Hildebrand, 1940:273).

Emblemaria atlantica Jordan and Evermann, 1898:2402.

Type [Holotype]

USNM 33915, 3 in [= 79.4 mm] long [68.8 mm SL = 3 in; 77.4 mm TL = 3.1 in], Gulf of Mexico; Snapper Banks off Pensacola, collected by Silas Stearns.

Remarks: Jordan and Evermann (1896:472) published the name only (nomen nudum). They listed the original description as being from Jordan and Evermann, *Fishes of North and Middle America*, 1896. However, *Bulletin of the United States National Museum*, 47(3), which contained the actual description, was not published until 1898. A handwritten tag in the jar with the holotype states that it was "Drawn for F.N.A." (= *Fishes of North and Middle America*).

Emblemaria bicirrus Hildebrand, 1946:406.

Type [Holotype]

USNM 128223, 35 mm [34.8 mm TL], 29 mm to base of caudal [28.9 mm SL], seined at Langunilla, Independencia Bay, Peru, by the Mission [acc. no. 158454].

Remarks: Tag in jar stating, "47 Drawn by [J.W.] Roller May 1944."

Emblemaria biocellata Stephens, 1970:301.

Holotype

USNM 198596, female, 41.0 mm SL collected by the *Oregon* off French Guiana, 7°46'N, 5°17'W, 22 Mar 1963 [acc. no. 254315].

[Paratype]

USNM 199417 (1) [acc. no. 251937].

Remarks: Stephens (1970:301) based his description on the female holotype and a male collected from Venezuela (USNM 199417). Although the male was not designated as a paratype, it was not excluded from the type material. It must be treated, therefore, as a paratype.

Neoclinus blanchardi Girard, 1858:114.

[Holotype]

[USNM] 691 [153 mm SL], adult female, collected by Dr. S.B. Blanchard, 1849, off San Diego, California.

Coralliozetus boehlkei Stephens, 1963:61.

Holotype

USNM 196673, 19.5 [18.2] mm SL, collected by C.L. Hubbs on 10 Sep 1946, in Puerto Marqués, near Acapulco, Guerrero, Mexico [acc. no. 240696].

Paratypes

USNM 196674 (3) [same collection data as holotype, acc. no. 240696].

Emblemariopsis bottomei Stephens, 1961:6.

Holotype

USNM 195822, 29.6 mm SL, collected by P. Bottome and party at Yonquí, Los Roques Archipelago, Venezuela [acc. no. 219726].

Zacalles bryope Jordan and Snyder, 1902:448.

Cotype [Paratypes]

USNM 50296 [6] [acc. no. 039095].

Remarks: Jordan and Snyder indicated only "cotype" for USNM 50296, without specifying the number of specimens. It is possible they were referring to a cotype lot, or a typographical error was made, or five specimens were later added to an original lot containing only one specimen.

Coralliozetus cardonae Evermann and Marsh, 1899:362.

Type [Holotype]

USNM 49377, 1 in [= 25.4 mm] long [22.2 mm SL = 0.89 in; 19.7 mm TL = 0.78 in], taken on the coral reefs at Ponce, Puerto Rico, 1 Feb 1899 [acc. no. 036735].

[Paratypes]

Remarks: Evermann and Marsh based their description on "three specimens, from .087 to 1 inch in length," only one of which was designated as the "type." Two specimens cataloged as "cotype" and "paratype" were found at USNM.

USNM 50222 (1).

USNM 125968 (1) [acc. no. 163614].

Acanthemblemaria castroi Stephens and Hobson in Stephens, Hobson, and Johnson, 1966:426.

Holotype

USNM 198257, male, 51.7 mm SL, from Barrington Is., Galapagos Archipelago, collected by B.W. Walker and E.S. Hobson, 17 Feb 1964, formerly UCLA [W]64-27 [acc. no. 257404].

Remarks: In the material examined section of the original description, the holotype is indicated erroneously as "formerly UCLA [W]54-27."

Paratypes

USNM 198258 (11) [10], same collection data as holotype [acc. no. 257404].

Remarks: Formerly UCLA [W]64-27. The original description lists 11 paratypes in USNM 198258, but the USNM ledger entry lists only 10, and only 10 specimens are in the jar. The location of the 11th specimen is unknown and may not have been received at USNM.

Stathmonotus corallicola Beebe and Tee Van, 1928:249.

Type [Holotype]

NYZS 7463 [USNM 170571], 21 mm [19.8 mm SL] length, Lamentin Reef, Port-au-Prince Bay, 22 Apr 1927, taken from worm holes in old broken coral

submerged about a foot [about 306 mm] [acc. no. 215651].

Remarks: The specimen was donated to USNM by W. Beebe (Mead, 1958:134).

Emblemaria culmenis Stephens, 1970:299.

Holotype

USNM 200424, male, 51.0 mm SL, collected by the *Oregon* from 35 fms [= 64 m] off Venezuela 12°31' N, 69°55' W, 2 Oct 1965 [acc. no. 261501].

Chaenopsis deltarrhis Böhlke, 1957:93.

Paratype

USNM 101950 (1) [acc. no. 131571].

Emblemariopsis diaphana Longley, 1927:223.

Type [Holotype]

USNM [88628], male, 30 mm long [26.5 mm SL, 30 mm TL], from Tortugas [acc. no. 98218].

Remarks: Longley (1927:223) gave the depository of the type as the U.S. National Museum, but gave no catalog number. Hildebrand (in Longley and Hildebrand, 1940:270), who worked from Longley's notes and specimens after Longley's death, indicated that the number was 88628. Hildebrand erroneously quoted Longley as having given the length of the holotype as 32 mm, whereas Longley gave it as 30 mm, identical with Hildebrand's measurement.

[Paratypes]

Remarks: Longley did not designate paratypes, but he indicated in his description that he had males and females. Although Longley provided neither catalog numbers nor numbers of specimens, all the specimens mentioned, other than the holotype, are de facto paratypes. Hildebrand (in Longley and Hildebrand, 1940:270) indicated that there were six specimens in addition to the holotype in Longley's Tortugas collection, but he also did not provide catalog numbers. There are two USNM lots of specimens of *Emblemariopsis diaphana* collected by Longley. One lot, USNM 116812 (six specimens), cataloged on 28 Feb 1940, is indicated as paratypes of *Emblemariopsis diaphana*. These are undoubtedly the six specimens Hildebrand mentioned, and they probably contributed to Longley's description. The other lot, USNM 88115 (one specimen), was cataloged 7 Dec 1926. An undecipherable pencilled identification for this lot has been erased from the USNM ledger and an inked-in identification, *Emblemariopsis diaphana*, is written over the erasure. No indication of type status for this specimen appears in the ledger or with the specimen. The identification, according to a handwritten label in the jar with the specimen, was made by John Stephens 8/23/1960. It is not possible to determine if this specimen contributed to Longley's description, but it seems doubtful.

[USNM 88115 (1)] [acc. no. 93233]. Paratype status questionable see remarks above.

[USNM 116812 (6)] [acc. no. 144662].

Emblemaria diphyodontis Stephens and Cervigón in Stephens, 1970:297.

Holotype

USNM 203820, male, 59 mm [55.9 mm] SL from Cabacera de Cubago, Venezuela [acc. no. 282179].

Emblemaria guttata Ginsburg, 1942:368 [Chaenopsidae].

Holotype

USNM 101999, 36 mm TL, 30.7 mm SL, Secas Isle, Panama, 12 fathoms [= about 22 m], [collected by] W.L. Schmitt, 5 Feb 1935 [acc. no. 131571].

Stathmonotus gymnodermis Springer, 1955:77.

Holotype

USNM 117436, adult male, 27.0 mm SL, collected by the Smithsonian-Hartford Expedition, vicinity of Fort San Geronimo [Geronimo], San Juan, Puerto Rico, 28 Mar 1937 [acc. no. 142536].

Paratypes

USNM 163324 (2) [acc. no. 142536].

USNM 163325 (1) [acc. no. 142536].

USNM 163419 (1), bearing same data as holotype [acc. no. 142536].

Acanthemblemaria hancocki Myers and Reid, 1936:7.

Holotype

USNM 102015, 31.8 mm SL taken 4 Feb 1935, on the outer side of the smaller, westernmost island of the Secas Islands, Pacific coast of Western Panama, Hancock Pacific Expedition, 1935, collected by W.L. Schmitt [acc. no. 131571].

Paratypes

USNM 102016 (2), same collection data as holotype [acc. no. 131571].

Stathmonotus hemphilli Bean, 1885:191.

Type [Syntype] [Lectotype]

USNM 37193 (2) [1], Key West, Fla., by H. Hemphill [acc. no. 15565].

Remarks: Bean (1885:191) based his description on two "type specimens" cataloged as USNM 37193 and illustrated (pl. 13) one of the specimens. Jordan and Evermann (1896:3302) effectively designated a lectotype for Bean's species by indicating that the specimen illustrated on their pl. 340: fig. 827, which was reproduced from Bean's, but reduced about 50%, was the "type." The two specimens, which are of about the same size, were not separated in the jar and we were unable to determine which specimen Bean had illustrated (= Jordan and Evermann had made lectotype). One of the specimens, however, is now in a much better state of preservation than the other. (It appears that the specimen in poor condition was

possibly damaged by dissection after Bean's description had appeared.) Hastings and Springer (1994:19), unaware of Jordan and Evermann's effective lectotype designation, designated the specimen in better condition lectotype of the species and retained the original catalog number for it alone. The *International Code of Zoological Nomenclature* contains no rule that aids in solving the problem of establishing a lectotype when a lectotype has been designated but not differentiated nor separated from the associated paralectotypes. We, nevertheless, assign lectotype status to the former syntype now in better condition, as did Hastings and Springer (1994).

Type [Syntype] [Paralectotype]

USNM 324027 (1), removed from USNM 37193 [acc. no. 15565].

Emblemaria hudsoni Evermann and Radcliffe, 1917:147 [Chaenopsidae].

Type [Holotype]

USNM 77535, 7.7 cm long [67.1 mm SL, 74 mm TL], from Sechura Bay, between Bayova and Mataballa, Peru, taken in dredge with shellfish at 5–6 fathoms [= about 9–11 m], R.E. Coker, field no. 09537, 1907–1908.

Remarks: The original USNM ledger entry for USNM 77535 listed seven specimens; one type and six "co-types" [paratypes]. The six paratypes were removed to USNM 119852.

Paratypes

[USNM 119852] (8) [6], removed from holotype lot.

Remarks: The original description was based on nine specimens, the type and eight paratypes. The location of the other two paratypes is unknown.

Emblemaria hyltoni Johnson and Greenfield, 1976:17.

Paratype

USNM 214839 (1), collected with holotype [acc. no. 320315].

Psednoblennius hypacanthus Jenkins and Evermann, 1889:156.

Type [Holotype]

USNM 39638, 40 mm long [31.8 mm SL, 36+ mm TL—damaged], shallow arm of the bay at Guaymas, east coast Gulf of California, obtained by O.P. Jenkins and B.W. Evermann, July 1887 [original no. 130; acc. no. 20952].

Emblemaropsis leptocirris Stephens, 1970:289.

Holotype

USNM 203819, female, 21.3 mm SL, collected by J.E. Randall from El Negro Reef, Puerto Rico, 14 Nov 1964 [acc. no. 282179].

Ekemblemaria lira Hastings, 1992b:770.

Holotype

USNM 316854, male, 59.8 mm SL, tidepool at Las Palmas, near Esmeraldas, Ecuador, 27–29 Mar 1963, [collected by] C. Fugler, formerly UNCW 63-7 [acc. no. 335542].

Paratypes

USNM 219829 (1), cleared and stained [in glycerin], formerly UNCW 63-3 [acc. no. 335542].

USNM 316855 (1), collected with the holotype, formerly UNCW 63-7 [acc. no. 335542].

Protoblemaria lucasana Stephens, 1963:20.

Paratypes

USNM 196704 (2) [acc. no. 240697].

Remarks: Formerly cataloged as SIO 61-252-61B.

Lucioblennius lucius Osburn and Nichols, 1916:179.

Type [Holotype]

AMNH 5207 [USNM 87550], 1.5 in [= 38.1 mm] long [34 mm SL = 1.3 in; 38 mm TL = 1.5 in], San Josef Island, Lower California [Mexico], 31 Mar 1911 [acc. no. 88294].

Remarks: The description was based on the holotype and another specimen [paratype] of about the same size. Both specimens were collected as part of the *Albatross* Lower California Expedition, arranged by C.H. Townsend, formerly of the American Museum of Natural History. Both specimens were deposited at AMNH; however, an agreement between C.H. Townsend and the U.S. Bureau of Fisheries required that type specimens (holotypes) of all new species collected by the *Albatross* be transferred to USNM. The paratype, still at AMNH, originally had the same catalog number (AMNH 5207) as the holotype, but it has since been assigned a new number (N. Feinberg, pers. comm.).

Emblemaria markii Mowbray in Bean, 1912:126.

Type [Syntype] [Lectotype]

USNM 74083 [2] [1, male], Hamilton Harbor, Bermuda, first taken 20 Jun 1907, in a mussel dredge [acc. no. 54253].

Remarks: The number of syntypes was not given in the original description, but reference was made to "the male" and the "female," indicating that there were at least two specimens. The original USNM catalog ledger entry for USNM 74083 indicates the presence of two specimens, male and female, and the jar bearing this number contained only a male and a female. Stephens (1963:86,133) examined one of the syntypes, which he indicated erroneously was the holotype. Although he did not specify the sex, the specimen Stephens examined was clearly the male, as he indicates (1963:133) that the "holotype" is 47.4 mm SL and that the longest dorsal-fin spine is 14.6 mm. Our measurement of the female is 39.1 mm SL, and its longest dorsal-fin spine is only 5.0 mm.

We herein designate the male syntype as lectotype of *Emblemaria markii*. The male retains the original catalog number; the female has been assigned a new catalog number.

Syntype [Paralectotype]
[USNM 327185, female].

Acanthemblemaria medusa Smith-Vaniz and Palacio, 1974:213.

Paratypes
USNM 170313 (1) [acc. no. 208263].
USNM 195818 (1) [acc. no. 219726].

Ekemblemaria myersi Stephens, 1963:23.

Holotype
USNM 196679 [196677] 55.2 [52.8] mm SL, taken at Punta Santa Inez, Bahía Santa Inez, Gulf of California, by B.W. Walker and party, 26 Apr 1953 [acc. no. 240696].

Remarks: Stephens erroneously published the holotype as USNM 196679. The correct catalog number is USNM 196677. USNM 196679 is a paratype of *Emblemaria walkeri* Stephens, 1963:81.

Paratypes
USNM 196678 (30) [acc. no. 240696].

Emblemaria nigra Meek and Hildebrand, 1928:953.

Type [Holotype]
USNM 81920, 42 mm [35.1 mm SL, 41.1 mm TL], Porto Bello, Panama [acc. no. 59904].

Remarks: A handwritten label with the holotype gives the collection date as 24 Apr 1911. The original description was based on the holotype (42 mm) and one other specimen (43 mm). The depository for the paratype was not given, but Ibarra and Stewart (1987:34) indicate its presence at FMNH (catalog number not given).

Emblemaria nivipes Jordan and Gilbert, 1883:627 [Chaenopsidae].

Type [Holotype]
USNM 29676, 2 in [= 50.8 mm] [41.2 mm SL = 1.6 in; 45 mm TL = 1.8 in], collected by Professor F.H. Bradley at the Pearl Islands, Panama, about 1866.

Remarks: Three specimens were originally cataloged in USNM 29676, the 2-inch holotype and two much smaller specimens, which were recataloged as USNM 195817 during September, 1960.

[Paratypes]
[USNM 195817 (2).]

Remarks: The original description stated that, in addition to the holotype, there were "numerous smaller specimens in the [Yale] collection from the same locality." All of the smaller specimens are de facto paratypes. Although other paratypes might be expected to be present in the Yale collections, Moore

and Boardman (1991:27) noted the existence of only the two USNM paratypes.

Neoclinus nudus Stephens and Springer, 1971:65.

Holotype
USNM 205217, male, 50.0 mm SL, collected by V.G. Springer et al. from cove just southwest of Yeh-liu, northern Taiwan, 25°12'N, 121°41'E, at a depth of about 4 m, 18 May 1968, original field number VGS 68-27 [acc. no. 275964].

Paratypes
USNM 205218 (10, including one specimen cleared and stained) [acc. no. 275964].

Chaenopsis ocellatus [ocellata] Poey in Gill, 1865:143.

Type [Holotype]
[USNM 8007] 4.75 inches [= 121 mm] long [118 mm TL; 114 mm SL], obtained by Prof. Poey at Matanzas [Cuba].

Remarks: Although no depository or catalog number was given by Poey in Gill (1865:143) for the type specimen, USNM 8007 is indicated in the ledger as the "type." Gill stated that Poey forwarded the specimen to him. The low USNM catalog number is consistent with the date of Gill's publication. The gender of *Chaenopsis* is feminine, and the termination of the specific epithet must be emended to bring the species into agreement with the genus.

Emblemaria oculocirris Jordan in Gilbert 1897:456.

Type [Holotype]
USNM 47749, 1¹/₂ in [26.8 mm SL = 1.1 in; 33.0 mm TL = 1.3 in], collected by the *Albatross*, La Paz Harbor, [Gulf of] California.

Remarks: The original description indicated the presence of only the holotype. The original USNM ledger entry listed two specimens in USNM 47749. The second specimen, in very poor condition, approximately 15 mm SL, is a ctenoid-scaled fish, probably a gobiid. It was probably included inadvertently with the holotype, and it has been recataloged as USNM 327186. This small specimen does not conform with the description of any of the other specimens or species described in the same publication with *Emblemaria oculocirris*.

Emblemaria pandionis Evermann and Marsh, 1900:318.

Type [Holotype]
USNM 49535, 1.5 in [28.9 mm SL = 1.1 in; 33.8 mm TL = 1.3 in], caught in the tangle at *Fish Hawk* sta 6804, between Vieques and Culebra islands, in 11 fathoms [= about 20 m] [acc. no. 36735].

Acanthemblemaria paula Johnson and Brothers, 1989:1019.

Holotype
USNM 301835, male, 15.9 mm SL, taken from dead coral on reef flat at south end of Carrie Bow Cay,

Belize, at depth of 1–2 m on 22 Mar 1988 [collected] by G.D. Johnson, and party [acc. no. 378741].

Paratypes

- USNM 290669 (2).
 USNM 301830 (3) [acc. no. 378741].
 USNM 301831 (3) [acc. no. 378741].
 USNM 301832 (10) [acc. no. 378741].
 USNM 301833 (23) [acc. no. 378741].
 USNM 301834 (9, cleared and stained) [acc. no. 378741].
 USNM 301836 (4) [acc. no. 378741].

Emblemaria piratica Ginsburg, 1942:369.

Holotype

USNM 101944, 28 mm TL, 23.8 mm SL, Secas Isle, Panama, 12 fathoms [= about 22m], [collected by] W.L. Schmitt, 5 Feb 1935 [acc. no. 131571].

Emblemaria piratula Ginsburg and Reid in Ginsburg, 1942:368.

Holotype

USNM 119875, 22 mm [21.8 mm TL, 18.0 mm SL], *Pelican* sta 142-6, off St. Andrews Bay, Fla., 29°56'N, 8°67.5'W, 18 fathoms [= about 33 m] [acc. no. 136194].

Paratypes

- USNM 101089 (2) [acc. no. 136194].
 USNM 101090 (7) [acc. no. 136194].
 USNM 101091 (3) [acc. no. 136194].

Remarks: Ginsburg and Reid (in Ginsburg, 1942:369) stated that the original description was based on the holotype and 11 paratypes, which were included in three cataloged lots. They followed this statement by an indication that an additional specimen, in “bad condition” and of uncertain identity was included in USNM 101091. The three specimens in this lot are all of about the same length and condition (reasonably good), and we were unable to determine which of the three specimens Ginsburg and Reid had singled out. We, therefore, treat all three specimens as paratypes.

Acanthemblemaria rivasi Stephens, 1970:308.

Holotype

USNM 203818, male, 30 mm SL, collected by Elliot Maynard, 15 Jul 1964, from Puerto Limon, Costa Rica [acc. no. 282179].

Remarks: Formerly UMIM 6104.

Coralliozetes rosenblatti Stephens, 1963:64.

Holotype

USNM 196675, 25.0 mm SL, collected by B.W. Walker and party on 30 Apr 1953, at Bahía Concepcion, Baja California, Gulf of California [acc. no. 240696].

Paratypes

USNM 196676 (11) [10] [acc. no. 240696].

Remarks: The original description lists 11 paratypes in

USNM 196676. However, the original USNM ledger entry for this catalog number lists only 10 specimens in the lot, and, at least as early as 5 Aug 1992, there were only 10 specimens in the jar. We believe that the discrepancy in number of specimens is the result of a typographical error.

Chaenopsis roseola Hastings and Shipp, 1981:876.

Holotype

USNM 221167, male, 42.2 mm SL, 30°07'N, 86°45'W, northeastern Gulf of Mexico, about 35 km SSW of Ft. Walton Beach, Florida, 19 Mar 1977, 55 m. Collected with a semi-balloon trawl from a bottom of coarse rubble. Originally USAIC [= USA] 03661 [acc. no. 339678].

Paratypes

USNM 221168 (3) [including one specimen subsequently cleared and stained, acc. no. 339678], collected with holotype.

Remarks: Formerly USA 03661. A note found with the cleared and stained paratype states that it was “found poorly dissected and in many fragments on 9 Nov. 1988.”

Mccoskerichthys sandae Rosenblatt and Stephens, 1978:5.

Paratypes

USNM 214706 (10) [20, including two cleared and stained] [acc. no. 318457], collected with the holotype.

Remarks: The paratypic series, of which these specimens are but a small part, originally included over 400 specimens, some of which were deposited at LACM and UCR.

SIO 70-358 (14) [USNM 212059] [3 including two cleared and stained, acc. no. 310884].

Remarks: The other 11 specimens in this lot presumably retain the same catalog number and are at the SIO.

[USNM 270280] [1, cleared and stained].

Remarks: This specimen, cataloged in 1985, lacks data. It was single stained with alizarin and is now [Feb. 1994] almost completely faded. It was undoubtedly processed for clearing and staining by VGS and was part of one of the other two USNM paratypic lots, but we are unable to determine which.

Neoclinus satiricus Girard, 1859:57.

[Holotype]

Smithsonian Institution [USNM 7884], 8 to 9 in TL [190 mm SL] caught at a depth of 30 fathoms [= about 55 m], in the Bay of Monterey [California].

Chaenopsis schmitti Böhlke, 1957:94.

Holotype

USNM 101957, 40.0 mm SL, collected by Dr. Waldo L. Schmitt from Albemarle Island, Galapagos Archipel-

ago, 15 Jan 1934 [acc. no. 128938].

Paratype

USNM 101948 (1) [acc. no. 131571].

Emblemaria signifer Ginsburg, 1942:367.

Holotype

USNM 119877, 33 mm TL, 27.8 mm SL, Rio de Janeiro, Wilkes Expedition.

Remarks: Holotype removed from USNM 83144.

Paratype

USNM 83144 (1), collected with holotype.

Hemiemblemaria simulus [*simula*] Longley and Hildebrand, 1940:273.

Type [Holotype]

USNM 108889, 98 mm TL, 83 mm SL, Tortugas, Florida [acc. no. 144662].

Remarks: The gender of *Hemiemblemaria* is feminine; the ending of the specific epithet must be changed in order to bring the ending into agreement with the gender of the genus.

[Paratypes]

[USNM 108890 (4) [5?], acc. no. 144662.]

Remarks: The original description indicates the presence of only five specimens including the holotype, four [adults] and a "single" juvenile, 32 mm TL. The original USNM ledger entry does not indicate the number of specimens in the paratypic lot. There are five specimens in the jar containing the paratypes. Four of these are of similar preservation (e.g., eye lens grayish) and include a juvenile of about 32 mm TL and three much larger adults. An additional juvenile, about 34 mm TL, of different preservation (eye lens milky white) is also present and possibly represents a later addition to the lot. We have segregated the latter specimen in a vial, which remains in the jar with the other specimens.

Auchenistius stahli Evermann and Marsh, 1899:359.

Type [Holotype]

USNM 49372, 1.2 in [= 30.5 mm] long [SL?], from Ponce, Puerto Rico, 1 Feb 1899.

Cotypes [Paratypes]

Remarks: The original description (Evermann and Marsh, 1899) gave no catalog numbers for the cotypes, but indicated that five were from Puerto Real and eight from Culebra. Evermann and Marsh (1900:52) wrote that duplicate cotypes of their new species from Puerto Rico were deposited in the collections of the U.S. Fish Commission (later incorporated into those at USNM) and the museum at Stanford University (later incorporated into those at the California Academy of Sciences).

USNM 50163 (5) [4].

Remarks: The USNM catalog ledger originally indicated the presence of only one specimen for this

catalog number. Data sheets prepared by one of us (VGS) in 1954 recorded the presence of four specimens in the lot. Possibly the three extra specimens were the result of the incorporation of the U.S. Fish Commission collections into USNM. Böhlke (1953:95) indicated that a paratype (SU 8658; now CAS-SU) from Puerto Real was present in the Stanford University collection, thus accounting for all five paratypes from Puerto Real.

[USNM 126078 (8), acc. no. 163614].

Neoclinus stephensae C. Hubbs, 1953b:15.

Paratype

USNM 160617 (1) [acc. no. 193942].

Emblemaria tortugae Hildebrand, 1946:404.

Type [Holotype]

USNM 128221, 60 mm TL, 50 mm SL, from Tortuga Bay, Peru, taken by the "Mission" [the team of R.H. Fiedler, N.D. Jarvis, and M.J. Lobell] [acc. no. 158454].

Remarks: Note in jar stating, "Drawn by [J.W.] Roller."

Paratype

USNM 128222 (1) [acc. no. 158454].

Neoclinus uninotatus C. Hubbs, 1953b:18.

Paratypes

USNM 6654 (1).

USNM 26883 [2].

USNM 26942 [2].

USNM 27179 (1).

USNM 31176 [1].

USNM 31209 [1].

USNM 31231 [1].

USNM 75158 (1) [acc. no. 56328].

Acanthemblemaria variegata Beebe and Tee-Van, 1928:247.

Type [Holotype]

NYZS 7464 [USNM 170569], 25.2 mm SL, Lamentin Reef, Port-au-Prince Bay, 8 May 1927. Taken from inner reef in 2 ft [= about 0.61 m] of water [acc. no. 215651].

Remarks: Originally published as NYZS No. 7464. See comments under *A. arborescens*.

Paratypes

[USNM 170570] (9) [acc. no. 215651].

Remarks: The paratypes were originally published as NYZS: 7098, 7195, 7261, 7261a, 7278, 7278a, 7454, "all from worm holes...Sand Cay and Lamentin Reef...24 March to 9 May 1927." Seven vials containing a total of nine specimens are present in the jar labelled USNM 170570. Handwritten tags, one in each vial, list the numbers 7098, 7195B, 7261, 7261A, 7278, 7278A, 7465.

A handwritten label, apparently associated with the specimens when received at USNM, is also included

in the jar with the vials. The label lists as paratypes all the numbers in the vials, except 7098, which is not listed on the label. According to the New York Zoological Society catalog ledgers (carbon copies filed under Beebe in Division of Fishes, USNM), NYZS 7195 is listed as a "Seahorse," and 7195B, which corresponds to a vial label, is listed as "Green headed Gobys from worm holes, Lamentin Reef, 22-iv." We believe that "Gobys" should have been singular (only one specimen in vial) and was an erroneous identification. Gobies and blennies are commonly confused on superficial examination. NYZS 7454 and 7465, the main discrepancies between the two groups of numbers listed above, are not among those included in the USNM copy of the NYZS ledger. The possibility exists, therefore, that 7465 is not a paratype. We believe that NYZS 7195 should have been published as 7195B and that all the other specimens in USNM 170570 are paratypes, but we are unable to explain the discrepancies in numbering.

Histoclinus veliger Metzelaar, 1919:157.

[Syntypes]

[USNM 160661 (6), acc. no. 193782].

Remarks: Metzelaar (1919:157) based his description on "several specimens, from Bonaire (lake). Length up to 35 mM [sic]," which, based on information in his preface, were collected from 1904–1905 by Dr. J. Boeke. Metzelaar did not designate a holotype nor give a final depository for the specimens, although presumably it was ZMA. The six specimens in USNM 160661 were collected by J. Boeke and were exchanged to USNM, as paratypes, by the Zoological Museum Amsterdam. They were originally and erroneously cataloged as paratypes at USNM. Wheeler (1958:255) stated that "co-types" were at BMNH; presumably these specimens are also syntypes.

Emblemaria walkeri Stephens, 1963:81.

Paratypes

USNM 196679 (2) [acc. no. 240696].

CLINIDAE

Gibbonsia elegans erroli C. Hubbs, 1952:151.

Paratypes

USNM 151999 [13], collected from the type locality [acc. no. 188181].

Gibbonsia elegans montereyensis C.L. Hubbs, 1927:354.

Paratypes

Remarks: C.L. Hubbs (1927) did not indicate which specimens he considered to be paratypes, except for citing literature in the synonymy of his new subspecies. C.L. Hubbs indicated most of the literature

references as "in part," meaning that only some of the specimens identified by the authors were the same subspecies as C.L. Hubbs' new one. The only basis for accepting the following specimens as paratypes are Hubbs' handwritten labels with the specimens or a paratype indication in the USNM ledger, presumably the result of information supplied by C.L. Hubbs.

[USNM 82150 (1), acc. no 56221].

[USNM 104414 (2), acc. no. 142501].

[USNM 117538 (10), from UMMZ 63913, acc. no. 156279].

Gibbonsia elegans velifera C. Hubbs, 1952:149.

Paratypes

USNM 152001 [38], dredged from around 6 fathoms [= about 11 m] at the type locality [acc. no. 188181].

Gibbonsia erythra C. Hubbs, 1952:135.

Paratypes

USNM 151998 [2, acc. no. 188181].

Ophiclinops hutchinsi George and Springer, 1980:9.

Paratype

USNM 219564 (1), collected with the holotype [acc. no. 316095].

Remarks: Removed from WAM P.26004-008.

Gibbonsia metzi C.L. Hubbs, 1927:360.

Paratypes

Remarks: C.L. Hubbs (1927) did not indicate which specimens he considered to be paratypes, except for citing literature in the synonymy of his new species. C.L. Hubbs indicated most of the literature references as "in part," meaning that only some of the specimens identified by the authors were the same species as C.L. Hubbs' new one. C. Hubbs (1952:123) mentioned examining 67 of the paratypes, all deposited at UMMZ. With regard to the number of paratypes, C.L. Hubbs (1927:360) described them as "very numerous...deposited in several museums." With the exception of USNM 26762, the basis for accepting the following specimens as paratypes are C.L. Hubbs' handwritten labels with the specimens or a paratype indication in the USNM ledger, presumably the result of information supplied by C.L. Hubbs. The two specimens in USNM 26762 were collected by D.S. Jordan in 1880 and are listed in the USNM ledger as having been taken at San Diego. It is possible that one of the two is the single specimen Jordan (1880:25) reported as *Gibbonsia elegans* from Point Loma, San Diego. C.L. Hubbs (1927:360) included Jordan (1880) in the synonymy under *Gibbonsia metzi*.

[USNM 6648 (1)].

[USNM 6800 (1)].

[USNM 26762 (2)].

[USNM 27037 (5 of 6: one dry, disarticulated skeleton excluded)].

Remarks: The skeletal specimen was originally cataloged in USNM Bone Ledger as 26513. A C.L. Hubbs handwritten label identifying them as *Gibbonsia metzi* paratypes is present with the five wet specimens, but not with the skeleton, which until recently was labeled "*Gibbonsia elegans*." Hence, it is unlikely Hubbs meant to include the skeleton, which was stored separately from the wet specimens, as a paratype. The skeleton has been recataloged as USNM 327404.

[USNM 31197 (2)].

[USNM 34784 (11), acc. no. 14099].

[USNM 74101 (1), acc. no. 54252].

[USNM 104408 (1), formerly UMMZ 63896, acc. no. 142501].

[USNM 117539 (10), formerly UMMZ 64314, acc. no. 156279].

[USNM 299833 (1)].

Pavoclinus myae Christensen, 1978:3.

Paratype

USNM 217462 (1), collected with holotype [acc. no. 327376].

Gibbonsia norae C. Hubbs, 1952:126.

Paratypes

USNM 152000 [16], from the type locality [acc. no. 188181].

Ophiclinus pectoralis George and Springer, 1980:23.

Paratypes

USNM 219565 (2), collected with the holotype [acc. no. 316095].

Remarks: Removed from WAM P.25770-006.

Springeratus polyporatus Fraser, 1972:4.

Paratypes

USNM 206173 (2), same [collection] data as holotype [acc. no. 294742].

Heterostichus rostratus Girard, 1854:143.

[Holotype]

[USNM 284] about 11 in [26 cm SL = 10.25 in; 29.5 cm TL = 11.62 in], from San Diego, California].

Myxodes schmitti C. Hubbs, 1952:109.

Holotype

USNM 102008, 146 mm [144 mm SL] taken from Santa Cruz (Indefatigable) Island, Galapagos Islands [lee side of Viejas Island, Independencia Bay, Peru], W.L. Schmitt, 12 Jan 1935 [acc. no. 131571].

Remarks: Springer (1970:433) corrected C. Hubbs' locality indication.

Clinus (Clinus) spatulatus Bennett, 1983:2.

Paratypes

USNM 259352 (5) [acc. no. 355030].

DACTYLOSCOPIDAE

Leurochilus acon Böhlke, 1968:4.

Paratype

USNM 202734 (1) [acc. no. 277574].

Dactyloscopus amnis Miller and Briggs, 1962:1.

Paratypes

USNM 197405 (2) [acc. no. 244606].

Gillellus arenicola Gilbert, 1890:99.

[Holotype] [lost]

2½ inches [= 38.1 mm] long, Cape San Lucas, collected by *Albatross*.

Remarks: Gilbert, who was a professor at Indiana University when he described this species, did not indicate the depositories for his specimens. Dawson (1977:142), who failed to locate the holotype, noted that there was no record that USNM ever received it, and Dawson designated a neotype (CAS-SU 67821). Because some of Gilbert's type specimens collected by the *Albatross* were deposited at USNM and this one might be expected to be among them, we list the reference here.

Gillellus australis Fowler and Bean, 1923:23.

Type [Holotype]

USNM 83315, length 87 mm, Valparaiso, Chile, Wilkes Exploring Expedition [1838–1842].

Remarks: Dawson (1977:154) noted that both the holotype and paratype were in such poor condition that it was impossible to obtain meaningful measurements. He gave the measurement of about 76 mm SL for the holotype.

Paratype

USNM 83099 (1), same [collection data] as holotype.

Myxodagnus belone Böhlke, 1968:6.

Paratypes

USNM 202735 (5) [acc. no. 277574].

Dactyloscopus boehlkei Dawson, 1982:29.

Paratypes

USNM 221434 (2) [acc. no. 337100], taken with holotype.

USNM 221435 (3) [acc. no. 337100].

Dactyloscopus byersi Dawson, 1969:45.

Holotype

USNM 202829, 58 mm SL, male, Colima, México, NE end of new breakwater, Manzanillo harbor (approx. 19°03'47"N, 104°19'13"W), coarse sand bottom, 0–5 ft [= 0–1.52 m] depth, 20 Aug 1967, C.E. Dawson [acc. no. 277803].

Allotype [Paratype]

USNM 202830 (1) [acc. no. 277803].

Paratypes

USNM 202831 (4) [acc. no. 277803].

Dactyloscopus comptus Dawson, 1982:34.

Paratypes

USNM 221436 (2) [acc. no. 337100].

Cokeridia crossota Meek and Hildebrand, 1928:906.

Type [Holotype]

USNM 81784, 85 mm [77.3 mm SL, 83.5 mm TL], Pacific Ocean, Panama, Chame Point [14 Feb 1912] [S.E. Meek and S.F. Hildebrand] [acc. no. 59904].

Remarks: Dawson (1975:16) correctly assessed the complex nomenclatural status of *Cokeridia crossota*. For purposes of clarity, we provide an expanded version of Dawson's discussion. Miller and Briggs (1962:8) synonymized *Cokeridia* Meek and Hildebrand, 1928 (type species: *C. crossota* Meek and Hildebrand, 1928) under *Dactyloscopus* Gill, 1859. Their action resulted in *Cokeridia crossota*'s becoming a junior homonym of *Dactyloscopus crossotus* Starks (1913:70). *Cokeridia crossota* must, therefore, be rejected. Böhlke (1966:880) proposed a replacement name, *Dactyloscopus thysanotus*, for *Cokeridia crossota*. The holotype of *Cokeridia crossota* thus became the holotype of *Dactyloscopus thysanotus* Böhlke. Dawson (1975:15–16), however, considered *Dactyloscopus amnis* Miller and Briggs (1962) to be the same species as Meek and Hildebrand's *Cokeridia crossota*, and thus to have nomenclatural priority as a replacement name for *Cokeridia crossota* (Article 60(b), *International Code of Zoological Nomenclature*). *Cokeridia crossota* (1928), which became a junior homonym when transferred to *Dactyloscopus*, and *Dactyloscopus thysanotus* (1966), an unnecessary replacement name for *C. crossota*, are, thus, both synonyms of *Dactyloscopus amnis* (1962).

Cokeridia fimbriata Reid, 1935:163.

Type [Holotype]

USNM 94993 [94003], length 77 mm [75.7 mm SL; 78.5 mm TL], field no. 300, dredged off Cape Elena, Ecuador, 8 Feb 1934, Hancock Expedition [W.L. Schmitt, collector] [acc. no. 128938].

Remarks: Published catalog number appears to be a typographical error.

Dactyloscopus foraminosus Dawson, 1982:32.

Holotype

USNM 221437 (71.0 mm SL, transformed male), Brazil, 00°24'00"N, 47°32'00"W, 29.3 m, trawl, *Oregon II* sta 17706, 13 May 1975, B.B. Collette [acc. no. 337100].

Paratypes

USNM 221438 (1) [acc. no. 337100].

USNM 221439 (1) [acc. no. 337100].

USNM 221440 (1) [acc. no. 337100].

USNM 221441 (1), taken with holotype [acc. no. 337100].

USNM 221442 (2) [acc. no. 337100].

Gillellus greyae Kanazawa, 1952:88.

Type [Holotype]

USNM 116881, 48 mm SL, Florida, Tortugas, collector W.H. Longley [acc. no. 144662].

Paratypes

USNM 82551 (1) [acc. no. 57608].

USNM 88113 (1) [acc. no. 93233].

USNM 160658 (4) [3], same data as holotype [acc. no. 144662].

Remarks: One specimen exchanged to FMNH, Apr 1952.

Gillellus healae Dawson, 1982:56.

Holotype

USNM 134249 (46.7 mm SL, transformed male), West Florida, off Pensacola, 29°18'15"N, 85°32'00"W, 45.7 m, beam trawl, 7 Feb 1885, *Albatross* sta 2370.

Paratypes

USNM 44301 (1), also a paralectotype of *Gillellus semicinctus* Gilbert, q.v.USNM 44302 (1), also a paralectotype of *Gillellus semicinctus* Gilbert, q.v.

USNM 148525 (1).

USNM 153153 (1) [acc. no. 183504].

USNM 160659 (1) [acc. no. 144662].

USNM 221432 (1) [acc. no. 337100].

USNM 221433 (1) [acc. no. 337100].

Dactyloscopus lunaticus Gilbert, 1890:99.

[Syntypes]

Remarks: Gilbert (1890:100) indicated that he had 3 specimens [syntypes] from *Albatross* stations 2797 and 3012, but he did not indicate how these were allocated between the stations, nor did he indicate where the specimens were deposited. Until recently, there were only two lots of specimens identified as *Dactyloscopus lunaticus* that were attributed to the two *Albatross* stations: USNM 44305, two specimens from station 2797, which were cataloged in 1892, and one specimen from station 3012, which was originally part of the "Reserve Series built up over many years" by the U.S. Fish Commission, and which was transferred to USNM in 1942 (information in USNM accession file #163614) and cataloged as USNM 126879. Dawson (1975:10) accepted the two specimens in USNM 44305 as syntypes of *D. lunaticus* because they are accompanied by a handwritten label signed by Gilbert indicating "types," and Dawson designated one of them as lectotype, which retained the catalog number. He designated the other specimen paralectotype, and it was recataloged as USNM 210633. Dawson considered that there was no record of the missing third syntype, noting that it might be the specimen in USNM 126879, but that it had been "entered in the USNM catalog, as an unidentified

stargazer, during 1943; [and] the jar contains no supplementary labels." Dawson's statement was erroneous. USNM 126879 was entered as *Dactyloscopus lunaticus* at the time it was cataloged, and the jar contains two original U.S. Fish Commission labels, both of which bear the scientific name. One label is an *Albatross* station label, and the other is the neck label with the Reserve Series number 571, which was originally on or in the original jar that contained the specimen. The number 571 is also entered with the identification *Dactyloscopus lunaticus* in the interleaved copy of D.S. Jordan and B.W. Evermann's 1896 *Check-list of the Fishes and Fish-like Vertebrates of North and Middle America*, which accompanied the transfer of numerous specimens from the U.S. Fish and Wildlife Service to USNM in 1942 (the interleaved copy, in poor condition, is stored among the USNM Division of Fishes cataloging files). There is, therefore, strong evidence that USNM 126879 was one of the three syntypes of *Dactyloscopus lunaticus*, and we know of no other specimens of the species that might be considered syntypes (paralectotypes).

Lectotype

USNM 44305, 55.1 mm SL, female, Golfo de Panamá, 08°06'30"N, 78°51'00"W, beam trawl, 60.3 m, 5 Mar 1888, *Albatross* sta 2797.

Remarks: Designated by Dawson (1975:10). See "Remarks" above under Syntypes. Gilbert (1890:100) indicated only that his largest specimen was "3 inches" (= 76.2 mm) long, but he did not indicate from which station it had come.

Paralectotype(s)

USNM 210633 (1), same collecting data as lectotype.
USNM 126879 (1) [acc. no. 163614], see "Remarks" under Syntypes.

***Myxodagnus macrognathus* Hildebrand, 1946:408.**

Type [Holotype]

USNM 128224 (1), 70 mm [TL], 60 mm SL, Lobos de Tierra Bay, Peru [collected 17 May 1941, M.J. Lobell, seine] [acc. no. 158454].

***Dactylagnus mundus* Gill, 1863:506.**

[Holotype]

Smithsonian Institution [USNM 4915], Cape San Lucas, 5³/₄ inches [= 146 mm] extreme length [121 mm SL, caudal-fin ray ends now broken off] [Baja California, Mexico], obtained by [J.] Xantus.

***Storrsia olsoni* Dawson, 1982:82.**

Holotype

USNM 221547 [MUZSP 25658], Brazil, Arquipelago de Fernando de Noronha, Ilha Fernando de Noronha, Sacco de Atalaia, tidepool, 0–1 m, 23 Jul 1973, S.L. Olson [acc. no. 305692].

Remarks: The holotype was transferred to MUZSP in

accordance with Brazilian law governing the deposition of type specimens of Brazilian species.

***Myxodagnus opercularis* Gill, 1861:270.**

[Syntypes]

Remarks: Gill (1861:271) did not indicate the number of specimens on which he based his description, mentioning only that he had "several" obtained by John Xantus at Cape St. Lucas, Lower California, and that they were "now preserved in the Museum of the Smithsonian Institution." Jordan and Gilbert (1882b:369) reported that the three specimens contained in USNM 2531, 2532, 2533 were the "types" of Gill's species. Dawson (1976:35–36), who did not mention Jordan and Gilbert's (1882b:369) reference to the syntypes, noted that at least as early as 1948, USNM 2531 contained three specimens indicated as syntypes of *Myxodagnus opercularis* and that no jars labelled USNM 2532 or 2533 were present in the USNM collection. Dawson identified two of the specimens in USNM 2531 as agreeing with Gill's description of *M. opercularis*, and the third as *Gillellus arenicola* Gilbert (1890:99). Dawson noted that catalog entries for USNM 2531–2533 each had a notation indicating "type" (and we note each also has a notation indicating it was collected by J. Xantus). USNM 2531 and 2532 also have the name *Myxodagnus opercularis* entered beside them in the catalog, but there was no identification assigned USNM 2533 in the catalog. Dawson surmised that the three specimens in USNM 2531 had somehow been combined in the same jar. Dawson segregated the two specimens identifiable as *M. opercularis*, one each as USNM 2531 and 2532, which he considered to be syntypes, and designated USNM 2531 as lectotype and USNM 2532 as paralectotype. He allocated the specimen identifiable as *G. arenicola* to USNM 2533, which he accorded no type status. We disagree with Dawson's conclusion regarding the type status of USNM 2533. It seems highly unlikely that Gill in 1861 would not have mentioned this Xantus specimen in his studies, especially as it represented an undescribed species at that time. It seems more probable to us that Gill failed to recognize that his three specimens represented two different taxa.

Lectotype

USNM 2531, male, about 49 mm SL [47 mm SL], Cabo San Lucas, J. Xantus.

Paralectotypes

USNM 2532 [1], data as for lectotype.

USNM 2533 [1], data as for lectotype.

***Gillellus ornatus* Gilbert, 1892:558.**

[Holotype] [lost]

About 2 inches [= about 51 mm] long, collected by

Albatross, from sta 2828 in the Gulf of California.

Remarks: Gilbert, who was a professor at Indiana University when he described this species, did not indicate the depositories for his specimens. Dawson (1977:146), who failed to locate the holotype, noted that there was no record that USNM ever received it. Because some of Gilbert's types of species collected by the *Albatross* were deposited at USNM and thus one might be expected to be among them, we list the reference here. Dawson (1977:142) designated a neotype for the species: LACM W65-86-1.

***Dactyloscopus pectoralis* Gill, 1861:267.**

[Syntypes] [lost]

Smithsonian Institution [USNM], three specimens, obtained by John Xantus at Cape St. Lucas [Lower California, Mexico].

Remarks: Jordan and Gilbert (1882b:361) reported that the type specimens of this species were lost or destroyed, and neither we nor Dawson (1975:34) have located them. Dawson (1975:34) designated SIO 59-210 as neotype of the species.

***Dactyloscopus poeyi* Gill, 1861:266.**

[Holotype] [lost]

Smithsonian Institution [USNM], 2.6 [inches = 66 mm] TL [Cuba] [F. Poey].

Remarks: Gill (1861:267) estimated the length of the caudal fin of his specimen, so that his TL was not exact. Dawson (1982:42) noted, and we confirm, that the holotype is not present at USNM and must be considered lost. Dawson (1982:46) designated ANSP 144227, from the Bahamas, as neotype.

***Gillellus* [*Gillellus*] *rubellulus* Kendall and Radcliffe, 1912:148.**

Type [Holotype]

USNM 65510, 2⁵/₁₆ in [= 58.7 mm] TL, Chatham Island [Galapagos Islands], *Albatross*, 9 Jan 1905 [acc. no. 51565].

Remarks: This lot originally contained three specimens, the holotype and two paratypes.

Cotypes [Paratypes]

USNM 208291 [2] [acc. no. 51565].

Remarks: Kendall and Radcliffe (1912:149) reported that they had three paratypes, but they did not indicate where these were deposited. The holotype and two of the paratypes were originally cataloged as USNM 65510. The holotype retains the latter catalog number, but the two USNM paratypes were recataloged as USNM 208291. The third paratype, apparently, was originally deposited at MCZ, having been received there from the USBF during August, 1910 (K. Hartel, in litt., 1 Jun 1994), and where it is cataloged as MCZ 29546.

***Gillellus rubrocinctus* Longley, 1934:257.**

Type [Holotype]

USNM [108870], Tortugas, Florida [acc. no. 144662].

Remarks: Longley in Longley and Hildebrand (1940:267–268) remarked that the “type” was 44 mm long, cataloged as USNM 108870, and taken [by Longley] on a sloping bank in the upper of deep holes in Bird Key reef flats. We measured it as 33.7 mm SL, 39.2 mm TL.

***Gillellus semicinctus* Gilbert, 1890:98.**

[Syntypes] [Paralectotypes]

Remarks: Dawson (1977:136) has discussed the basis for considering Jordan's (1896:244) actions as having designated CAS-SU 31 lectotype for this species.

[USNM 44301] [1].

Remarks: Dawson (1982:57) designated this specimen as a paratype of *Gillellus healae* Dawson, but he mistakenly indicated that it was a syntype of *Gillellus semicinctus*. Dawson (1977:136) neglected to note that the specimen had become a paralectotype as a result of Jordan's (1896:244) lectotype designation.

[USNM 44302] [1].

Remarks: Dawson (1982:57) designated this specimen as a paratype of *Gillellus healae* Dawson, but he mistakenly indicated that it was a syntype of *Gillellus semicinctus*. Dawson (1977:136) neglected to note that the specimen had become a paralectotype as a result of Jordan's (1896:244) lectotype designation.

[USNM 126880] [1] [acc no. 163614].

***Dactyloscopus thysanotus* Böhlke, 1966:880.**

Remarks: This is an invalid replacement name for *Cokeridia crossota* Meek and Hildebrand, and it would take as its holotype, the holotype of the latter species (USNM 81784). See “Remarks” under *Cokeridia crossota*.

***Dactyloscopus tridigitatus* Gill, 1859:132.**

[Syntypes]

[USNM 6307] (3), largest slightly more than 3 in [= 76.2+ mm], all in bad state of preservation, island of Barbadoes [Barbados], obtained by T. Gill.

***Dactyloscopus zelotes* Jordan and Gilbert in Jordan and Evermann, 1896:465.**

[Holotype]

Remarks: Name based on description of *Dactyloscopus* sp. nov. Jordan and Gilbert (1883:628), which mentions only one specimen, collected by Capt. Dow on the coast of Central America. Dawson (1975:20) discussed the circumstances of the description and the probable destruction of the holotype, and he designated a neotype for the species.

Neotype

USNM 210625 (71.9 mm SL, male), Panamá, Canal

Zone, Venado Beach, about three-fourths way to Isla Venado, 0.2 m, 28°C, 30.2‰, 16 Jan 1972, C.E. Dawson [acc. no. 304927].

LABRISOMIDAE

Labrisomus afuerae Hildebrand, 1946:400.

Holotype

USNM 128213, 53 mm TL, 43 mm SL, Lobos de Afuera Island, Peru [acc. no. 158454].

Remarks: Stephens and Springer (1974:10) designated the holotype of *Labrisomus afuerae* Hildebrand as the neotype of *Blennius tetranemus* Cope (1877:42). As a result, USNM 128213 is a primary type of both nominal species. For more information see Stephens and Springer (1974).

[Paratypes]

[USNM 128214] (2) [collected with holotype, acc. no. 158454].

Malaccoctenus afuerae multipunctatus Springer, 1959:462.

Paratypes

USNM 174962 [38] [acc. no. 206958].

Remarks: Springer (1959:462) gave only total numbers of specimens for each locality, not breaking down the number for each paratype lot.

Auchenopterus albicaudus Evermann and Marsh, 1899:360.

Type [Holotype]

USNM 49373, 1.5 in [= 38.1 mm] long [30.8 mm SL, caudal fin damaged], from Arroyo, Puerto Rico, 4 Feb 1899.

Labrisomus albigenys Beebe and Tee-Van, 1928:233.

Type [Holotype]

NYZS 7372 [USNM 170899], 16 mm [14.9 mm SL], Lamentin Reef, Port-au-Prince Bay, Haiti. Taken among broken coral in two feet of water on inside of reef, 9 May 1927 [acc. no. 215651].

Remarks: Transferred from NYZS to USNM; see "Remarks" under *Acanthemblemaria arborescens*.

Paratypes

NYZS 7372a [USNM 170900] (3), collected with holotype [acc. no. 215651].

Remarks: Transferred from NYZS to USNM; see "Remarks" under *Acanthemblemaria arborescens*.

Paraclinus altivelis sini C. Hubbs, 1952:74.

Paratypes

USNM 151996 [2], from the type locality [same data as holotype] [acc. no. 188181].

Remarks: C. Hubbs (1952) only indicated the total number of paratypes from particular localities, not breaking down the number in each individual lot.

Cremnobates argus Beebe and Tee Van, 1928:238.

Type [Holotype]

NYZS 7375 [USNM 170904], 22 mm [SL], Lamentin Reef, Port-au-Prince Bay, Haiti [acc. no. 215651].

Remarks: Listed in the original description as [NYZS] No. 7375. See "Remarks" under *Acanthemblemaria arborescens*.

Auchenopterus asper Jenkins and Evermann, 1889:154.

Type [Holotype]

USNM 39643, from the mass of kelp hauled out by the seine from the bay near Guaymas [Gulf of California, Sonora Mexico, acc. no. 20952].

Remarks: The length of the holotype was not given. The original description is based on six specimens, the largest of which is "57 mm long." The other five specimens must be considered to be paratypes. Jenkins and Evermann (1889:154) do not indicate a depository for the paratypes. C. Hubbs (1952:93) examined, "one paratype (CAS 7769 with the same data [as holotype])." The location of the remaining paratypes could not be determined.

Nemaclinus atelestos Böhlke and Springer, 1975:58.

Paratypes

USNM 214025 (2, including one cleared and stained) [acc. no. 304838].

USNM 214026 (1) [acc. no. 308566].

Paraclinus beebei C. Hubbs, 1952:81.

Paratypes

USNM 151992 [2] [acc. no. 188181].

Remarks: C. Hubbs (1952) only indicated the total number of paratypes from particular localities, not breaking down the number in each individual lot.

Emmion bristolae Jordan in Gilbert, 1897:454.

Type [Holotype]

USNM 47578, about 3 in [59.5 mm SL = 2.3 in; 71 mm TL = 2.8 in], taken by the *Albatross* from Galapagos Islands [acc. no. 30301].

Auchenopterus cingulatus Evermann and Marsh, 1899:361.

Type [Holotype]

USNM 49375, 0.8 in [= 20.3 mm] long [15.7 mm SL; 17.5 mm TL], from Ponce, Puerto Rico [1 Feb 1899].

Remarks: Date of collection came from label found in jar with holotype.

Cotypes [Paratypes]

[USNM 50165] (1).

[USNM 125928] (2), collected with holotype [acc. no. 163614].

Remarks: Evermann and Marsh (1899:361) based their description on five specimens: four, including the holotype, from Ponce, and one from Puerto Real. Only three paratypes were found at USNM, the specimen from Puerto Real [USNM 50165] and two from

Ponce. The original USNM ledger entry for the Ponce paratypes [125928] lists only two specimens for this lot. The location of the missing Ponce paratype is unknown, but it was probably never received at USNM.

Cryptotrema corallinum Gilbert, 1890:101.

[Syntypes]

Remarks: No type designations, catalog numbers, or depository institutions are given in the original description, which closes with a statement beginning "Three specimens," followed by collection data. One might infer from this that there are only three type specimens, all syntypes, but reference is made in the description to the color of the fins, "largely black in males, pale in females," which indicates that the description was based on at least four specimens. C. Hubbs (1952:100) reported that he found four specimens of *Cryptotrema corallinum* from *Albatross* station 2945: USNM 48257 (1 specimen), USNM 43090 [sic] (1) and Stanford University 75 (2) (now CAS-SU 75), and that all four specimens must be considered "cotypes" [syntypes in his usage]. C. Hubbs' (1952:100, 102) citations of USNM 43090 and USNM 43098 for the USNM specimen, which he erroneously designated a "paratype," were typographical errors. The correct catalog number should have been USNM 43092.

[Syntype] [lectotype]

[USNM 48257] (1) *Albatross* sta 2945 [34°00'00"N, 119°29'30"W, off east end of Santa Cruz Island], California [6 Feb 1889], in 30 fathoms [= about 55 m] [acc. no. 32201].

Remarks: C. Hubbs (1952:100) designated USNM 48257 as the "holotype"; however, according to *International Code of Zoological Nomenclature*, Article 73(a)(iii), holotypes can only be designated by the original author in the publication containing the original description. In accordance with C. Hubbs' intentions, we here designate USNM 48257 lectotype of *Cryptotrema corallinum*. A handwritten note stating "Type" and a tin tag impressed with the number 188 are in the jar.

[Syntype] [Paralectotype]

[USNM 43092] (1) same collection data as lectotype [acc. no. 23787].

Remarks: Originally cataloged as F.C. 5563 in the United States Fish Commission ledger. A handwritten note in the jar states: "This is probably not one of the types. Clark Hubbs, VIII:3:1947." This note was written prior to C. Hubbs (1952) and should be disregarded. A tin tag impressed with the number 196 and one stating "DRN" were also found in the jar. Two illustrations of USNM 43092 are present in the

illustration files at USNM. One drawn by W.S. Atkinson has USNM 43092 written on the illustration cover. This illustration appears as figure 817, plate CCCXXXVII, in Jordan and Evermann (1900). The second illustration, presumably never published, was drawn by S.F. Denton from a specimen 196, which corresponds to the tin tag found in the jar.

Labrosomus [*Labrisomus*] *cremnobates* Gilbert, 1890:100.

[Syntypes] [Lectotype]

[USNM 48262] *Albatross* sta 3001 [24°55'15"N, 110°39'W, 16 Mar 1889, 71 [33] fathoms [72°C, acc. no. 32201]

Remarks: Gilbert based his description on two specimens, neither singled out as type or holotype, and both presumably from *Albatross* station 3001, for which he gave an erroneous depth of 71 fathoms (Townsend, 1901:407). There is but one specimen entered in the USNM catalog as "*Labrosomus cremnobates*" from *Albatross* station 3001. This specimen was sent to USNM on 8 Jun 1897 by the U.S. Commission of Fish and Fisheries. There is, however, a second specimen cataloged as "*Labrosomus cremnobates*," USNM 44371, which is indicated as having been obtained from *Albatross* station 3005, and, hence, was collected the day after, and very close to the locality (25°02'45"N, 110°43'30"W) of USNM 48262 (Townsend, 1901:407). The second specimen was cataloged at USNM on 13 Dec 1892, almost five years before USNM 48262. The station data for 3005 give the surface temperature as 71. The specimen in USNM 44371 was undoubtedly available to Gilbert for his description and we believe that it is one of his two syntypes. If we are correct, Gilbert mainly failed to include the second *Albatross* station number, and confused the 71 temperature of that station for a depth, which he erroneously assigned to the station he did include. Furthermore, Gilbert described the dorsal-fin spine counts for his two specimens as XXI or XXII. We determined the counts for the specimens from stations 3001 and 3005 to be XXII and XIX, respectively (the specimen from station 3005 is in poor condition, and a radiograph reveals that two spines are missing, hence the correct number of spines is XXI).

Rosenblatt and Taylor (1971:453) redescribed the specimen in USNM 48262, which they first called "holotype," and then designated it as "lectotype" of the species. They stated that the specimen in USNM 44371 was probably "the cotype" [= paratype in this usage], and then excluded it as a lectoparatype because there was no "internal evidence in Gilbert's description pointing surely to this specimen as the second cotype" [= syntype in this usage]. Based on our findings we believe it highly probable that USNM

44371 was one of Gilbert's two syntypes.

Labrosomus is an unjustified emendation of *Labrisomus* (Eschmeyer and Bailey in Eschmeyer, 1990:206).

[Syntype] [Paralectotype]

[USNM 44371 (1)].

Remarks: See "Remarks" above under lectotype.

Malacoctenus culebrae Evermann and Marsh, 1899:357.

Type [Holotype]

USNM 49369, 1.38 in [28.9 mm SL = 1.14 in, 34.6 mm TL = 1.36 in] [collected by] the Fish Commission Steamer *Fish Hawk* from the reefs outside the harbor of Culebra, Puerto Rico, 9 Feb 1899.

[Paratypes]

[USNM 50207] (1).

[USNM 125973] (1), acc. no. 163614.

Tagusa delicata Herre, 1935:435.

[Paratype]

[USNM 117315 (1), collected from type locality, acc. no. 155340].

Remarks: The USNM paratype is a prejuvenile specimen, identifiable as *Dialommus fuscus* Gilbert, and the holotype (FMNH 17399), also a prejuvenile, is identifiable as *Malacoctenus zonogaster* Heller and Snodgrass (Springer, 1995).

Odontoclinus dendriticus Reid, 1935:165.

Type [Holotype]

USNM 43397, length 135 mm [130 mm SL, 160 mm TL], field no. 5595 [dredging station], Albemarle Island, Galapagos, 10 Apr 1888, U.S. Fisheries Steamer *Albatross* [acc. no. 24037].

[Paratype?]

USNM 94033 (1) [acc. no. 128938].

Remarks: Reid (1935:166) discussed a second specimen as "apparently the same species." It is debatable whether this specimen should be considered as a paratype or as other material.

Malacoctenus ebisui Springer, 1959:478.

Paratypes

USNM 174964 (1) [acc. no. 206958].

USNM 174967 (1) [acc. no. 206958].

Starksia elongata Gilbert, 1971:195.

Paratype

USNM 205199 (1) [acc. no. 289378].

Auchenopterus fajardo Evermann and Marsh, 1899:361.

Type [Holotype]

USNM 49376, 1.63 in [= 41.4 mm] long [33.4 mm SL, caudal fin damaged], taken at Fajardo, Puerto Rico, 17 Feb 1899 [acc. no. 36735].

Paraclinus fehlmanni Springer and Trist, 1969:323.

Holotype

USNM 202697, male, 40.3 mm SL, Bahia de Santa Elena, Ecuador (02°13'11"S, 80°55'22"W), area exposed by rocks at low tide and small tide pools, 0-6 feet [= 0-1.8 m], poisoned, 4 May 1966, H.A. Fehlmann, HA-102 [acc. no. 273221].

Paratypes

USNM 202713 (3) [acc. no. 273221].

USNM 202714 (13), taken with holotype [acc. no. 273221].

Labrisomus (Gobioclinus) filamentosus Springer, 1960:289.

Holotype

USNM 185618, male, 76.0 mm SL, collected by U.S. Fish and Wildlife Service vessel M.V. *Oregon*, sta 1874, 16°43'N latitude, 81°57'W longitude, depth of 50 fathoms [about 91 m], 22 Aug 1957 [acc. no. 220290].

Starksia fulva Rosenblatt and Taylor, 1971:454.

Paratypes

Remarks: Rosenblatt and Taylor (1971:454-455) have a paragraph with a lead-in title "PARATYPES," in which they list several lots. In the same paragraph, immediately continuing after the last of these lots, they make the following statement: "Material from the following localities was examined for comparative purposes." They then list numerous cataloged lots, including those we list below. Although their intentions may have been to exclude the comparative material from their type series, we do not believe they have done so "expressly" as required by ICZN Article 72(b)(i), 1985. Further evidence for our conclusion is found under their description of *Starksia grammilaga* (pp. 57-58) in which there is a section heading, "Material Examined," under which there are two paragraph headings, "HOLOTYPE" and "PARATYPES." These are followed by a new section heading titled "Other Material."

USNM 101937 (2) [acc. no. 131571].

USNM 101940 (1) [acc. no. 131571].

USNM 101941 (5) [acc. no. 131571].

USNM 101955 (1) [acc. no. 128938].

USNM 101989 (6) [acc. no. 131571].

USNM 101991 (1) [acc. no. 131571].

USNM 101993 (1) [acc. no. 131571].

USNM 101994 (1) [acc. no. 131571].

USNM 101996 (1) [acc. no. 131571].

USNM 101997 (1) [acc. no. 131571].

USNM 101998 (3) [acc. no. 131571].

USNM 109422 (2) [acc. no. 128938].

USNM 109423 (4) [acc. no. 128938].

USNM 164254 (6).

USNM 164256 (1).

Somersia furcata Beebe and Tee-Van, 1934:1.

Holotype

NYZS 26165 [USNM 170924], 20.3 [18.3] mm SL, 25.5 [21.3] mm TL, Bermuda Oceanographic Expeditions, Hungry Bay, Bermuda, 12 Nov 1933, captured by Thatcher Adams [acc. no. 215651].

Remarks: The type specimen was originally deposited in the collections of the Department of Tropical Research of the New York Zoological Society. The specimen was donated to USNM by W. Beebe (Mead, 1958:134).

Starksia galapagensis Rosenblatt and Taylor, 1971:456.

Paratypes

UCLA 64-16 [USNM 205467] (9) [acc. no. 291423].

Malacoctenus gigas Springer, 1959:457.

Paratypes

USNM 174961 [18] [acc. no. 206958].

Remarks: Springer (1959) gave only total numbers of specimens from each locality, not breaking down the number for each paratypic lot.

Starksia grammilaga Rosenblatt and Taylor, 1971:457.

Holotype

USNM 102014, 24.2 mm long [24.0 mm SL, about 26.7 TL], male, Isla Tangola, Bahia Tangola, Tangola, Mexico, taken on 1 Mar 1934 by W.L. Schmitt [acc. no. 128938].

Paratypes

USNM 116223 (2) [acc. no. 122445].

USNM 116224 (2) [acc. no. 122445].

USNM 205212 (1), from same collection as the holotype [acc. no. 128398].

Remarks: Paratype removed from USNM 102014 and recataloged as USNM 205212.

Starksia guadalupae Rosenblatt and Taylor, 1971:458.

Paratype

SIO 58-493 [USNM 205475] (1) [acc. no. 291424].

Labrisomus haitiensis Beebe and Tee-Van, 1928:232.

Type [Holotype]

NYZS 7170 [USNM 170903], 52.5 mm [49.8 mm SL], Bizoton, Port-au-Prince Bay, Haiti, 15 Mar 1927, captured in small trap in 4 feet [1.22 m] of water [acc. no. 215651].

Remarks: Originally published as NYZS No. 7170. See comments under *Acanthemblemaria arborescens*.

Starksia holderi Lauderbach [F.] in Jordan and Starks, 1907:73.

Type [Holotype]

USNM 56397, 94 mm in length [76.7 mm SL, 91 mm TL] [Santa Catalina Island, southern California] [acc. no. 46605].

Remarks: Jordan and Starks (1907:67) indicated that Jordan had visited Avalon Bay on Santa Catalina, "where several species [we report] were obtained,

most of them being fishes that had died at the local aquarium."

Malacoctenus hubbsi hubbsi Springer, 1959:465.

Paratypes

USNM 134904 [3].

Remarks: Springer (1959) gave only total numbers of specimens from each locality, not breaking down the number for each paratypic lot.

USNM 174965 [88] [acc. no. 206958].

Remarks: See "Remarks" above. The catalog ledger indicates 89 specimens in the lot. As of April 1993, there were only 88.

Malacoctenus hubbsi polyporosus Springer, 1959:468.

Holotype

USNM 174957, adult male, 51 mm [48.5 mm] SL, from Islas Venados, just north of Mazatlan, Sinaloa, Mexico, collected by G. Bartholomew and K. Norris, 26 Feb 1951 (Field Number: [UCLA, B.W. Walker field number] W51-26) [acc. no. 206958].

Paratypes

USNM 174960 [228] [acc. no. 206958].

Remarks: Springer (1959) gave only total numbers of specimens from each locality, not breaking down the number for each paratypic lot. The catalog ledger indicates 231 specimens in the lot. As of April 1993, there were only 228.

Cremnobates integripinnis Smith, 1880:147.

[Syntypes]

[USNM 27404] (3) [2], 1¹/₂-2 in [TL], collected from rocky tidepools that are heavily lined with algae, on 6 Mar 1880 [San Diego, California].

Remarks: Rosa Smith (1880) based her description on 3 specimens, which she states were presented to USNM, two of equal size ("2 in long" [TL]) and one specimen "1¹/₂ in long" [TL]. The entry in the ledger for USNM 27404 indicates the word "type," but the number of specimens is not indicated. Two specimens are present in the jar labeled USNM 27404, a smaller specimen [36.9 mm SL = 1.44 in, 44.6 mm TL = 1.74 in] and a larger specimen [44.8 mm SL = 1.75 in, 54.9 mm TL = 2.14 in]. Smith (1883:217) refers to the types of *Cremnobates integripinnis* as "either of the type specimens," implying that there were only two syntypes. According to W.N. Eschmeyer (pers. comm.), the third specimen is cataloged as MCZ 27397. C. Hubbs (1952:85) indicated erroneously that the "holotype" was at USNM. The three syntypes need to be examined, their identities determined, and a lectotype designated that best supports stability of current concepts of the species nomen.

Paraclinus integripinnis zacae C. Hubbs, 1952:87.

Paratypes

USNM 151994 [1] [acc. no. 188181].

USNM 151997 [2] [acc. no. 188181].

Ericteis kalisherae Jordan, 1904:543.

Type [Holotype]

SU 8366 [USNM 79275], 2¹/₂ in [54.0 mm SL = 2¹/₈ in, 65 mm TL = 2¹/₂ in], collected by J.C. Thompson, inside Bush Key, Tortugas Archipelago [Florida], depth 3 feet, 24 Nov 1902 [acc. no. 61537].

Remarks: The original USNM ledger entry and a label with the holotype both give the locality as Garden Key, Florida, which is the main island of Dry Tortugas, and it is where Thompson was stationed as a naval surgeon. A metal tag with the SU catalog number and a paper tag on which "Type" is printed are tied to the specimen. The holotype was given to USNM by D.S. Jordan (in litt. to R. Rathbun, 28 Aug 1917; see file in acc. no. 61537), as noted by Springer (1959:436).

[Paratype?]

[USNM 57082 (1)].

Remarks: The status of USNM 79275 as the holotype of *Ericteis kalisherae* is clear, but there is a question as to which of two specimens (USNM 57802 or BMNH 1908.3.19.9) is the paratype. Jordan (1904:543) stated that the original description was based on two specimens, the type (= holotype) and one other (= paratype), and that the latter was "retained by J.C. Thompson." Based on information provided by D.W. Tucker (in litt., 24 Apr 1956, to V.G. Springer), Springer (1959:436) reported that Thompson had given the paratype to the British Museum, where it had been cataloged as the "type" of *Ericteis kalisherae* (BMNH 1908.3.19.9). The following items are associated with the BMNH specimen: small, thick cardboard label tied to specimen inscribed in pencil "Nov. 24" [same month and day as given in original description]; larger, similar label loose in bottle, inscribed (pencil, same hand) "Tortugas Is. Florida. U.S.A. Nov. 1902 [same month and year as given in original description]. Coll. Thompson U.S.N." Tucker wrote that the BMNH register noted, "Presented by Dr. J.C. Thompson." Darrell Siebert informs us the specimen is about 63.3 mm SL and about 73.5 mm TL, slightly longer than the size reported for the holotype. Although Jordan did not report the size of the paratype, he implied a difference between the two specimens by stating that the dorsal-fin formula of the species was either XVIII,11 or XIX,11, but he did not indicate which formula pertained to which specimen. The illustration of the "type" (Jordan, 1904, pl. 2: fig. 4) indicates the presence of XIX,11 dorsal-fin rays; hence, the paratype might be expected to have the formula

XVIII,11. In fact, the holotype and both of the specimens in question have the dorsal-fin formula XIX,11 (formula for BMNH specimen provided to us by Darrell Siebert), an indication, perhaps, that Jordan was merely uncertain of the accuracy of his count for the holotype.

In a report on the fishes of Tortugas (which included new material collected by Thompson), Jordan and Thompson (1905:254) indicated that *Ericteis kalisherae* was known from three specimens, all taken by Thompson at Bush Key. Although not specifically stated, it appears that the third specimen was obtained after the species had been described. One of these three specimens, but not the holotype, which was still at Stanford, was sent to USNM, where it was cataloged as USNM 57802 (date of collection not reported) on 28 Feb 1907 and entered (then or later, and presumptively) as a co-type (paratype) of *Ericteis kalisherae*. The evidence favors the BMNH specimen as the paratype, but because both Thompson and Jordan had both the BMNH specimen and USNM specimens in their possession, it will always remain uncertain which of the two specimens was before Jordan at the time of the original description.

Myxodes lugubris Poey, 1876:173.

[Holotype]

727 [USNM 37539], 55 mm [45.8 mm SL, 54.3 mm TL], Cuba [acc. no. 16292].

Mnierpes macrocephalus catherinae C. Hubbs, 1952:61.

Paratypes

USNM 151990 (1) [acc. no. 188181].

USNM 151991 (1) [acc. no. 188181].

Paraclinus magdalenae Rosenblatt and Parr, 1969:12.

Paratypes

SIO 64-56 [USNM 204259] (3), same collection as holotype [acc. no. 284328].

Malacotenus margaritae mexicanus Springer, 1959:449.

Holotype

USNM 174956, adult male, 46.6 mm [44.5 mm] SL, from the south side of Bahia Santa Inez, Baja California, Gulf of California, Mexico (UCLA [B.W. Walker] field number W53-86), collected by Boyd W. Walker and party, 26 Apr 1953 [acc. no. 206958].

Paratypes

USNM 174959 (85) [86] [acc. no. 206958].

Paraclinus mexicanus cleophens C. Hubbs, 1952:80.

Paratypes

USNM 151993 [5], with the same data [as the holotype, acc. no. 188181].

Remarks: C. Hubbs gave only a total number for all the separate lots of paratypes of specimens taken with the holotype.

Labrosomus [Labrisomus] microlepidotus Poey, 1880:246.

[Syntypes?]

[USNM 37572 (2)], adult, 180 mm [132 and 141 mm SL, 150 and 163 mm TL], Cuba.

Remarks: Poey indicated the presence of only one specimen in his description, when he remarked, "La longitud de este pez adulto es...180 mm." His illustration (Poey, 1880, pl. 8: fig. 2) shows the head and anterior portion of the body of the specimen. Nevertheless, it is possible that Poey had more than one specimen before him. It is also possible, although we doubt it, that neither of the two conspecific specimens in USNM 37572 is a type. The specimens in USNM 37572 were cataloged in 1886, and they were erroneously recorded to have been collected by Poey in 1885, well after the date of the species description [USNM 37467-37578 were entered as a unit, all with essentially the same data, except that USNM 37467-37500 have, handwritten, "Recd" added to the printed "When Collect'd" column, and USNM 37501-37578 do not]. The anterior portion of the larger of the two specimens in USNM 37572, although 17 mm shorter than the size given by Poey, resembles Poey's illustration in that both show the mouth opened similarly, which it is not in the smaller specimen. The difference in length of the larger specimen, compared with that given by Poey, might be the result of shrinkage. Longley (in Longley and Hildebrand, 1941:250) considered both of these specimens to be "the types." A note in the USNM catalog, apparently written subsequent to the initial catalog entry and prior to 1953, when Springer recorded having examined the lot, states that the larger specimen is "the type." We are unable to contribute further to the solution of the problem as to the exact type status of these two specimens.

Malacoctenus moorei Evermann and Marsh, 1899:358.

Type [Holotype]

USNM 49370, 1.4 in long [27.4 mm SL = 1.1 in; 32.2 mm TL = 1.3 in], collected at Culebra Island [by the U.S. Fish Commission Steamer *Fish Hawk*], 11 Feb 1899.***Labrisomus (Labrisomus) multiporosus*** C. Hubbs, 1953a:131.

Paratypes

USNM 30743 (1).
 USNM 47484 (2) [acc. no. 128938].
 USNM 94008 (1) [acc. no. 128938].
 USNM 134910 (1).
 USNM 165469 (2) [acc. no. 196217].
 USNM 165470 (2) [acc. no. 196217].
 USNM 165471 (5) [acc. no. 196217].

Remarks: Five specimens were found in the lot. The

USNM ledger listed only four.

USNM 165474 (1) [acc. no. 196217].

Cremnobates nox Jordan and Gilbert, 1884:30.

Type [Holotype]

USNM 34971, 1³/₄ in [= 44.4 mm] long [34.8 mm SL = 1.4 in, 40.2 mm TL = 1.6 in] collected by D.S. Jordan in December, 1883, Key West, Florida.Remarks: Note in jar stating "Drawn for F.N.A. [*Fishes of North and Middle America*]."***Starksia occidentalis*** Greenfield, 1979:27.

Paratypes

USNM 107110 (2) [acc. no. 148787].
 USNM 192388 (1) [acc. no. 229190].
 USNM 192399 (1) [acc. no. 229190].
 USNM 192401 (1) [acc. no. 229190].
 USNM 192416 (1) [acc. no. 229190].

Labrisomus (Labrisomus) pomaspilus Springer and Rosenblatt, 1965:25.

Paratype

USNM 197771 (1), same locality and data as holotype [acc. no. 252190].

Starksia posthon Rosenblatt and Taylor, 1971:460.

Holotype

USNM 101945, 27.9 mm long [27.4 mm SL, 34 mm TL], male, from Isla Secas (Secas Group), Panama, 14 fathoms [= 25.6 m], on bottom of "shells and millepore," 5 Feb 1935 by W.L. Schmitt (original number 450-33) [acc. no. 131571].

Malacoctenus puertoricensis Evermann and Marsh, 1899:358.

Type [Holotype]

USNM 49371, female, 2.5 in long [49.5 mm SL = 1.9 in, 60.9 mm TL = 2.4 in], obtained at Hucares, Puerto Rico [by the Steamer *Fish Hawk*], 14 Feb [1899].

Cotypes [Paratypes]

Remarks: Evermann and Marsh did not indicate the depository, nor the number of separate lots involved, for their six cotypes [paratypes]. The paratypes comprised three females taken 17 Feb at Fajardo and one female taken 9 Feb 1899 at Culebra (no sizes given), and two males (2.5 and 2.25 in) taken 11 Feb 1899 at Culebra. Böhlke (1953:98) indicated the presence of three paratypes (three females; T. Iwamoto, in litt., 28 Feb 1994) from Fajardo at Stanford University (SU 8656, now CAS-SU 8656). Until recently, there were two lots cataloged as paratypes at USNM: USNM 50180, which contains four females from Ponce collected 30 Jan 1899, and USNM 125974, which contains one male and one female from Ensenada Honda, Culebra, collected 2 Feb 1899. The four females in USNM 50180 are not paratypes because both the locality and collection date disagree with those given by Evermann and Marsh (and

inclusion of the specimens would bring the total number of females to eight, three more than the description allows). USNM 125974 also should be excluded as paratypes because the collection date disagrees with those for the female from Culebra and the two males cited by Evermann and Marsh, and because Evermann and Marsh did not indicate the same collection date for both males and females. Ibarra and Stewart (1987:55) indicate the presence of two paratypes from Ponce at FMNH (no catalog numbers supplied). Confirmation of their paratypic status would be indicated if both specimens are males with a collection date of 11 Feb 1899.

Xenomedeia rhodopyga Rosenblatt and Taylor, 1971:445.

Paratypes

SIO 69-358 [USNM 205479] (23) [acc. no. 291424].

Auchenopterus rubescens Evermann and Marsh, 1899:360.

Type [Holotype]

USNM 49374, 1.3 in [= 33.0 mm] in length [26.9 mm SL, 31.8 mm TL], from Puerto Real, 27 Jan 1899.

Cryptotrema seftoni C. Hubbs, 1954:17.

Paratype

USNM 165475 (1), same collection data as holotype [acc. no. 196217].

Starksia starcki Gilbert, 1971:200.

Paratype

USNM 205200 (1) [acc. no. 289378].

Paraclinus stephensi Rosenblatt and Parr, 1969:13.

Paratypes

SIO 62-49 [USNM 204261] (2) [acc. no. 284328].

Labrisomus (Brockius) striatus C. Hubbs, 1953a:120.

Paratype

USNM 165472 (1) [acc. no. 196217].

Paraclinus tanygnathus Rosenblatt and Parr, 1969:10.

Paratypes

SIO 62-19 [USNM 204260] (8) [acc. no. 284328].

Blennius tetranemus Cope, 1877:42.

[Holotype]

0.073 m TL, Pacasmayo Bay, Peru, collected by James Orton, 1876-1877.

Remarks: The depository of the holotype was not indicated, but was probably ANSP. Stephens and Springer (1974:10) were unable to locate the holotype and considered it lost.

Neotype

USNM 128213, Lobos de Afuera Island, Peru [acc. no. 158454].

Remarks: Stephens and Springer (1974:10) designated the holotype of *Labrisomus afuerae* Hildebrand (1946:400), USNM 128213, as the neotype of *Blennius tetranemus* Cope. As a result, USNM

128213 is the primary type of both nominal species, and *Labrisomus afuerae* is an objective junior synonym of *Blennius tetranemus*.

Malacoctenus triangulatus Springer, 1959:477.

Paratypes

Remarks: Springer (1959) gave only total numbers of specimens from each locality, not breaking down the number for each paratypic lot.

USNM 37430 [1] [acc. no. 16292].

USNM 82536 [1] [acc. no. 57608].

USNM 82537 [1] [acc. no. 57608].

USNM 88120 [1] [acc. no. 93233].

USNM 114760 [1] [acc. no. 144662].

USNM 116823 [17] [acc. no. 144662].

USNM 116824 [2] [acc. no. 144662].

USNM 128794 [1] [acc. no. 173645].

Starksia variabilis Greenfield, 1979:33.

Paratype

USNM 217832 (1), collected with the holotype [acc. no. 329227].

Myxodes varius Poey, 1876:174.

[Holotype]

726 [USNM 37538], 52 mm [40.1 mm SL, 49.5 mm TL], Cuba [acc. no. 16292].

Paraclinus walkeri C. Hubbs, 1952:88.

Paratype

USNM 151995 (1), from the type locality [acc. no. 188181].

Remarks: Removed from SU 15320 (the holotype, now CAS-SU 15320).

Labrisomus (Odontoclinus) wigginsi C. Hubbs, 1953a:122.

Paratypes

USNM 165473 (5) [acc. no. 196217].

Labrosomus [Labrisomus] xanti Gill, 1860:107.

Remarks: The original description was based on "old and young specimens...numbered 2334, 2335 and 2478 at the Smithsonian Institution." We found only one jar, bearing two of the catalog numbers, USNM 2334 and 2335, and containing two unsegregated specimens [syntypes] in the type collection. A note written in the catalog stated that the lots were mixed. Attached to the caudal peduncle of each specimen, however, is a handwritten tag that allows the lots to be separated. One tag states "947," and the other "948." These numbers correspond to original numbers listed in the catalog ledger for USNM 2334 and USNM 2335, respectively.

[Syntype] [Lectotype]

USNM 2334 [1], collected under rocks on Cerro Blanco [Mexico] by J. Xantus.

Remarks: C. Hubbs (1953a:131) designated USNM 2334 "holotype" from among the two available

syntypes, which he called "cotypes." Although C. Hubbs did not use the words lectotype and syntypes, it is clear that the current concepts of these words are what he had in mind. Nevertheless, according to Article 73(a)(iii) of the *International Code of Zoological Nomenclature* (1985 ed.), C. Hubbs did not validly designate a lectotype because a holotype can only be designated in the original publication in which it was described. According to W.N. Eschmeyer (in litt., to D.G. Smith, 1994) it is possible to equate the word holotype with lectotype only in the special case described in Article 74(b), which requires the inference that the holotype designator did so because it could not be determined that the species description was based on a single specimen and the designator believed, even if erroneously, that it was so based. In keeping with C. Hubbs' intentions, we here designate USNM 2334 lectotype of *Labrosomus xanti* Gill.

[Syntypes] [Paralectotypes]

USNM 2335 [1], collected with USNM 2334.

Remarks: C. Hubbs (1953a:131) erroneously indicated that this specimen was a "paratype." As a result of our designation of a lectotype, it became a paralectotype. USNM 2478 [?], collected with USNM 2334.

Remarks: This lot was not mentioned by C. Hubbs (1953a) and, apparently, was missing in 1953, if not earlier. The USNM catalog ledger lists an original number for USNM 2478 as 1860 (not a USNM catalog number, possibly a Xantus or Bureau of Fisheries number). The lot could not be located and may be lost. Another lot, USNM 7314, of *L. xanti*, indicated as having been collected by Xantus at Cape St. Lucas, might have been part of Gill's type series and is possibly the missing USNM 2478. This lot comprising 32 specimens (including one skeleton separately cataloged with a bone catalog number) in 1947, now comprises 29 specimens, 55.7–152 mm SL, including the skeleton. Based on a note in the jar, C. Hubbs removed three specimens of *Malacoctenus*. A new catalog number for the removed lot is not indicated on the note nor in the catalog. Cerro Blanco is not indicated as the locality for this lot, but we have been unable to find Cerro Blanco on maps or charts of the coastal areas of Baja California and northern mainland Mexico, to which this species is restricted (C. Hubbs, 1953a, fig. 1). Xantus' collections in the Gulf of California emanated mainly or completely from the Cape San Lucas area, and Cerro Blanco may have been a local place name. As early as 1896, Jordan and Evermann (p. 468) indicated the type locality of *L. xanti* as "Cerro Blanco, Cape San Lucas" and the known distribution as restricted to "La Paz," which is well north of Cape San Lucas. Perhaps, they considered La Paz as a broad region.

Starksia y-lineata Gilbert, 1965:2.

Paratypes

BLBG (uncat.) [USNM 208572] (2) [acc. no. 299357]

Remarks: Previously deposited at the no-longer extant U.S. Fish and Wildlife Biological Laboratory, Brunswick Georgia.

USNM 247754-F1 [USNM 209095] (2), same [collection] data as holotype [acc. no. 247754].

Remarks: The published catalog number for this lot was based on an archaic system using the USNM accession number (in this case 247754) and an added number for each species designated from the accession (in this case F1). The lot has been recataloged under the current system.

Malacoctenus zacae Springer, 1959:470.

Paratypes

USNM 174966 [6] [acc. no. 206958].

Remarks: Springer (1959) gave only total numbers of specimens from each locality, not breaking down the number for each paratype lot.

Clinus zonifer Jordan and Gilbert, 1882a:361.

[Syntype] [Lectotype]

[USNM] 28122 Mazalan, on the west coast of Mexico.

Remarks: Jordan and Gilbert (1882a:361) did not designate a holotype nor did they report the number of specimens examined. A number, 28122, appears in parentheses at the beginning of the description. C.L. Hubbs et al. (1963) noted that Jordan and coauthors often designated type-species by giving catalog numbers in parentheses, and we have noted that Jordan and coauthors listed USNM catalog numbers that clearly represented types of species in papers at least as early as Jordan and Gilbert (1882a). The ledger entry for USNM 28122 indicates "*Clinus zonifer* type" and indicates "1" specimen, but there is a strike through the one and the number "3" is entered with the remark that two specimens were removed to USNM 164585. The latter action was dated 1956 (in the "when-cataloged" column of 164585) and taken in anticipation of Springer's (1959:474) actions implying that the three specimens were syntypes and selecting 1 of them (28122) as lectotype.

[Syntypes] [Paralectotypes]

USNM 164585 (2), removed from USNM 28122.

Malacoctenus zonifer sudensis Springer, 1959:474.

Paratypes

Remarks: When more than one paratypic lot was listed for a locality, Springer (1959) gave only total numbers of specimens for the locality, not breaking down the number for each paratypic lot.

USNM 65567 (1) [acc. no. 51565].

USNM 81898 (1) [acc. no. 59904].

USNM 94046 [1] [acc. no. 128938].
 USNM 101933 (10) [acc. no. 131571].
 USNM 101936 [2] [acc. no. 131571].
 USNM 101987 (1) [acc. no. 131571].
 USNM 101988 (1) [acc. no. 131571].
 USNM 101990 [1] [acc. no. 131571].
 USNM 102002 (2) [acc. no. 131571].
 USNM 128493 [24] [acc. no. 168826].
 USNM 144820 [7] [acc. no. 168826].
 USNM 144822 [15] [acc. no. 168826].
 USNM 144824 [2] [acc. no. 168826].
 USNM 144825 (1) [acc. no. 168826].
 USNM 144826 (2) [acc. no. 168826].
 USNM 144828 (1) [2] [acc. no. 168826].
 USNM 174963 [18] [acc. no. 206958].

TRIPTERYGIIDAE

Gilloblennius abditus Hardy, 1986:154.

Paratype

USNM 272605 (1) [acc. no. 365319] [formerly NMNZ P.16433].

Enneapterygius altipinnis Clark, 1980:99.

Holotype

USNM 205807, female, 20.0 mm SL, Gulf of Elat (= 'Aqaba) (VGS 69-7), 23.VII.1969, collected by V.G. Springer [acc. no. 284009].

Paratypes

USNM 205808 (33) [collected with holotype] [acc. no. 284009].

USNM 205809 (2) [acc. no. 284009].

USNM 212247 (2) [acc. no. 284009].

USNM 212248 (1) [acc. no. 284009].

***Helcogramma aquila* [*aquilum*]** Williams and McCormick, 1990:1021.

Holotype

USNM 298405, male, 39.7 mm SL, White Beach, past Mahatae, Batan Id., Batanes, Philippines, 20°24'45"N, 121°55'02"E, surge channel at outer edge of reef, flat walls of channel rock and some coral, 0–6 m, rotenone; 22 Apr 1987, G.D. Johnson and W.F. Smith-Vaniz [field no. GDJ 87-2, acc. no. 374820].

Remarks: The specific epithet *aquila* is feminine, whereas *Helcogramma* is neuter; therefore, the correct epithet is *aquilum*.

Paratypes

USNM 293945 (1) [acc. no. 374820].

USNM 297370 (4, including one cleared and stained in glycerine).

USNM 298400 (4) [acc. no. 374820].

Helcogramma ascensionis Lubbock, 1980:293.

Paratype

USNM 219405 (1), collected with holotype [acc. no. 338524].

Tripterygium* [*Tripterigion*] *atriceps Jenkins, 1903:505.

Type [Holotype]

USNM 50719, about 1 in long [23.0 mm SL, 28.0 mm TL], caught by O.P. Jenkins at Honolulu [Oahu], Hawaiian Islands, summer of 1889 [acc. no. 40470].

Remarks: Tag with specimen indicates "Drawn." Jenkins misspelled the generic name, which should be *Tripterygion*."

Cotypes [Paratypes]

Jenkins (1903:506) indicated that in addition to the type [= holotype], he had collected nine cotypes [= paratypes] at Honolulu. Jordan and Evermann (1905:496) stated: "Besides the type [of *Tripterygion atriceps*], we have examined nine examples [paratypes]...obtained by Doctor Jenkins at Honolulu in 1889, and 37 examples...collected by us at Waikiki reef, near Honolulu, in 1901." [Jordan was president of Stanford University at that time.] Böhlke (1953:99) reported that SU 23305 contained nine paratypes of *Tripterigion* [sic] *atriceps* Jenkins, and D. Catania (in litt., 15 Apr 1994) reaffirmed the presence of nine paratypes in CAS-SU 23305. Thus, all of Jenkins' type material is accounted for.

Through what we believe are errors, two lots, containing three specimens each, and included in the same jar, have long been considered to be among Jenkins' paratypes: USNM 51165 and USNM 126693. Adding to the complexity of the type status of the two problematic lots was Jenkins' (1903:419–420) statement that "cotypes and series of all the species, so far as possible, have been presented to the Leland Stanford Junior University Museum and to the United States Fish Commission. A representative collection has been presented to the British Museum and one retained by the museum of De Pauw University." Although Jenkins (1903) occasionally indicates Stanford and U.S. Fish Commission (and one FMNH) catalog numbers for cotypes of some of his new species, no specimens are indicated as having been deposited at BMNH or De Pauw University, and no museum depository numbers were given his cotypes of *Tripterygion atriceps*.

The catalog entry for USNM 51165 indicates that these specimens were collected in 1901 by the U.S. Fish Commission and cataloged as USNM, 21 Jan 1904. The accession files (acc. no. 41289) provide no collecting data or information on the type status of this lot, and we are uncertain how the 1901 date became associated with these specimens. Jordan and Evermann (1905), who related in detail the history of ichthyological collecting in the Hawaiian Islands, mentioned (p. 20) that they and Jenkins, among others, made shorefish collections in the Hawaiian Islands in 1901 under the auspices of the United States

Fish Commission. Perhaps these three specimens were among the 37 nontypes mentioned above by Jordan and Evermann (1905:496). The collection date for the specimens in USNM 51165 are sufficient to exclude them as forming part of Jenkins' type material.

The catalog entry for USNM 126693 indicates that these specimens were collected by Jenkins at Waikiki in 1901, and that they were originally cataloged as USBF 1085. A USBF jar label stating "1085. *Tripterygion* [sic] *atricsps*, Waikiki, Hawaii. O.P.J. 1901," is loose in the jar, as are the three specimens cataloged as USNM 126693. Three specimens, USNM tag 51165, and a paper label reading "*Tripterygion atriceps*" (note correct generic spelling) are segregated in a vial in the same jar. The accession records (acc. no. 163614) for USNM 126693 only indicate that some paratypes were included among a large number of specimens transferred to USNM from the U.S. Fish and Wildlife Service. A list of species was included with the accession, but it appears to have been lost. We believe that the similarity of the data pertaining to the type specimens of *Tripterygion atriceps* and those associated with the three specimens in USNM 126693 were the cause of the latter's erroneously being considered to be paratypes of *T. atriceps*.

Helcogramma billi Hansen, 1986:329.

Holotype

USNM 222377, male, 29.5 mm SL, Trincomalee [outside harbor, rocky area opposite Fort Frederick] Bay, Sri Lanka, collected by W.F. Smith-Vaniz [27 Jun 1969; field no. S-V 69-121; acc. no. 323952].

Paratypes

USNM 222367 (6, including one cleared and stained) [acc. no. 323952].

USNM 222368 (1) [acc. no. 323592].

Remarks: Hansen (1986:330) indicated erroneously that the collector of this lot was W.F. Smith-Vaniz; it was C.C. Koenig.

USNM 222374 (3) [acc. no. 323952].

USNM 222380 (27) [17], same data as holotype.

Remarks: Hansen (1986:330) erroneously indicated that this lot contained 13 males and 14 females, and, just before the catalog number, he anomalously indicated "Paratypes: (N = 17)." Seemingly, the 17 was meant to refer to the number of specimens in USNM 222380, which contains 12 males and five females.

Lepidonectes bimaculata [*bimaculatus*] Allen and Robertson, 1992:55.

Paratype

USNM 321178 (1), collected with holotype [acc. no. 398860].

Remarks: *Lepidonectes* is masculine; therefore, the correct adjectival form of the specific epithet should be *bimaculatus*.

Tripterygion brachylepis Schultz, 1960:291.

Holotype

USNM 142253, female 25.5 mm SL, Marshall Islands, Bikini Atoll, lagoon at eastern end, coral head, depth 20 to 25 feet [= 6.1–7.6 m], 26 Mar 1946, V.E. Brock and L.P. Schultz [acc. no. 172586].

Helcogramma capidata [*capidatum*] Rosenblatt in Schultz, 1960:297.

Paratypes

USNM 142249 (1) [acc. no. 172586].

USNM 142250 (2) [acc. no. 172586].

USNM 175255 (2) [acc. no. 151472].

Remarks: The specific epithet *capidata* is feminine, whereas *Helcogramma* is neuter; therefore, the correct epithet is *capidatum*.

Tripterygium [*Tripterygion*] ***carminale*** Jordan and Gilbert, 1882a:362.

[Syntypes]

(4) [0] [USNM] 28118, each about 1½ in [38.1 mm] [TL], Mazatlan, Mexico, fall and winter, 1880–1881, C.H. Gilbert.

Remarks: Jordan and Gilbert (1882a) listed the USNM catalog number 28118, without acronymic prefix or number of specimens, at the beginning of their description of *T. carminale*. This type citation of a catalog number (with or without attribution to USNM) was often a general, but nowhere specified, procedure used by D.S. Jordan and coauthors to designate USNM type lots (see discussion in C.L. Hubbs et al., 1963, who discussed Jordan and coauthors' similar method of designating type-species for genera). Later in the description, Jordan and Gilbert indicated that they had four specimens [syntypes] of their new species, but they did not indicate whether all specimens were deposited at USNM. USNM 28118 was cataloged in 1882 and originally indicated as containing only one specimen, but such indications during this period often have been found to be inaccurate. On the other hand, Jordan, who was a professor at Indiana University in 1882 and maintained a fish collection, often retained duplicate specimens for his collection (Jordan, 1922, 1:240, 280), which was destroyed by fire in 1883 (Jordan, 1922, 1:279), but re-established (Jordan, 1922, 1:280). In 1939, USNM 28118 was indicated by E.D. Reid in the USNM catalog ledger as lost, and it has not been found since. Brock (1940:34) mentioned that L.P. Schultz had written G.S. Myers that the specimens were lost in the fire at Bloomington, Indiana. We are uncertain how Schultz knew that the lot was at Bloomington. Brock (1940:34) designated [CAS]-SU 3854 as neotype of *T. carminale*. A note written by C.

Hubbs, dated 5 Aug 1947, is included with a specimen identified as *Tripterygium carminale* that is cataloged as USNM 120946. The note reads, "This specimen is probably one of the four original types of the species *Tripterygium carminale* Gilbert [sic], 1882, since it was removed from USNM 29250 [in 1944] containing the types of *Gobiesox zebra* [Jordan and Gilbert—our interpolations in brackets], which were described in the same paper. Two of the original types were lost in the Indiana Univ. fire and Reid was unable to find the other type, USNM 28118, in 1939." We do not know how C. Hubbs knew that two of the four syntypes were at Indiana University. On the other hand, we doubt that the specimen in USNM 120946 is one of the syntypes of *Tripterygium carminale*. The catalog indicates that some of the other Jordan and Gilbert type lots of species described in their 1882a paper consisted of mixed species (families) that were sorted subsequent to the species descriptions.

Enneapterygius cerasinus Jordan and Seale, 1906:419.

Type [Holotype]

USNM 51802, length 1 in [= 25.4 mm] [19.6 mm SL; caudal fin badly damaged], from Apia, Samoa, summer, 1902 [acc. no. 43712].

Remarks: Tin tags reading "Drawn" and "2384" in jar with holotype.

Helcogramma chica Rosenblatt in Schultz, 1960:294.

Holotype

USNM 115516, Phoenix Islands, Hull Island, Ocean Reef, 12–15 Jul 1939, L.P. Schultz, male, 20.9 mm SL [acc. no. 151472].

Paratypes

USNM 115514 (19) [acc. no. 151472].
USNM 115515 (5) [acc. no. 151472].
USNM 142252 (1) [acc. no. 172586].
USNM 175256 (21), same data as the holotype [acc. no. 151472].

Enneapterygius clarkae Holleman, 1982:121.

Paratypes

USNM 231378 (1) [acc. no. 321909].
USNM 231379 (1) [acc. no. 323952].
USNM 231380 (1) [acc. no. 323952].
USNM 231381 (1) [acc. no. 321909].
USNM 231382 (3) [acc. no. 321909].

Enneapterygius corallicola Kendall and Radcliffe, 1912:153.

Type [Holotype]

USNM 65484, 1⁷/₁₆ in long [= 36.5 mm] [30.2 mm SL; caudal fin badly damaged], Wreck Bay, Chatham Island, Galapagos Islands, shore, *Albatross* [9 Jan 1905].

Remarks: Paper tags tied to specimen read "Drawn" and "263."

Enneapterygius destai Clark, 1980:102.

Holotype

USNM 214629, female, 18.3 mm SL, Ethiopia (VGS

69-9), 7.VIII.1969, collected by V.G. Springer [acc. no. 284009].

Paratypes

USNM 205798 (14) [acc. no. 284009].
USNM 205799 (2), collected with holotype [acc. no. 284009].

Tripterygion ellioti Herre, 1944:49.

Paratypes

SU [CAS-SU] [USNM 123656 (4)], Maharanepeeta Beach, Vizagapatam, India, 20 Dec 1940 [acc. no. 171582].

Remarks: Herre (1944) did not provide catalog numbers for his type series, among which he lists 120 specimens from Maharanepeeta Beach, Vizagapatam, India. Böhlke (1953:99) reported on the presence of 116 specimens of the type series from this locality collected between 20–24 December 1940 (Böhlke also listed other paratypes). The four paratypes exchanged to USNM by Herre in 1945 thus account for all the types from Maharanepeeta Beach. Herre did not designate a holotype but did indicate that a male and female were the "types" and all other specimens were "paratypes." Böhlke (1953:99) and Hansen (1986:337) erroneously indicated that SU 38840 [male] was the holotype and SU 38841, female, was the allo-paratype (or allotype); these two specimens are syntypes. In keeping with Böhlke and Hansen's assumption, we herein designate the male in CAS-SU 38840 lectotype of *Tripterygion ellioti* Herre.

Enneapterygius erythrosoma Shen and Wu, 1994:7.

Paratype

USNM 329658 (1) [acc. no. 409252].

Tripterygium [Tripterygion] etheostoma Jordan and Snyder, 1902:444.

Cotype [Paratypes]

USNM 50299 [7] [acc. no. 39095].

Enneapterygius flavocipitis Shen and Wu, 1994:8.

Paratype

USNM 329659 (1) [acc. no. 409252].

Helcogramma fuscopinna Holleman, 1982:115.

Paratypes

USNM 227738 (4) [acc. no. 275964].
USNM 227739 (1) [acc. no. 275964].
USNM 227740 (33) [acc. no. 321909].
USNM 227741 (33) [acc. no. 321909].
USNM 227742 (3).
USNM 227743 (3).
USNM 227744 (2) [acc. no. 333189].
USNM 227745 (9) [acc. no. 275964].
USNM 227746 (19) [acc. no. 321909].
USNM 227747 (91) [acc. no. 321909].

Crocodilichthys gracilis Allen and Robertson, 1991:79.

Holotype

USNM 316798, male, 51.5 mm SL, Los Islotes, Isla

Partida, Gulf of California, Mexico (approximately 25°02'N, 110°32'W), 10–12 m depth, rotenone [collected by] G. Allen and D.R. Robertson, 16 Jun 1990 [acc. no. 392230].

Paratype

USNM 316799 (1) [acc. no. 392230].

Enneapterygius gracilis Fricke, 1994:209.

Paratype

USNM 279864 (1) [acc. no. 337100].

Helcogramma habena Williams and McCormick, 1990:1026.

Holotype

USNM 300194, male, 34.7 mm SL, Philippines, Batanes Province, approx. 1/2 km southeast of Diojo Point, large encrusted boulders, vertical rock walls, and large shallow cave, Batan Id., 20°27'55"N, 121°57'12"E, 3–6 m, 2 May 1987, rotenone, G.D. Johnson and W.F. Smith-Vaniz [field no. GDJ 87-16] [acc. no. 374820].

Paratypes

USNM 222333 (3) [acc. no. 275964].

USNM 222347 (76) [80] [acc. no. 275964].

Remarks: Four specimens segregated in a vial with this lot were erroneously excluded from the total count.

USNM 293946 (10) [acc. no. 374820].

USNM 300193 (12) [14] [acc. no. 374820].

Remarks: Jar contains two exceptionally small specimens from which data were not recorded by Williams and McCormick (1990), and, hence, they were overlooked in their tally.

USNM 300195 (16) [acc. no. 374820].

USNM 300196 (21) [18], same [field] data as holotype [acc. no. 374820].

Remarks: This lot originally contained 23 specimens; one was designated holotype, and three were identified as not conspecific and removed before publication of Williams and McCormick (1990). The published number of specimens, 21, for this lot is erroneous.

Ceratobregma helenae Holleman, 1987:175.

Paratypes

USNM 220065 (6) [acc. no. 333928].

USNM 224336 (1) [acc. no. 339879].

USNM 280187 (1) [acc. no. 275964].

USNM 280188 (1) [acc. no. 275964].

USNM 280189 (3) [acc. no. 275964].

USNM 280190 (3) [acc. no. 275964].

USNM 280191 (2) [4, including one cleared and stained, acc. no. 333189].

Remarks: Holleman (1987:175) reported that only two specimens were present in this lot; we cannot explain the discrepancy.

Tripterygium [*Tripterygion*] *hemimelas* Kner and Steindachner, 1866:371.

Remarks: *Tripterygium* is a misspelling of *Tripterygion*.

[Holotype] [lost]

Museum...Godeffroy 2148b, 15''' [= 15 mm?], wahrscheinlich jungen Exemplares, Samoa-Inseln.

Remarks: Fricke (1994:221) described his futile search for the holotype.

Neotype

USNM 220068, 21.3 mm SL, male, Fagasa Bay, Tutuila Island, American Samoa, 0–3 m depth, R.C. Wass, 7 Oct 1975 [acc. no. 333928].

Remarks: Neotype was designated by Fricke (1994:221), who considered the correct genus to be *Enneapterygius*.

Enneapterygius hollemani Randall, 1995:27.

Paratype

USNM 334523 (1) [acc. no. 412307], same data as holotype.

Enneapterygius hsiojenae Shen and Wu, 1994:11.

Paratype

USNM 329660 (1) [acc. no. 409252].

Enneapterygius hudsoni Jordan and Seale, 1906:419.

Type [Holotype]

USNM 51798, length 1 in [= 25.4 mm], from Apia, Samoa, summer, 1902.

Acanthanectes hystrix Holleman and Buxton, 1993:328, 332.

Paratypes

USNM 326000 (2) [acc. no. 405668].

Gillias jordani Evermann and Marsh, 1899:357.

Type [Holotype]

USNM 49368, 1.5 in long [= 38.1 mm] [33.8 mm TL, 28.4 mm SL], Cardona Light-House Reef, at Ponce, Puerto Rico, 1 Feb 1899, *Fish Hawk*.

[Paratype]

[USNM 126096] (1) [formerly United States Fish Commission 840].

Enneapterygius kermadecensis Fricke, 1994:230.

Paratypes

USNM uncat. (5) [0], same [collecting] data as holotype.

Remarks: The holotype is cataloged as NMNZ P.28611. USNM never received the five paratypes indicated by Fricke.

Gracilopterygion kulbickii Fricke and Randall in Fricke, 1994:367.

Paratypes

USNM 220066 (18) [acc. no. 333928].

USNM 236396 (1) [acc. no. 346849].

USNM 283453 (19) [acc. no. 367323].

USNM 283456 (1) [acc. no. 367323].

USNM 283476 (1) [acc. no. 367323].

USNM 289015 (1) [acc. no. 367323].

USNM 310626 (3) [acc. no. 397403].

USNM 319883 (1) [acc. no. 397403].

USNM 323824 (6) [acc. no. 397403].

Forsterygion lapillum Hardy, 1989:504.

Paratypes

NMNZ P.18135 (28) [USNM 295870 (6)] [acc. no.

380483].

Remarks: Six specimens were received at USNM subsequent to publication of the description. We are unaware of the disposition of the other specimens.

Bellapiscis lesleyae Hardy, 1987a:263.

Paratypes

USNM 280259 (16) [acc. no. 372126].

Forsterygion malcolmi Hardy, 1987b:48.

Paratypes

[USNM 289219 (4)] [acc. no. 376565].

Remarks: These specimens were formerly cataloged as NMNZ P.19927, which bears identical collecting data to that of other paratypes of *F. malcolmi* bearing the catalog number NMNZ P.19853. The original collection appears to have been split into two lots, both of which were cataloged at NMNZ, and one of which was then deposited in the USNM collections.

Helcogramma maldivensis [*maldivense*] Fricke and Randall, 1992:9.

Paratype

USNM 316488 (1) [acc. no. 394927].

Remarks: *Helcogramma* is neuter; therefore, the specific epithet should be *maldivense*.

Obliquichthys maryannae Hardy, 1987b:53.

Paratypes

USNM 289220 (3) [acc. no. 376565].

Enneapterygius melanospilus Randall, 1995:29.

Paratype

USNM 334524 (1) [acc. no. 412307].

Enneapterygius mirabilis Fricke, 1994:251.

Paratype

USNM 263652 (1) [acc. no. 323952].

Axoclinus multicinctus Allen and Robertson, 1992:54.

Holotype

USNM 321176, female, 21.9 mm SL, Isla Socorro, Islas Revillagigedos (approximately 18°48'N, 111°02'W), 8 m, quinaldine [collected by] D.R. Robertson, 20–21 Feb 1991 [acc. no. 398860].

Paratypes

USNM 321177 (2), collected with holotype [acc. no. 398860].

Tripterygion nanus Schultz, 1960:288.

Holotype

USNM 142233, 16 mm SL, Marshall Islands, Enewetak Atoll, Rujoru Island, lagoon reef, 2 Jun 1946 [acc. no. 172586].

Paratypes

USNM (1) [0].

Remarks: Schultz (1960:289) listed one specimen with the following data: "Rongelap Atoll, Enybarbar Island, ocean reef, high tidal channels, 18 June, S-46-216, Schultz, one specimen, 15 mm," but he

failed to give a catalog number. No other paratypic lot is associated with these data, and, in the entire USNM collection, the only other lot of tripterygiid specimens that we found associated with these collecting data is USNM 142258, eight specimens, identified as *Enneapterygius minutus*, but which Schultz (1960:287) reported as *Tripterygion minutus*, with lengths of 13 to 20 mm. Given the small size, 15 mm SL, of the missing paratype, it is possible that it was initially misidentified as belonging to Schultz's new species and added to his manuscript list of paratypes but, before being cataloged, was reidentified as *E. minutus* and added to the group of specimens that were later cataloged as USNM 142258. In this case, Schultz would have neglected to delete reference to the specimen from his manuscript list of paratypes. It appears that Schultz deposited all of his paratypes of this species at USNM.

USNM 142234 (7), same collecting data as holotype [acc. no. 172586].

USNM 142235 (4) [acc. no. 172586].

USNM 142236 (2) [acc. no. 172586].

USNM 142237 (2) [acc. no. 172586].

USNM 142238 (2) [acc. no. 172586].

USNM 142239 (3) [acc. no. 172586].

USNM 142240 (1) [acc. no. 172586].

USNM 142241 (1) [acc. no. 172586].

USNM 142242 (4) [acc. no. 172586].

USNM 142243 (1) [acc. no. 172586].

USNM 142244 (4) [acc. no. 172586].

USNM 142245 (2) [acc. no. 175351].

USNM 142246 (1) [acc. no. 176603].

USNM 142247 (4) [acc. no. 176603].

USNM 142248 (1) [acc. no. 172586].

Enneapterygius niger Fricke, 1994:259.

Paratypes

USNM 323779 (14) [acc. no. 397403].

Axoclinus nigricaudus Allen and Robertson, 1991:79.

Holotype

USNM 316797, male, 33.8 mm SL, near Pichilingue, Baja California, Mexico (approximately 24°16'N, 110°20'W), 0–3 m depth, rotenone [collected by] G. Allen and D.R. Robertson, 13 Jun 1990 [acc. no. 392230].

Enneapterygius obscurus Clark, 1980:105.

Holotype

USNM 205818, female, 19.2 mm SL, Gulf of Elat (= 'Aqaba) [bay at El Himera] (VGS 69-24), 9.IX.1969, collected by V.G. Springer [et al.] [acc. no. 284009].

Paratypes

USNM 205819 (2), collected with the holotype [acc. no. 284009].

USNM 205820 (9) [acc. no. 284009].

Enneapterygius pallidus, Clark, 1980:107.

Holotype

USNM 212156, male, 20.8 mm SL, Gulf of Elat (= 'Aqaba) [bay at El Himera] (VGS 69-24), 9.IX.1969, collected by V.G. Springer [et al.] [acc. no. 284009].

Paratypes

USNM 205829 (1) [acc. no. 284009].

USNM 212246 (2) [acc. no. 284009].

Enneapterygius pardochir Jordan and Seale, 1906:417.

Type [Holotype]

USNM 51799, length 1.06 in [= 26.9 mm] [25.9 mm TL, 22.4 mm SL], from Apia, Samoa, summer of 1902 [acc. no. 43712].

Remarks: The original description indicates the type locality as Apia, which is on the island of Upolu. The description also indicates that there were 14 paratypes (not designated as such) that are mentioned as originating from either Apia or Pago Pago, which is on the island of Tutuila, but it does not indicate how many cotypes came from each locality. The accession records indicate that USNM 51799, the published catalog number for the type (= holotype), was sent to USNM from Stanford University on 22 Dec 1904. The USNM catalog indicates that USNM 51799 contained seven specimens when the lot was cataloged on 8 Jan 1905, and that the largest specimen was the type, but it is not recorded how it was known that the largest specimen was the type (possibly by the process of elimination as all other specimens in the lot were much too small to be the type). The locality entered in the catalog for USNM 51799 is Pago Pago, rather than Apia. There are two metal tags in the jar with the type. One is the USNM catalog number; the other reads 02379, and we were unable to determine its significance. The putative holotype, a male, now in poor condition, agrees reasonably well with the published illustration (Jordan and Seale, 1906, fig. 98) of the holotype.

In August 1942, the U.S. Fish and Wildlife Service transferred a large collection of fishes in approximately 1800 glass-top jars to USNM. This collection was the USFWS' (a more recent agency that incorporated the former U.S. Bureau of Fisheries) reserve collection "built up over many years" (information from accession file, no. 163614). Among these was a lot of four specimens associated with a paper neck label with the USBF number 1275 and the wording "*Enneapterygius pardochir*, Pago Pago, Samoa 1902." These specimens were cataloged on 19 Jan 1943 as USNM 126235; the neck label is still in the jar, as is another paper, now in poor condition, that reads: "*Enneapterygius pardochir* Pago Pago, Samoa Co-type [sic], U.S.F.C. 06315." We do not know the

significance of the latter number. At some date after the cataloging, four of the putatively paratypic specimens in USNM 51799 were removed and added to the four specimens in USNM 126235. According to information at MCZ (Hartel, in litt., 3 May 1994), the two other putatively paratypic specimens in USNM 51799 were exchanged during 1948 to MCZ, where they are cataloged as MCZ 35910 (thus accounting for all seven of the specimens originally part of USNM 51799).

Böhlke (1953:95) reported that there were six paratypes of *E. pardochir* from Apia in SU (now CAS-SU) 8696, and the number of specimens was confirmed by D. Catania (in litt., 17 Jun 1994). CAS-SU 8696 contains the only specimens that are reported to be part of the type series of *E. pardochir* and that are labelled as collected at Apia. There are, thus, 16 specimens, rather than 14, that are indicated as paratypes of *E. pardochir*.

We are unable to explain the discrepancy in the locality accorded to the putative holotype, USNM 51799, nor that indicated by the presence of the additional two paratypes.

[Paratypes]

[USNM 126235] [8] [acc. no. 43712]. See above "Remarks."

Forsterygion profundum Fricke and Roberts in Fricke, 1994: 336.

Paratype

USNM 319682 (1) [acc. no. 402123].

Enneapterygius punctulatus Herre, 1935:432.

Paratype

[USNM 112209] [1].

Remarks: Herre (1935:433) indicated that his description was based on "the type and five paratypes" from Wala Island, New Hebrides, but he gave only the catalog number for the holotype, FMNH 17388. Herre (1935:433) followed his previous statement with the remark, "Three specimens... were taken at Hog Harbor, Espiritu Santo Island, and one... at Malo Island..." The latter four specimens must be considered to be other material and, as such, are not paratypes. The USNM paratype was originally cataloged as [part of?] FMNH 17390, and an FMNH label indicates it was collected at Wala Island, on 29 Mar 1929, by the Crane Pacific Expedition. It was cataloged at USNM in 1950, and it still has the FMNH catalog number tied to it. Böhlke (1953:95-96) reported three more putative Wala Island paratypes cataloged as SU 24437 (now CAS-SU), thus, accounting for four of the five Wala Island paratypes (he also reported, erroneously, that three other specimens, in two lots, CAS-SU 25117 and 25118, from Malo Island and Hog Harbor, Espiritu Santo Island, New Hebrides, were paratypes). Ibarra

and Stewart (1987:34) indicate the presence of the holotype and two paratypes from two different, unspecified localities (no catalog numbers given) at FMNH. One of the FMNH paratypes is presumably from Wala Island, thus accounting for all five paratypes.

Enneapterygius pyramis Fricke, 1994:266.

Holotype

USNM 283069, male, 23.7 mm SL, Fiji, Rotuma, NE corner, 0–12 m depth, V.G. Springer et al., 12 May 1986 [acc. no. 367323].

Paratypes

USNM 283107 (9) [acc. no. 367323].
USNM 283111 (3) [acc. no. 367323].
USNM 283442 (13) [12] [acc. no. 367323].

Remarks: We are unable to explain the discrepancy between the number of specimens reported and those present.

USNM 329661 (1) [acc. no. 409252].
USNM uncat. [339019] (6) [acc. no. 367323], same [collection] data as holotype.

Enneanectes reticulatus Allen and Robertson, 1991:80.

Holotype

USNM 316796, male, 41.6 mm SL, near Pichilingue, Baja California, Mexico (approximately 24°16'N, 110°20'W), 0–3 m depth, rotenone, G. Allen and D.R. Robertson, 13 Jun 1990 [acc. no. 392230].

Helcogramma rhinoceros Hansen, 1986:344.

Holotype

USNM 222370, male, 27.0 mm SL, Philippines, Palawan Province [Cuyo Islands], N.W. [side of] Putuc Island, 10°55'[05"]N, 121°02'[03"]E, collected by V.G. Springer [et al.], 22 May 1978 [field no. SP-78; acc. no. 333189].

Paratypes

USNM 221917 (6, including one cleared and stained), same data as holotype [acc. no. 33189].
USNM 221920 (2) [acc. no. 333189].
USNM 221921 (6), same [field] data as holotype [acc. no. 333189].

Enneapterygius rubicauda Shen and Wu, 1994:17.

Paratype

USNM 329661 (1) [acc. no. 409252].

Axoclinus rubinoffi Allen and Robertson, 1992:53.

Paratype

USNM 321175 (1), collected with holotype [acc. no. 398860].

Acanthanectes rufus Holleman and Buxton, 1993:328.

Paratypes

USNM 326001 (2), same collection as holotype [acc. no. 405668].

Grahamina signata Fricke and Roberts, 1993:16.

Paratypes

USNM 326614 (5), same data as holotype [acc. no. 406913].

Taboguilla signata Allen and Robertson, 1991:81.

Holotype

USNM 316800, male, 51.4 mm SL, Isla Taboguilla, Gulf of Panama (approximately 8°49'N, 79°31'W), 3–10 m depth, rotenone [collected by] G. Allen and D.R. Robertson, 27 Mar 1990 [acc. no. 392230].

Paratypes

USNM 316801 (4) [acc. no. 392230].

Helcogramma springeri Hansen, 1986:345.

Holotype

USNM 229368, male, 31.3 mm SL, from [Indonesia], Moluccas, Ambon, off Tandjung Suli, shallow coral reef, less than 2 m, collected by V.G. Springer [and M.F. Gomon], 11 Jan 1973 [field no. VGS 73-8; acc. no. 301981].

Paratypes

USNM 150550 (1) [acc. no. 180183].
USNM 164600 (1) [acc. no. 144662].
USNM 210277 (1) [3] [301981].

Remarks: The original description indicates the presence of only one specimen in this lot. We are unable to explain the discrepancy.

USNM 222349 (5) [acc. no. 334183].

USNM 222369 (1) [acc. no. 334183].

USNM 222372 (1) [acc. no. 323952].

USNM 228903 (22) [acc. no. 301981].

USNM 228932 (2) [acc. no. 337100].

USNM 228935 (5).

USNM 228940 (1), same [field] data as holotype [acc. no. 301981].

USNM 263387 (1) [acc. no. 334183].

USNM 263388 (1).

USNM 263389 (2) [1] [acc. no. 333189].

Remarks: The original paper label included with this lot before cataloging indicates the presence of two specimens. Hansen (1986:347) also reported that it contained two specimens. Correspondence among V.G. Springer, P. Hansen, and J.T. Williams between 13 Dec 1983 and 15 Mar 1984 indicates that a specimen had become separated from Hansen's paratype material of *H. springeri*, but that Williams was unable to determine which paratype lot it belonged to. Although USNM 263389 contained only one specimen at the time of Hansen's publication, she chose to indicate that the lot still had two specimens. The separated specimen was recataloged as a paratype of *H. springeri*, USNM 285799, 31 Mar 1987, with a note referencing the correspondence mentioned above. The specimen in USNM 285799 is a male and is undoubtedly the smaller of the two males Hansen mentioned in her listing of USNM 263389.

[USNM 285799] [1]. See "Remarks" above under USNM 263389.

Norfolkia springeri Clark, 1980:95.

Holotype

USNM 205793, female, 36.8 mm SL, Gulf of Elat (= 'Aqaba) [NW coast just N of Ras Burqa, Egypt], [collected by] V.G. Springer [et al.], 23 Jul 1969 [field no. VGS 69-7; acc. no. 284009].

Paratypes

USNM 205794 (2) [collected with the holotype; acc. no. 284009].

USNM 205795 (1), cleared and stained [acc. no. 284009].

Helcogramma steinitzi Clark, 1980:88.

Holotype

USNM 205787 male, 36.0 mm SL, Gulf of Elat (= 'Aqaba) [bay between Marsa Mokrakh and El Himeira, NW coast Gulf of Aqaba], collected by V.G. Springer [et al.], 15 Jul 1969, field no. VGS 69-1 [acc. no. 284009].

Paratypes

USNM 205788 (2) [collected with the holotype; acc. no. 284009].

USNM 205789 (5) [3] [acc. no. 284009].

Remarks: We are unable to account for the discrepancy in number of specimens.

USNM 205790 (4) [acc. no. 284009].

USNM 205791 (12 [including four cleared and stained]) [acc. no. 384009].

USNM 205792 (6) [acc. no. 284009].

USNM 205824 (7) [acc. no. 284009].

USNM 205826 (1) [acc. no. 284009].

USNM 205828 (1) [acc. no. 284009].

USNM 205830 (1) [acc. no. 284009].

USNM 205832 (1) [acc. no. 284009].

USNM 205833 (17) [acc. no. 284009].

Karalepis stewarti Hardy, 1984:177.

Paratypes

USNM 265098 (2) [acc. no. 357234].

Helcogramma striata [*striatum*] Hansen, 1986:349.

Holotype

USNM 221667, male, 42.5 mm SL, from Toga Pt. rocks, Myiyakejima, Japan (34°07'N, 139°30'E), 1–3 m, collected by P. Hadley [and L. Cuyvers], 10 Jul 1977 [field no. 770710-1].

Remarks: *Helcogramma* is neuter; therefore, the specific epithet should be *striatum*.

Paratypes

USNM 221666 (1) [acc. no. 336294].

USNM 221668 (1), same [field] data as holotype.

USNM 221669 (9) [acc. no. 332315].

USNM 221916 (11) [and ? USNM 269807] [13?], 23.3–35.0 mm SL; [including] three [4?] cleared and stained, 23.0–33.0 [about 23–40?] mm SL.

Remarks: Hansen (1986:350), for USNM 221916, reported: "5 males (23.3–29.4), six females (25.0–35.0)...3 specimens (23.0–33.0) removed for clearing

and staining," which can be interpreted to indicate a total of 14 specimens. The specimens in alcohol in USNM 221916 presently number nine (four males, 23.1–28.8 mm SL; five females, 29.1–34.6 mm SL), although the original label indicates 11, which is crossed out and replaced with a 9. There are two notes in the jar: one indicates one male was removed for clearing and staining, no date indicated; the other indicates that three specimens (sex not indicated) were removed for clearing and staining with a handwritten date "07/18/79." The labels, thus, indicate a total of 13 specimens initially present in the lot.

There are only two lots of cleared and stained specimens of *H. striatum* in the collection: one lot of three females, about 31–40 mm SL, containing two catalog numbers, USNM 221916 and USNM 222321, and a note in the same handwriting as that of the previous date indicating the specimens were cleared and stained "07/18/79." An annotation by Hansen in VGS' record book of cleared and stained specimens indicates that clearing and staining of three specimens of a striped *Helcogramma* from Taiwan [*striatum* is the only striped species in the genus] was begun on "7/18/79." These three specimens are indicated in the record book as USNM 222321, a lot identified in the catalog as *Helcogramma striatum*, but indicated as *fuscopinna* in Hansen's writing on the outside jar label. A note in the catalog indicates that two specimens were removed for clearing and staining from USNM 222321, but other than the three specimens of *striatum* bearing the two different catalog numbers, there are no other cleared and stained specimens bearing a USNM 222321 catalog number, which is not cited anywhere in Hansen (1986). USNM 222321 comprises 55 specimens (collections of *striatum* are never so numerous), none of which is identifiable as *striatum*.

The other lot of cleared and stained *H. striatum* is cataloged as USNM 269807. The entire lot consists of a single cleared and stained male, about 37 mm SL. Catalog data indicates only Taiwan and an erroneous accession number, 275967 (should be 275964 for Springer's Taiwan collection). This erroneous accession number is also indicated in VGS' record book of cleared and stained specimens for a single specimen of "striped *Helcogramma*" from Taiwan, and an indication that the clearing and staining process was begun on 07/03/79.

We believe that USNM 221916 originally contained 13 specimens, rather than 14 as indicated by Hansen, and that the two lots comprising four cleared and stained specimens of *H. striatum*, discussed above, were originally part of USNM 221916. We are unable to explain how the additional catalog numbers (222321, 269807) came to be assigned or included with the two lots of cleared and stained specimens.

USNM 263386 (7) [8] [acc. no. 289275].

Remarks: The original description indicates that this lot contains only seven specimens. We are unable to explain the discrepancy.

Enneapterygius tusitalae Jordan and Seale, 1906:416.

Remarks: Jordan and Seale (1906:417) declared that the specific epithet was "named for the 'tusitala' (story-teller) of Samoa, Robert Louis Stevenson." Tusitala is a Samoan word, and according to Jordan (1922, 2:109), who capitalized it, was an honorary name conferred on Stevenson during a *kava* ceremony. The correct patronymic suffix is "e" (as given) only if the authors considered the name to have been Latinized (*International Code of Zoological Nomenclature*, Art. 31(a)(i) Examples), which seems doubtful to us. Otherwise, the correct suffix should be "i," hence *tusitalai*. We arbitrarily accept the original orthography.

Type [Holotype]

USNM 51800, length 0.85 in [= 21.6 mm] [22.8 mm TL; 19.9 mm SL], from Pago Pago, summer, 1902 [acc. no. 43712].

[Paratypes]

[USNM 164583 (4), originally part of USNM 51800, acc. no. 43712].

Remarks: Jordan and Seale (1905:416) based their description on "about 10 specimens from the reef at Apia." One other specimen, originally part of USNM 51800, was exchanged to MCZ in 1948 (K. Hartel, in litt., 3 May 1994).

Enneapterygius tutuilae Jordan and Seale, 1905:418.

Type [Holotype]

USNM 51801, length 0.75 in [19.0 mm] [14.0 mm SL; caudal fin badly damaged], from the reef at Pago Pago, summer, 1902 [acc. no. 43712].

[Paratype]

[USNM 164584] (1) [collected with holotype, acc. no. 43712].

Remarks: Jordan and Seale reported that they had a total of four specimens. Böhlke (1953:96) reported that two paratypes were cataloged as SU 8695 (CAS-SU), thus accounting for the complete type series.

Helcogramma vulcana [*vulcanum*] Randall and Clark, 1993:27.

Paratypes

USNM 293374 (8) same collecting data as holotype [acc. no. 379161].

Remarks: Randall and Clark (1993:31) indicate that the specific epithet is based on Vulcanus (masculine), the god of fire. Although they do not state so, it appears that they believed *Helcogramma* was feminine and, thus, changed the ending of the stem vulcan-to

vulcana to be in agreement with the genus. *Helcogramma* is neuter, however, and the correct ending should thus be -um.

Ruanoho whero Hardy, 1986:161.

Paratypes

USNM 272606 (5) [acc. no. 363319].

Ucla xenogrammus Holleman, 1993:5.

Paratypes

USNM 209844 (2) [acc. no. 301981].
 USNM 209984 (2) [acc. no. 301981].
 USNM 210016 (1) [acc. no. 301981].
 USNM 210069 (5) [acc. no. 301981].
 USNM 210277 (3) [acc. no. 301981].
 USNM 220062 (2) [acc. no. 333928].
 USNM 221941 (2) [acc. no. 308017].
 USNM 223173 (6) [acc. no. 339879].
 USNM 223209 (2) [acc. no. 339879].
 USNM 230395 (1) [acc. no. 341645].
 USNM 236394 (2) [acc. no. 346849].
 USNM 238810 (3) [acc. no. 346849].
 USNM 238811 (2) [acc. no. 346849].
 USNM 238812 (11) [acc. no. 346849].
 USNM 238813 (2) [acc. no. 346849].
 USNM 228814 [238814] (2) [acc. no. 346849].
 USNM 238815 (3) [acc. no. 346849].
 USNM 238816 (3) [acc. no. 346849].
 USNM 238817 (4) [acc. no. 346849].
 USNM 238818 (1) [acc. no. 346849].
 USNM 238819 (5) [acc. no. 346849].
 USNM 238820 (1) [acc. no. 346849].
 USNM 262028 (2) [acc. no. 351121].
 USNM 262030 (1) [acc. no. 351121].
 USNM 263393 (1) [acc. no. 323952].
 USNM 263639 (4) [acc. no. 334183].
 USNM 263640 (4) [acc. no. 267924].
 USNM 263641 (1) [acc. no. 333189].
 USNM 263642 (1) [acc. no. 308017].
 USNM 263643 (2) [acc. no. 333189].
 USNM 263644 (2) [acc. no. 333189].
 USNM 263645 (3) [acc. no. 333189].
 USNM 263646 (1) [acc. no. 333189].
 USNM 263647 (4) [acc. no. 333189].
 USNM 263648 (2) [acc. no. 308017].
 USNM 263649 (4) [acc. no. 334183].
 USNM 263650 (5) [acc. no. 333189].
 USNM 263651 (1) [acc. no. 323952].
 USNM 263652 (1) [acc. no. 323952].

Remarks: We were unable to locate this lot during a search of the collection in May, 1994.

USNM 263653 (1) [acc. no. 318061].
 USNM 263655 (1) [acc. no. 323952].
 USNM 263657 (3) [acc. no. 323952].
 USNM 267930 (2) [acc. no. 333189].
 USNM 267932 (1) [acc. no. 333189].

USNM 267933 (5) [acc. no. 334183].
USNM 267934 (6) [acc. no. 334183].
USNM 267936 (7) [acc. no. 334183].
USNM 267937 (1) [acc. no. 333189].
USNM 267938 (1) [acc. no. 308017].
USNM 267940 (1) [acc. no. 334183].
USNM 267941 (1) [acc. no. 334183].
USNM 267942 (1) [acc. no. 301540].

USNM 267943 (1) [acc. no. 323952].
USNM 267944 (1) [acc. no. 323952].
USNM 267945 (2) [acc. no. 323952].
USNM 267946 (1) [acc. no. 328354].
USNM 267947 (1) [acc. no. 323952].

Notoclinops yaldwyni Hardy, 1987c:170.

Paratype

USNM 283758 (1) [acc. no. 373169].

Literature Cited

- Allen, G.R., and D.R. Robertson
 1991. Description of Two New Genera and Four New Species of Triplefins (Pisces: Tripterygiidae) from the Tropical Eastern Pacific. *Revue Française D'Aquariologie*, 18(3):79-82.
1992. Three New Species of Triplefins (Pisces: Tripterygiidae) from Malpelo and Socorro Islands, in the Tropical Eastern Pacific. *Revue Française D'Aquariologie*, 19(1 and 2):53-56.
- Bean, T.H.
 1885. On *Stathmonotus*, a New Genus of Fishes Related to *Muraenoides*, from Florida. *Proceedings of the United States National Museum*, 8(508):191-192.
1912. Description of New Fishes of Bermuda. *Proceedings of the Biological Society of Washington*, 25:121-126.
- Beebe, W., and J. Tee-Van
 1928. The Fishes of Port-au-Prince Bay, Haiti, with a Summary of the Known Species of Marine Fish of the Island of Haiti and Santo Domingo. *Zoologica*, 10(1):1-279.
1934. A New Genus and Species of Scaleless Blenny, *Somersia furcata*, from Bermuda. *American Museum Novitates*, 730: 3 pages.
- Bennett, B.A.
 1983. *Clinus spatulatus*, a New Species of Clinid Fish (Perciformes: Blennioidei) from South Africa, with a Modified Definition of the Genus *Clinus*. *J.L.B. Smith Institute of Ichthyology, Special Publication*, 29: 9 pages.
- Böhlke, J.E.
 1953. A Catalogue of the Type Specimens of Recent Fishes in The Natural History Museum of Stanford University. *Stanford Ichthyological Bulletin*, 5(1):1-168.
1957. A Review of the Blenny Genus *Chaenopsis*, and the Description of a Related New Genus from the Bahamas. *Proceedings of the Academy of Natural Sciences Philadelphia*, 109:81-103.
1966. A New Name for the Dactyloscopid Fish, *Cokeridia crossota* Meek and Hildebrand, 1928. *Copeia*, 1966(4):879-880.
1968. The Descriptions of Three New Sand Stargazers (Dactyloscopidae) from the Tropical West Atlantic. *Notulae Naturae*, 414: 16 pages.
- Böhlke, J.E., and V.G. Springer
 1975. A New Genus and Species of Fish (*Nemaclinus atelestos*) from the Western Atlantic (Perciformes: Clinidae). *Proceedings of the Academy of Natural Sciences of Philadelphia*, 127(7):57-61.
- Brock, V.E.
 1940. Three New Blennoid Fishes from the West Coast of Mexico. *Stanford Ichthyological Bulletin*, 2(1):29-35.
- Christensen, M.S.
 1978. *Pavoclinus myae*, a New Species of Clinid Fish (Perciformes: Blennioidei) from South Africa, with a Note on the Identity of *P. graminis* and *P. laurentii*, and a Key to the Known Species of *Pavoclinus*. *J.L.B. Smith Institute of Ichthyology, Special Publication*, 18: 16 pages.
- Clark, E.
 1980 ("1979"). Red Sea Fishes of the Family Tripterygiidae with Descriptions of Eight New Species. *Israel Journal of Zoology*, 28(3-4):65-113. [Date on title page is 1979; actually published August-September, 1980.]
- Cope, E.D.
 1877. Synopsis of the Cold Blooded Vertebrata, Procured by Prof. James Orton during His Exploration of Peru in 1876-77; Pisces. *Proceedings of the American Philosophical Society*, 17:33-49.
- Dawson, C.E.
 1969. A New Eastern Pacific Sand Stargazer, *Dactyloscopus byersi* (Pisces: Dactyloscopidae). *Copeia*, 1969(1):44-51.
1975. Studies on Eastern Pacific Sand Stargazers (Pisces: Dactyloscopidae), 2: Genus *Dactyloscopus*, with Descriptions of New Species and Subspecies. *Natural History Museum of Los Angeles County, Science Bulletin*, 22:1-61.
1976. Studies on Eastern Pacific Sand Stargazers, 3: *Dactylagnus* and *Myxodagnus*, with Description of a New Species and Subspecies. *Copeia*, 1976(1):13-43.
1977. Studies on Eastern Pacific Sand Stargazers (Pisces: Dactyloscopidae), 4: *Gillellus*, *Sindoscopus* New Genus, and *Heteristius* with Description of New Species. *Proceedings of the California Academy of Sciences*, series 4, 41(2):125-160.
1982. Atlantic Sand Stargazers (Pisces: Dactyloscopidae), with Description of One New Genus and Seven New Species. *Bulletin of Marine Science*, 32(1):14-85.
- Eschmeyer, W.N.
 1990. *Catalog of the Genera of Recent Fishes*. 697 pages. San Francisco: California Academy of Sciences.
- Evermann, B.W., and M.C. Marsh
 1899. Descriptions of New Genera and Species of Fishes From Puerto Rico. *U.S. Commission of Fish and Fisheries, Report of the Commissioner of Fish and Fisheries*, 25:351-362.
1900. Fishes of Porto Rico. *United States Fish Commission Bulletin for 1900*, 20(1):49-350, plates 1-49.
- Evermann, B.W., and L. Radcliffe
 1917. The Fishes of the West Coast of Peru and the Titicaca Basin. *United States National Museum Bulletin*, 95: xi + 166 pages, 14 plates.
- Fowler, H.W., and B.A. Bean
 1923. Descriptions of Eighteen New Species of Fishes from the Wilkes Exploring Expedition, Preserved in the United States National Museum. *Proceedings of the United States National Museum*, 63(2488):1-27.
- Fraser, T.H.
 1972. A New Species of the Klipfish Genus *Springeratus* (Clinidae) from the Indian Ocean. *J.L.B. Smith Institute of Ichthyology, Special Publication*, 9: 14 pages.
- Fricke, R.
 1994. Tripterygiid Fishes of Australia, New Zealand and the Southwest Pacific Ocean, with Descriptions of 2 New Genera and 16 New Species (Teleostei). In *Theses Zoologicae*, 24: iv + 585 pages. Königstein: Koeltz Scientific Books.
- Fricke, R., and J.E. Randall
 1992. Tripterygiid Fishes of the Maldives Islands, with Descriptions of Two New Species (Teleostei: Blennioidei). *Stuttgarter Beiträge zur Naturkunde*, series A, 484:1-13.
- Fricke, R., and C.D. Roberts
 1993. *Grahamina*, a New Genus for Robust-bodied Triplefins (Teleostei: Tripterygiidae) from New Zealand and Australia, with Description of a New Species. *Stuttgarter Beiträge zur Naturkunde*, series A, 504:1-21.
- George, G., and V.G. Springer
 1980. Revision of the Clinid Fish Tribe Ophiclinini, Including Five New Species, and Definition of the Family Clinidae. *Smithsonian*

Contributions to Zoology, 307: iii + 31 pages.

- Gilbert, C.H.
 1890. Scientific Results of Explorations by the U.S. Fish Commission Steamer *Albatross*, No. XII: A Preliminary Report on the Fishes Collected by the Steamer *Albatross* on the Pacific Coast of North America during the Year 1889, with Descriptions of Twelve New Genera and Ninety-Two New Species. *Proceedings of the United States National Museum*, 13:49–126.
 1892. Scientific Results of Explorations by the U.S. Fish Commission Steamer *Albatross*, No. XXII: Descriptions of Thirty-four New Species of Fishes Collected in 1888 and 1889, Principally among the Santa Barbara Islands and in the Gulf of California. *Proceedings of the United States National Museum*, 14:539–566.
 1897. Descriptions of Twenty-Two New Species of Fishes Collected by the Steamer *Albatross*, of the United States Fish Commission. *Proceedings of the United States National Museum*, 19:437–457, plates 49–55.
- Gilbert, C.R.
 1965. *Starksia y-lineata*, a New Clinid Fish from Grand Cayman Island, British West Indies. *Notulae Naturae*, 379: 6 pages.
 1971. Two New Atlantic Clinid Fishes of the Genus *Starksia*. *Quarterly Journal of the Florida Academy of Sciences*, 33(3), 1970:193–206.
- Gill, T.N.
 1859. On *Dactyloscopus* and *Leptoscopus*, Two New Genera of the Family of Uranoscopidae. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 1859(11):132–133.
 1860. Monograph of the Genus *Labrosomus* Sw. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 1860(12):102–108.
 1861. Monograph of the Tridigitate Uranoscopoids. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 1861(13):263–271.
 1863. On the Limits and Affinity of the Family of Leptoscopoids. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 1862(14):501–506.
 1866 ("1865"). On a New Family Type of Fishes Related to the Blennioids. *Annals of the Lyceum of Natural History of New York*, 8:141–144, plate 3: figure 3. [Date on title page is 1865; actually published in 1866].
- Ginsburg, I.
 1942. Seven New American Fishes. *Journal of the Washington Academy of Sciences*, 32(12):364–370.
- Girard, C.
 1854. Observations upon a Collection of Fishes Made on the Pacific Coast of the United States, by Lieut. W.P. Trowbridge, U.S.A., for the Museum of the Smithsonian Institution. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 7:142–156.
 1858 ("1859"). Fishes. In General Report upon the Zoology of the Several...Routes, Part 4. In *Reports of Explorations and Surveys to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean*, 10: xiv + 2 + 2 + 400 pages, 21 plates. Washington, D.C.: 33rd Congr., 2nd Sess. [Date on title page is 1859; actually published in 1858.] [Also published as a separate in 1858.]
 1859. Ichthyological Notices. *Proceedings of the Academy of Natural Sciences of Philadelphia*, 1859:56–68.
- Greenfield, D.W.
 1979. A Review of the Western Atlantic *Starksia ocellata*-Complex (Pisces: Clinidae) with the Description of Two New Species and Proposal of Superspecies Status. *Fieldiana (Zoology)*, 73(2):9–48.
- Hansen, P.E.H.
 1986. Revision of the Tripterygiid Fish Genus *Helcogramma*, Including Descriptions of Four New Species. *Bulletin of Marine Science*, 38(2):313–354.
- Hardy, G.S.
 1984. A New Genus and Species of Triplefin (Pisces: Family Tripterygiidae) from New Zealand. *National Museum of New Zealand Records*, 2(16):175–180.
1986. Redescription of *Gilloblennius* Whitley and Phillipps, 1939 (Pisces: Tripterygiidae), and Description of a New Genus and Two New Species from New Zealand. *Journal of the Royal Society of New Zealand*, 16(2):145–168.
- 1987a. Revision of Some Triplefins (Pisces: Tripterygiidae) from New Zealand and Australia, with Descriptions of Two New Genera and Two New Species. *Journal of the Royal Society of New Zealand*, 17(3):253–274.
 1987b. Descriptions of a New Genus and Two New Species of Tripterygiid Fishes from New Zealand. *National Museum of New Zealand Records*, 3(5):47–58.
 1987c. Revisions of *Notoclinops* Whitley, 1930 (Pisces: Tripterygiidae), and Description of a New Species from New Zealand. *Journal of the Royal Society of New Zealand*, 17(2):165–176.
 1989. The Genus *Forsterygion* Whitley & Phillipps, 1939 (Pisces: Tripterygiidae) in New Zealand and Australia, with Descriptions of Two New Species. *Journal of Natural History*, 23(3):491–512.
- Hastings, P.A.
 1992a. Phylogenetic Relationships of *Tanyblembaria alleni*, a New Genus and Species of Chaenopsid (Pisces: Blennioidei) from the Gulf of Panama. *Bulletin of Marine Science*, 51(2):147–160.
 1992b. *Ekeblembaria lira*, a New Blennioid Fish from Ecuador, with Comments on Sexual Dimorphism and Relationships in *Ekeblembaria* (Teleostei: Chaenopsidae). *Copeia*, 1992(3):769–776.
- Hastings, P.A., and R.L. Shipp
 1981. A New Species of Pikeblenny (Pisces: Chaenopsidae: *Chaenopsis*) from the Western Atlantic. *Proceedings of the Biological Society of Washington*, 1980, 93(4):875–886.
- Hastings, P.A., and V.G. Springer
 1994. Review of *Stathmonotus*, with Redefinition and Phylogenetic Analysis of the Chaenopsidae (Teleostei: Blennioidei). *Smithsonian Contributions to Zoology*, 558: 48 pages.
- Herre, A.W.
 1935. New Fishes Obtained by the Crane Pacific Expedition. *Field Museum of Natural History Publication 335, Zoological Series*, 18(12):383–438.
 1944. Notes on Fishes in the Zoological Museum of Stanford University. XVII: New Fishes from Johore and India. *Proceedings of the Biological Society of Washington*, 57(11):45–51.
- Hildebrand, S.F.
 1946. A Descriptive Catalog of the Shore Fishes of Peru. *United States National Museum, Bulletin*, 189: xi + 530 pages.
- Holleman, W.
 1982. Three New Species and a New Genus of Tripterygiid Fishes (Blennioidei) from the Indo-West Pacific Ocean. *Annals of the Cape Provincial Museums, Natural History*, 14(4):109–137.
 1987. Description of a New Genus and Species of Tripterygiid Fish (Perciformes: Blennioidei) from the Indo-Pacific, and the Reallocation of *Vauclusella acanthops* Whitley, 1965. *Cybium*, 11(2):173–181.
 1993. *Ucla xenogrammus*, a New Genus and Species of Indo-Pacific Fishes (Perciformes: Tripterygiidae). *J.L.B. Smith Institute of Ichthyology, Special Publication*, 55:1–10.
- Holleman, W., and C.D. Buxton
 1993. *Acanthanectes*, a New Genus of Triplefin with Two New Species from the Southern Coast of South Africa (Blennioidei: Tripterygiidae). *Cybium*, 17(4):327–342.
- Hubbs, C.
 1952. A Contribution to the Classification of the Blennioid Fishes of the Family Clinidae, with a Partial Revision of the Eastern Pacific Forms. *Stanford Ichthyological Bulletin*, 4(2):41–165.
 1953a. Revision of the Eastern Pacific Fishes of the Clinid Genus

- Labrisomus*. *Zoologica, Scientific Contributions of the New York Zoological Society*, 38(3):113-136.
- 1953b. Revision and Systematic Position of the Blennioid Fishes of the Genus *Neoclinus*. *Copeia*, 1953(1):11-23.
1954. Additional Records of Clinid Fishes, with the Description of a New Species of *Cryptotrema* from the Gulf of California. *Copeia*, 1954(1):17-19.
- Hubbs, C.L.
1927 ("1926"). Notes on the Blennioid Fishes of Western North America. *Papers of the Michigan Academy of Science, Arts and Letters*, 7:351-394. [Date on title page is 1926; actually published in 1927.]
- Hubbs, C.L., L.P. Schultz, V.G. Springer, and J.E. Randall
1963. Comments on the Proposed Rejection of the Type Designations of Jordan and Evermann, 1896-1900 and 1896, Z.N.(S.) 1279. *Bulletin of Zoological Nomenclature*, 20(4):257-259.
- Ibarra, M., and D.J. Stewart
1987. Catalogue of Type Specimens of Recent Fishes in Field Museum of Natural History. *Fieldiana (Zoology)*, new series, 35: 112 pages.
- Jenkins, O.P.
1903. Report on Collections of Fishes Made in the Hawaiian Islands, with Descriptions of New Species. *Bulletin of the United States Fish Commission*, 1902, 22:417-511, plates 1-4.
- Jenkins, O.P., and B.W. Evermann
1889 ("1888"). Descriptions of Eighteen New Species of Fishes from the Gulf of California. *Proceedings of the United States National Museum*, 11:137-158. [Date on title page is 1888; actually published in 1889.]
- Johnson, G.D., and E.B. Brothers
1989. *Acanthemblemaria paula*, a New Diminutive Chaenopsid (Pisces: Blennioidei) from Belize, with Comments on Life History. *Proceedings of the Biological Society of Washington*, 102(4):1018-1030.
- Johnson, R.K., and D.W. Greenfield
1976. A New Chaenopsid Fish, *Emblemaria hyltoni*, from Isla Roatán, Honduras. *Fieldiana (Zoology)*, 70(2):13-28.
- Jordan, D.S.
1896. Notes on Fishes, Little Known or New to Science. *Proceedings of the California Academy of Sciences*, series 2, 6:201-244, plates 20-43.
1904. Notes on Fishes Collected in the Tortugas Archipelago. *Bulletin of the United States Fish Commission*, 1902, 22:539-544, plates 1, 2.
1922. *The Days of a Man*. Volume 1, i-xxvii, 1-710, plates; volume 2, i-xxvii, 1-906, plates. New York: Century Book Co.
- Jordan, D.S., and B.W. Evermann
1896. A Check-list of the Fishes and Fish-Like Vertebrates of North and Middle America. *United States Fish Commission, Report* 21(1895):207-584.
1898. The Fishes of North and Middle America: A Descriptive Catalogue of the Species of Fish-like Vertebrates Found in the Waters of North America, North of the Isthmus of Panama. *Bulletin of the United States National Museum*, 47(3):i-xxiv, 2183a-3136.
1900. The Fishes of North and Middle America: A Descriptive Catalogue of the Species of Fish-Like Vertebrates Found in the Waters of North America, North of the Isthmus of Panama. *Bulletin of the United States National Museum*, 47(4):i-ci, 3137-3313, 392 plates.
1905. The Aquatic Resources of the Hawaiian Islands, Part I: The Shore Fishes. *Bulletin of the United States Fish Commission*, 1903, 23(1): xxvii + 574 pages, 73 color plates, 65 black and white plates.
- Jordan, D.S., and C.H. Gilbert
1880. Notes on a Collection of Fishes from San Diego, California. *Proceedings of the United States National Museum*, 3:23-34.
1882a. Descriptions of Thirty-three New Species of Fishes from Mazatlan, Mexico. *Proceedings of the United States National Museum*, 4(237):338-365.
1882b. Catalogue of the Fishes Collected by Mr. John Xantus at Cape San Lucas, which Are Now in the United States National Museum, with Descriptions of Eight New Species. *Proceedings of the United States National Museum*, 5:353-378.
1883. List of Fishes Now in the Museum of Yale College, Collected by Prof. Frank H. Bradley, at Panama, with Descriptions of Three New Species. *Proceedings of the United States National Museum*, 5(329):620-632.
1884. Descriptions of Ten New Species of Fishes from Key West, Florida. *Proceedings of the United States National Museum*, 7(402): 24-32.
- Jordan, D.S., and A. Seale
1906. The Fishes of Samoa. *Bulletin of the Bureau of Fisheries*, 1905, 25:173-455, plates 33-53.
- Jordan, D.S., and J.O. Snyder
1902. A Review of the Blennioid Fishes of Japan. *Proceedings of United States National Museum*, 25:441-504.
- Jordan, D.S., and E.C. Starks
1907. Notes on Fishes from the Island of Santa Catalina, Southern California. *Proceedings of the United States National Museum*, 32:67-77.
- Jordan, D.S., and J.C. Thompson
1905. The Fish Fauna of the Tortugas Archipelago. *Bulletin of the Bureau of Fisheries*, 1904, 24:229-256.
- Kanazawa, R.H.
1952. More New Species and New Records of Fishes from Bermuda. *Fieldiana (Zoology)*, 34(7):71-100.
- Kendall, W.C., and L. Radcliffe
1912. The Shore Fishes. In Reports on the Scientific Results of the Expedition to the Eastern Tropical Pacific, in Charge of Alexander Agassiz, by the U.S. Fish Commission Steamer "Albatross," from October, 1904 to March, 1905, Lt. Cdr. L.M. Garrett, USN, Commanding, XXV. *Memoirs of the Museum of the Comparative Zoology*, 35(3)76-172, 8 plates.
- Kner, R., and F. Steindachner
1866. Neue Fische aus dem Museum der Herren Joh. Ces. Godeffroy & Sohn in Hamburg. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften zu Wien, Mathematisch-Naturwissenschaftliche Classe*, 54(1):356-395, plates 1-5.
- Leviton, A.E., R.H. Gibbs, Jr., E. Heal, and C.E. Dawson
1985. Standards in Herpetology and Ichthyology, Part I: Standard Symbolic Codes for Institutional Resource Collections in Herpetology and Ichthyology. *Copeia*, 1985(3):802-832.
- Longley, W.H.
1927. Observations upon the Ecology of Tortugas Fishes with Notes upon the Taxonomy of Species New or Little Known (Definition of Three New Genera and Two Species). *Carnegie Institution Year Book*, 26(1926-27):222-224.
1934. Studies on West Indian Fishes: Description of Six New Species. *Carnegie Institution of Washington, Year Book*, 33:257-260.
- Longley, W.H., and S.F. Hildebrand
1940. New Genera and Species of Fishes from Tortugas, Florida. *Carnegie Institution of Washington Publication*, 517, 32:225-285, 1 plate.
1941. Systematic Catalogue of the Fishes of Tortugas, Florida. *Carnegie Institution of Washington Publication*, 535, 34: xiii, 331 pages, 34 plates.
- Lubbock, R.
1980. The Shore Fishes of Ascension Island. *Journal of Fish Biology*, 17(3):283-303.
- Mead, G.W.
1958. A Catalog of the Type Specimens of Fishes Formerly in the

- Collections of the Department of Tropical Research, New York Zoological Society. *Zoologica*, 43(4):131-134.
- Meek, S.E., and S.F. Hildebrand
1928. The Marine Fishes of Panama, Part III. *Field Museum of Natural History, Publication 249, Zoological Series*, 15:xxv-xxxi, 709-1045, plates 72-102.
- Metzelaar, J.
1919. *Over Tropisch Atlantische Visschen*. 314 pages. Amsterdam: A.H. Kruyt. [In English except several additional pages of front matter in Dutch; also several pages of back matter in Dutch and a table of contents and addendum in English. An English addition appeared in parallel, titled: "Report on the fishes collected by Dr. J. Boeke in the Dutch West Indies 1904-1905; with comparative notes on marine fishes of Tropical West Africa." Gravenhage, F.J. Belinfante, 1-314.]
- Miller, R.R., and J.C. Briggs
1962. *Dactyloscopus amnis*, a New Sand Stargazer from Rivers of the Pacific Slope of Southern Mexico. *Occasional Papers of the Museum of Zoology, University of Michigan*, 627:1-11.
- Moore, J.A., and R. Boardman
1991. List of Type Specimens in the Fish Collection at the Yale Peabody Museum, with a Brief History of Ichthyology at Yale University. *Postilla*, 206: 36 pages.
- Myers, G.S., and E.D. Reid
1936. Description of a New Blennioid Fish of the Genus *Acanthemblemaria* from the Pacific Coast of Panama. *University of Southern California Publications, Hancock Pacific Expeditions*, 2(2):7-10.
- Osburn, R.C., and J.T. Nichols
1916. Shore Fishes Collected by the "Albatross" Expedition in Lower California with Descriptions of New Species. *Bulletin of the American Museum of Natural History*, 35(16):139-181.
- Poey, F.
1876. Enumeratio Piscium Cubensium. *Anales de la Sociedad Española de Historia Natural*, 5:131-176, plates 7-10.
1880. Revision Piscium Cubensium. *Anales de la Sociedad Española de Historia Natural*, 9(1):243-261, plates 6-10.
- Randall, J.E.
1995. A Review of the Triplefin Fishes (Perciformes: Blennioidei: Tripterygiidae) of Oman, with Descriptions of Two New Species of *Enneapterygius*. *Revue Française D'Aquariologie*, 22(1-2):27-34.
- Randall, J.E., and E. Clark
1993. *Helcogramma vulcana*, a New Triplefin Fish (Blennioidei: Tripterygiidae) from the Banda Sea, Indonesia. *Revue Française D'Aquariologie*, 20(1):27-32.
- Reid, E.D.
1935. Two New Fishes of the Families Dactyloscopidae and Clinidae from Ecuador and the Galapagos. *Copeia*, 1935(4):163-166.
- Rosenblatt, R.H., and T.D. Parr
1969. The Pacific Species of the Clinid Fish Genus *Paraclinus*. *Copeia*, 1969(1):1-20.
- Rosenblatt, R.H., and J.S. Stephens, Jr.
1978. *Mccoskerichthys sandae*, a New and Unusual Chaenopsid Blenny from the Pacific Coast of Panama and Costa Rica. *Natural History Museum of Los Angeles County, Contributions in Science*, 293:1-22.
- Rosenblatt, R.H., and L.R. Taylor, Jr.
1971. The Pacific Species of the Clinid Fish Tribe Starksini. *Pacific Science*, 25(3):436-463.
- Schultz, L.P.
1942. Ichthyology: Notes on Some Fishes from the Gulf of California, with the Description of a New Genus and Species of Blennioid Fish. *Journal of the Washington Academy of Sciences*, 32(5):153-156.
1960. Subfamily Tripterygiinae. In Fishes of the Marshall and Marianas Islands. *United States National Museum Bulletin*, 202:281-301.
- Shen, S.-C., and K.-Y. Wu
1994. A Revision of the Tripterygiid Fishes from Coastal Waters of Taiwan, with Descriptions of Two New Genera and Five New Species. *Acta Zoologica Taiwanica*, 5(2):1-32.
- Smith, D.G.
1994. Catalog of Type Specimens of Recent Fishes in the National Museum of Natural History, Smithsonian Institution, 6: Anguilliformes, Saccopharyngiformes, and Notacanthiformes (Teleostei: Elopomorpha). *Smithsonian Contributions to Zoology*, 566: 50 pages.
- Smith, R.
1880. On the Occurrence of a Species of *Cremnobates* at San Diego, California. *Proceedings of the United States National Museum*, 3:147-149.
1883. The Life Colors of *Cremnobates integripinnis*. *Proceedings of the United States National Museum*, 6(372):216-217.
- Smith-Vaniz, W.F., and F.J. Palacio
1974. Atlantic Fishes of the Genus *Acanthemblemaria*, with Descriptions of Three New Species and Comments on Pacific Species (Clinidae: Chaenopsinae). *Proceedings of the Academy of Natural Sciences of Philadelphia*, 125(11):197-224.
- Springer, V.G.
1955. The Taxonomic Status of the Fishes of the Genus *Stathmonotus*, including a Review of the Atlantic Species. *Bulletin of Marine Science of the Gulf and Caribbean*, 5(1):66-80.
1959 ("1958"). Systematics and Zoogeography of the Clinid Fishes of the Subtribe Labrisomini Hubbs. *Publications of the Institute of Marine Science, University of Texas*, 5:417-492. [Date on title page is 1958; actually published in 1959.]
1960 ("1959"). A New Species of *Labrisomus* from the Caribbean Sea, with Notes on Other Fishes of the Subtribe Labrisomini. *Copeia*, 1959(4):289-292. [Date on title page is 1959; actually published in 1960.]
1970. The Western South Atlantic Clinid Fish *Ribeiroclinus eigenmanni*, with Discussion of the Intrarelationships and Zoogeography of the Clinidae. *Copeia*, 1970(3):430-436.
1993. Definition of the Suborder Blennioidei and Its Included Families (Pisces: Perciformes). *Bulletin of Marine Science*, 52(1): 472-495.
1995. Identification of the Blennioid Fish Taxa *Tagusa* and *T. delicata* Herre with the Labrisomid *Malacoctenus zonogaster*. *Copeia*, 1995(2):494-496.
- Springer, V.G., and R.H. Rosenblatt
1965. A New Blennioid Fish of the Genus *Labrisomus* from Ecuador, with Notes on the Caribbean Species *L. filamentosus*. *Copeia*, 1965(1):25-27.
- Springer, V.G., and R.E. Trist
1969. A New Clinid Fish Species, *Paraclinus fehlmanni*, from Ecuador. *Proceedings of the Biological Society of Washington*, 82:323-328.
- Springer, V.G., J.T. Williams, and T.M. Orrell
1991. Catalog of Type Specimens of Recent Fishes in the National Museum of Natural History, Smithsonian Institution, 2: Blenniidae. *Smithsonian Contributions to Zoology*, 519: 28 pages.
- Starks, E.C.
1913. The Fishes of the Stanford Expedition to Brazil. *Leland Stanford Junior University Publications, University Series*, 77 pages, 15 plates.
- Stephens, J.S., Jr.
1961. A Description of a New Genus and Two New Species of Chaenopsid Blennies from the Western Atlantic. *Notulae Naturae*, 349:1-8.

1963. A Revised Classification of the Blennioid Fishes of the American Family Chaenopsidae. *University of California Publications in Zoology*, 68: 165 pages, 15 plates.
1970. Seven New Chaenopsid Blennies from the Western Atlantic. *Copeia*, 1970(2):280-309.
- Stephens, J.S., Jr., E.S. Hobson, and R.K. Johnson
1966. Notes on Distribution, Behavior and Morphological Variation in Some Chaenopsid Fishes from the Tropical Eastern Pacific, with Descriptions of Two New Species, *Acanthemblemaria castroi* and *Coralliozetus springeri*. *Copeia*, 1966(3):424-438.
- Stephens, J.R., and V.G. Springer
1971. *Neoclinus nudus*, New Scaleless Clinid Fish from Taiwan with a Key to *Neoclinus*. *Proceedings of the Biological Society of Washington*, 84(9):65-72.
- 1974 ("1973"). Clinid Fishes of Chile and Peru, with Description of a New Species, *Myxodes ornatus*, from Chile. *Smithsonian Contributions to Zoology*, 159: 24 pages. [Date on title page is 1973; actually published in 1974.]
- Townsend, C.H.
1901. Dredging and Other Records of the United States Fish Commission Steamer *Albatross*, with Bibliography Relative to the Work of the Vessel. *U.S. Commission of Fish and Fisheries, Report of the Commissioner*, 26:387-562, plates i-vii.
- Wheeler, A.C.
1958. The Identity of the British Fish *Parviclinus spinosus*. *Proceedings of the Zoological Society of London*, 130(2):253-256.
- Williams, J.T., and C.J. McCormick
1990. Two New Species of the Triplefin Fish Genus *Helcogramma* (Tripterygiidae) from the Western Pacific. *Copeia*, 1990(4):1020-1030.

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