A Checklist of the North and Middle American Crayfishes (Decapoda: Astacidae and Cambaridae)

HORTON H. HOBBS, JR.

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ABSTRACT

Hobbs, Horton H., Jr. A Checklist of the North and Middle American Crayfishes (Decapoda: Astacidae and Cambaridae). *Smithsonian Contributions to Zoology*, number 166, 161 pages, 294 figures, 1974.—Included in this alphabetical list are all of the North and Middle American crayfishes, including two fossil species, that were described prior to 1 January 1973. Within the treatment of each specific or subspecific taxon is a synonymy in which are cited alterations in generic and subgeneric assignments, erroneous spellings, and synonyms. References also are given to recent descriptions, discussions, and keys. The composition and locations of type-series are cited, as are the type-locality, range, and habitat of each species and subspecies. Nomina nuda that have been neither validated nor synonymized with other crayfish taxa, together with one name suppressed by the International Commission on Zoological Nomenclature, are listed separately. Illustrations, which are arranged in related species groups, are provided for each of the 294 recognized extant species and subspecies.

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A Checklist of the North and Middle American Crayfishes (Decapoda: Astacidae and Cambaridae)

Horton H. Hobbs, Jr.

Introduction

Preparation of this checklist of the crayfishes of North and Middle America began late in the 1940's but its presentation for publication has been repeatedly postponed because of the almost continuous appearance of descriptions of new taxa. The most recent checklist appeared more than half a century ago (Faxon, 1914); since then the number of described species and subspecies has nearly tripled. As a result of this and because most descriptions subsequent to Faxon's checklist have been published in short papers scattered among many journals, a revised compilation is needed. This list is being published despite the fact that there remain many undescribed species; indeed, descriptions of at least a dozen species are now in preparation or in press.

To the best of my knowledge, all of the North and Middle American crayfishes (including two fossil species) that were described prior to 1 January 1973 are accounted for in this summary (most also are incorporated in a recent key to the crayfish fauna of the same area, Hobbs, 1972b). While those few species that have been described since that date are not treated, combinations involving older names have been updated to June 1973.

Preceding the alphabetical list of species is a list of nomina nuda that have not been validated, together with one name that has been suppressed by the International Commission on Zoological Nomenclature. Included in the treatment of each specific or subspecific taxon is a synonymy in which are cited alterations in generic and subgeneric assignments, erroneous spellings, and synonyms; in only rare instances are references to misidentifications listed. References also are given to recent descriptions, discussions, and keys. The composition and locations of the type-series are cited and, where possible, the sexes of the syntypes and primary-types are indicated. In instances in which the type designations included a holotypic male, form I, and a "paratypic male, form II" (the latter clearly separated from the remainder of the paratypic-series), the paratypic male has been referred to here as "morphotype," the name enclosed in quotation marks. In citing the types of those taxa for which a morphotype was designated by the describer, the quotation marks are omitted.

The type-locality, range, and habitats are given for each taxon. The designations "primary, secondary, and tertiary burrowers" follow Hobbs (1942b:20): primary burrowers are those largely restricted to burrows; secondary burrowers are those that generally occupy burrows but often wander into open water during times when the mouths of the burrows are flooded; and tertiary burrowers are those that burrow "only in periods of drought or occasionally, but not necessarily, during the breeding season."

Insofar as possible the illustrations, which are

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arranged in related species groups, are based upon types of the species; and in the comparatively few instances in which types were not available, specimens were chosen from, or as close to, the type-locality as possible (see Explanation of Illustrations).

LOCATIONS OF TYPES.—The following abbreviations are used for museums or collections in which specimens of one or more type-series have been deposited:

Alabama Mus. Nat. Hist.: Alabama Museum of Natural History, Tuscaloosa, Alabama.
AMNH: American Museum of Natural History, New York, New York.
AMS: Australian Museum, Sydney, Australia.
ANSP: Academy of Natural Sciences of Philadelphia, Pennsylvania.
BMNH: British Museum, Natural History, London, England.
BSNH: Boston Society of Natural History, Boston, Massachusetts.
Chas. M.: Charleston Museum, South Carolina.
CM: Carnegie Museum, Pittsburgh, Pennsylvania.
GM: Muséum d'Histoire Naturelle, Geneva, Switzerland.
IBM: Instituto de Biología de la Universidad Nacional Autónoma de México, Mexico City, Mexico.
Ill. St. Lab. Nat. Hist.: Illinois State Laboratory of Natural History, Urbana, Illinois.
La. Polytechnic Inst.: Louisiana Polytechnic Institute, Ruston, Louisiana.
MCZ: Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts.
MHNP: Muséum National d'Histoire Naturelle, Paris, France.
Mus. Washburn Coll.: Museum of Washburn College, now Department of Biology, Washburn University, Topeka, Kansas.
Mus. Zool. Torino: Instituto e Museo di Zoologia, Della Università di Torino, Italy.
NMV: National Museum of Victoria, Melbourne, Australia.
OSM: Ohio State Museum, Columbus, Ohio.
PM: Peabody Museum of Natural History, Yale University, New Haven, Connecticut.
RR: Collection of Rendell Rhoades, Ashland College, Ashland, Ohio.
TU: Department of Zoology, Tulane University, New Orleans, Louisiana.
UF: Department of Zoology, University of Florida, Gainesville, Florida.
USNM: National Museum of Natural History (formerly under United States National Museum), Smithsonian Institution, Washington, D.C.
UZM: Universitetets Zoologiske Museum, Krystalgade, København K., Denmark.
Würzburg Mus.: Würzburg Museum, Würzburg, Germany.
ZBM: Zoologisches Museum der Humboldt-Universität, Berlin, East Germany.
ZIAS: Zoological Institute, Academy of Sciences, Leningrad, U.S.S.R.

In addition, type-specimens of a few species are in the collections of the following: Troy C. Dorris, Oklahoma State University, Stillwater, Oklahoma; Max R. Matteson, University of Illinois, Urbana, Illinois; Leslie Hubricht, Meridian, Mississippi; Hugo L. James, University of Bridgeport, Bridgeport, Connecticut; Rollin D. Reimer, Texas A & M, College Station, Texas; Joe B. Black, McNeese State University, Lake Charles, Louisiana; Joseph F. Fitzpatrick, Jr., Randolph-Macon Woman's College, Lynchburg, Virginia; Jerry G. Walls, Hightstown, New Jersey; Raymond W. Bouchard, University of Tennessee, Knoxville; Rudolph Prins, Western Kentucky University, Bowling Green; H. H. Hobbs III, Christopher Newport College, Newport News, Virginia; and Coe College, Cedar Rapids, Iowa.

Three large and important crayfish collections—those of the University of Michigan Museum of Zoology, the University of Kansas Museum of Natural History, and the personal collection of the author—have been transferred to the National Museum of Natural History, Smithsonian Institution, and the type-specimens cited by many previous authors as having been deposited in those collections are now in the Smithsonian crayfish collection.

A BRIEF HISTORY OF THE NOMENCLATURE OF NORTH AMERICAN CRAYFISHES.—Prior to the publication of Girard's (1852) revision of the North American Astaci, which treated 20 species, all of the North American crayfishes were assigned to the genus *Astacus*. Girard was the first to employ Erichson's (1846) subgeneric designation *Cambarus* as a generic name, and with its adoption by Hagen (1870) in his *Monograph of the North American Astacidae* and the clear delineation drawn between *Cambarus,* in the Atlantic watershed, and *Astacus,* largely restricted to the Pacific slope, a generic stability was established that remained unchanged until 1933. The first checklist of holarctic crayfishes was that of Faxon (1884), in which 60 North American species were recognized. Faxon revised the Astacidae in 1885 but made few changes in the "species groups" originally proposed by Hagen. With some reshuffling of species, Ortmann (1905c, 1905d, 1906a) proposed the recognition of six subgenera of *Cambarus:*

Cambarus, Bartonius, Faxonius, Cambarellus, Procambarus, and *Paracambarus.* Fowler (1912), in reviewing the Crustacea of New Jersey, pointed out that Ortmann (1905c) overlooked Faxon's (1898) selection of *Astacus Bartonii* Fabricius as the type-species of *Cambarus.* Ortmann had chosen that crayfish as the type-species of the subgenus *Bartonius,* and *Astacus Blandingii* Harlan as that of his subgenus *Cambarus.* Thus the name *Bartonius* was shown to be a junior objective synonym of Erichson's *Cambarus,* and *Ortmannicus* was proposed to replace Ortmann's subgenus *Cambarus.*

In his checklist of the crayfishes Faxon (1914) included 110 species and subspecies from North America but recognized no subgenera. An alteration in the generic assignment of the North American crayfishes had its inception with Creaser (1933a) who elevated Ortmann's subgenus *Faxonius* to generic rank. Not until 1942, however, was there a major departure from the generic structure that had been established by Girard (1852) and Hagen (1870).

Creaser (1933b) erected the monotypic subgenus *Faxonella* to receive *Cambarus clypeatus* Hay. This subgenus was questionably accorded generic status by Creaser (1962) and was clearly so treated by Fitzpatrick (1963).

Lyle (1938) designated the subgenus *Girardiella* to encompass Faxon's (1914) Group II.

Hobbs (1942a) proposed the elevation of Ortmann's subgeneric groupings of *Cambarus* to generic rank, recognizing the subfamilies Astacinae and Cambarinae, the latter comprising the following genera: *Cambarus, Procambarus* (including Fowler's *Ortmannicus* and Lyle's *Girardiella*), *Orconectes* (=Ortmann's *Faxonius*), *Cambarellus, Paracambarus,* and *Troglocambarus,* the latter described as new. *Orconectes* Cope (1872) was considered to be a subjective senior synonym of Ortmann's *Faxonius.*

Villalobos (1955) recognized the Cambaroidinae as a subfamily of the Astacidae, and Laguarda (1961) designated a fourth subfamily, the Cambarellinae. Fitzpatrick and Payne (1968) added the genus *Hobbseus,* and Hobbs (1969b), in revising the genus *Cambarus,* proposed the genus *Fallicambarus.* In the latter revision, 10 subgenera (see below) of *Cambarus* were recognized. One of them, *Barbicambarus,* was elevated to generic rank by Bouchard (1972).

In 1972, Hobbs (1972a) recognized 16 subgenera of *Procambarus,* resurrecting the subgenera *Ortmannicus* (Fowler, 1912) and *Girardiella* (Lyle, 1938) and returning *Paracambarus* to subgeneric status in *Procambarus.* Later in the same year, Hobbs' (1972b) key to most of the crayfishes, included herein, was made available.

Finally, in a synopsis of the families and genera of crayfishes, Hobbs (1974) proposed a restructuring of the Astacuran infraorder Astacidea as follows:

INFRAORDER ASTACIDEA

Superfamily Nephropoidea Dana, 1852 (lobsters and marine allies)
Superfamily Parastacoidea Huxley, 1879 (crayfishes of the Southern Hemisphere)
Superfamily Astacoidea Latreille, 1802–1803
- Family Astacidae Latreille, 1802–1803
  - Genus *Astacus* Fabricius, 1775 (Europe and western Asia)
    - Subgenus *Astacus* Fabricius, 1775
    - Subgenus *Pontastacus* Bott, 1950
  - Genus *Austropotamobius* Skorikov, 1908 (Europe)
    - Subgenus *Austropotamobius* Skorikov, 1908
    - Subgenus *Atlantoastacus* Bott, 1950
  - Genus *Pacifastacus* Bott, 1950
- Family Cambaridae Hobbs, 1942a
  - Subfamily Cambarinae Hobbs, 1942a
    - Genus *Barbicambarus* Hobbs, 1969b
    - Genus *Cambarus* Erichson, 1846
      - Subgenus *Cambarus* Erichson, 1846
      - Subgenus *Aviticambarus* Hobbs, 1969b
      - Subgenus *Depressicambarus* Hobbs, 1969b
      - Subgenus *Erebicambarus* Hobbs, 1969b
      - Subgenus *Hiaticambarus* Hobbs, 1969b
      - Subgenus *Jugicambarus* Hobbs, 1969b
      - Subgenus *Lacunicambarus* Hobbs, 1969b
      - Subgenus *Puncticambarus* Hobbs, 1969b
      - Subgenus *Veticambarus* Hobbs, 1969b
    - Genus *Fallicambarus* Hobbs, 1969b
    - Genus *Faxonella* Creaser, 1933b
    - Genus *Hobbseus* Fitzpatrick and Payne, 1968
    - Genus *Orconectes* Cope, 1872
    - Genus *Procambarus* Ortmann, 1905d
      - Subgenus *Procambarus* Ortmann, 1905d
      - Subgenus *Acucauda* Hobbs, 1972a
      - Subgenus *Austrocambarus* Hobbs, 1972a
      - Subgenus *Capillicambarus* Hobbs, 1972a
      - Subgenus *Girardiella* Lyle, 1938
      - Subgenus *Hagenides* Hobbs, 1972a
      - Subgenus *Leconticambarus* Hobbs, 1972a
      - Subgenus *Lonnbergius* Hobbs, 1972a
      - Subgenus *Mexicambarus* Hobbs, 1972a
      - Subgenus *Ortmannicus* Fowler, 1912

Subgenus *Paracambarus* Ortmann, 1906a
Subgenus *Pennides* Hobbs, 1972a
Subgenus *Remoticambarus* Hobbs, 1972a
Subgenus *Scapulicambarus* Hobbs, 1972a
Subgenus *Tenuicambarus* Hobbs, 1972a
Subgenus *Villalobosus* Hobbs, 1972a
Genus *Troglocambarus* Hobbs, 1942a
Subfamily Cambarellinae Laguarda, 1961
Genus *Cambarellus* Ortmann, 1905c
Subfamily Cambaroidinae Villalobos, 1955 (eastern Asia and Japan)
Genus *Cambaroides* Faxon, 1884

ACKNOWLEDGMENTS.—Among the many persons to whom I am indebted for assistance in compiling this checklist are Dr. J. Forest, Muséum National d'Histoire Naturelle, Paris; the late Dr. H. Gisin, Muséum d'Histoire Naturelle, Geneva; Dr. H.-E. Gruner, Zoologisches Museum, Berlin; Dr. H. W. Levi, Museum of Comparative Zoology, Cambridge, Massachusetts; Dr. Paul W. Parmalee, Illinois State Museum, Springfield; Dr. J. J. Parodiz, Carnegie Museum, Pittsburgh, Pennsylvania; Dr. N. E. Pearson, Butler University, Indianapolis, Indiana; Dr. Philip W. Smith, Illinois State Natural History Survey, Urbana; Dr. David H. Stansbery, Ohio State Museum, Columbus; Dr. Y. Starobogatov, Zoological Institute, Academy of Sciences, U.S.S.R., Leningrad; Dr. J. Taubucci, Instituto e Museo di Zoologia, Torino, Italy; Dr. S. L. Tuxen, Universitetets Zoologiske Museum, Copenhagen; Dr. Alejandro Villalobos, Universidad Nacional Autónoma de México, Mexico City; and Dr. J. C. Yaldwyn, formerly of the Australian Museum, Sydney. I am also grateful to the following persons who have read or assisted in checking certain parts of the manuscript: Thomas E. Bowman, Fenner A. Chace, Jr., Martha R. Cooper, Margaret A. Daniel, Joseph F. Fitzpatrick, Jr., Georgia B. Hobbs, Richard L. Hoffman, and Mary H. Moulton.

Nomina Nuda neither Validated nor Synonymized with Other Crayfish Taxa

Cambarus (*Cambarus*) *lobdelli* Lyle, 1938:76.
Cambarus (*Faxonius*) *creaseri* Lyle, 1938:76.
Cambarus (*Girardiella*) *hagenianus carri* Lyle, 1938:76.
Cambarus (*Girardiella*) *hagenianus evansi* Lyle, 1938:76.
Cambarus (*Girardiella*) *hagenianus forestae* Lyle, 1938:76.
Cambarus (*Ortmannicus*) *cookae* Lyle, 1938:76.
Cambarus (*Ortmannicus*) *evictus* Lyle, 1938:76.
Cambarus schmittii Penn, 1941:8 [questionably synonymized with *Cambarellus puer* Hobbs].
Cambarus lucifugus Packard, 1888:82 [lapsus for *Crangonyx lucifugus* Hay].

Suppressed Name

Astacus oreganus Randall, 1840:138. [Suppressed by Opinion 855 of the International Commission on Zoological Nomenclature, 1968:84.]

Species Inquirenda

Cambarus primaevus Packard

Cambarus primaevus Packard, 1880:222; 1881a:832; 1881b:391.
Cambarus primoevus.—Villalobos, 1955:14 [erroneous spelling].

TYPES.—Not known to be extant.

TYPE-LOCALITY.—Lower Tertiary beds in the Bear River Valley, "75 to 100 miles a little west of north of Evanston, Wyo., and near the Utah line" (Packard, 1881b:391).

RANGE.—Known only from the type-locality.

REMARKS.—It is highly doubtful that this crayfish is a member of the genus *Cambarus* as presently defined; and, on the basis of available information, it cannot be assigned to any of the subgenera. Possibly, it is not even a member of the Cambaridae! The original combination of Packard is retained because, until the type specimens or additional material of the species become available, no assessment of its relationships to other crayfishes can be made.

Procambarus wiegmanni (Erichson)

Astacus (*Cambarus*) *Wiegmanni* Erichson, 1846:99.
Cambarus Wiegmanni.—Hagen, 1870:54.
Cambarus wiegmanni.—Faxon, 1890:621.
Procambarus wiegmanni.—Hobbs, 1942a:342 [by implication].
Procambarus weigmanni.—Villalobos, 1949:338 [erroneous spelling].
Procambarus Weigmanni.—Villalobos, 1950:381–383 [erroneous spelling].

TYPES.—Type lost from BMNH.

TYPE-LOCALITY.—Mexico.

RANGE.—Unknown.

HABITAT.—Unknown.

REMARKS.—The identity of this crayfish has not been recognized with certainty since it was described. Villalobos (1950) reviewed its history and designated Erichson's name a nomen nudum. In-

asmuch as Erichson diagnosed and described the species and stated that it occurs in Mexico, it cannot be considered a nomen nudum.

The species was referred to the genus *Procambarus* on the basis of Erichson's (1846:99) statement, "Des zweite Glied am dritten und am vierten Beinpaar beim Männchen mit einem hakenförmigen Fortsatz." Only two crayfish genera are known to occur in Mexico, and, of the two, this statement could apply only to a member of the genus *Procambarus.*

The Checklist

Family ASTACIDAE Latreille, 1802–1803

Genus *Pacifastacus* Bott

Astacus.—Dana, 1852:522.
Cambarus.—Girard, 1852:90.
Cambrus Girard, 1852:90 [erroneous spelling].
Potamobius.—Ortmann, 1902:286.
Pacifastacus Bott, 1950:24. [Type-species by original designation, *Astacus klamathensis* Stimpson, 1857a:87. Gender: masculine.]
Pasifastacus Sanders, 1967:33 [erroneous spelling].
Pacifastaculus Kamita, 1973:123 [erroneous spelling].

Pacifastacus chenoderma (Cope), new combination

Astacus chenoderma Cope, 1871:606.—Rathbun, 1926:130, pl. 29: fig. 7; pls. 31–34.
?Astacus subgrundialis Cope, 1871:605. [Types not extant. Type-locality, "fresh water deposit in the Territory of Idaho, near Hot Springs Mountain."]
?Astacus breviforceps Cope, 1871:606. [Types not extant. Type-locality, same as that for *Astacus chenoderma,* see below.]

TYPES.—Syntype, USNM 353343; other syntypes probably lost.

TYPE-LOCALITY.—"Catherine's creek, Idaho." According to an annotation in a reprint, this is "a local name for the upper part of Castle Creek, Owyhee County." A Pliocene deposit.

RANGE.—Miocene and Pliocene deposits in Idaho and Oregon.

REMARKS.—Rathbun (1926) redescribed and figured Cope's *A. chenoderma,* suggesting that both *A. breviforceps* and *A. subgrundialis* are probable synonyms. Since the types are lost and accounts of specimens assignable to either have not appeared since Miss Rathbun's review of the species, I have followed her in including these species as probable synonyms of *Pacifastacus chenoderma.* The species is transferred to the genus *Pacifastacus* because the rostrum with as many as seven pairs of marginal spines is a feature foreign to members of the Eurasian Astacidae but strongly resembles that of four members of the American astacid genus *Pacifastacus: P. connectens, P. fortis, P. gambelii,* and *P. nigrescens.*

Pacifastacus connectens (Faxon)

FIGURE 1

Astacus gambelii connectens Faxon, 1914:360, pl. 7: figs. 6, 10; pl. 10.
Pacifastacus gambelii connectens.—Bott, 1950:24 [by implication].
Pacifastacus gambeli connectens.—Riegel, 1959:43.
Pacifastacus gambelii connectans.—Holt, 1960:61 [erroneous spelling].
Pacifastacus connectens.—Hobbs, 1972b:22, figs. 12d, 14a.

TYPES.—Syntypes, USNM 23096 (3 ♂, ♀), MCZ 73285 (♂).

TYPE-LOCALITY.—Snake River, Upper Salmon Falls, Logan County, Idaho.

RANGE.—Idaho and Oregon.

HABITAT.—Streams.

Pacifastacus fortis (Faxon)

FIGURE 3

Astacus nigrescens fortis Faxon, 1914:360, pl. 7: figs. 5, 9; pl. 9: fig. 2.
Pacifastacus nigrescens fortis.—Bott, 1950:24 [by implication].
Pacifastacus fortis.—Hobbs, 1972b:23, figs. 13c, 14c.

TYPES.—Syntypes, USNM 44404 (♂, 2♀), MCZ 7383 (♂, ♀).

TYPE-LOCALITY.—Fall River, Fall City Mills, Shasta County, California.

RANGE.—Known only from Shasta County, California.

HABITAT.—Streams.

Pacifastacus gambelii (Girard)

FIGURE 2

Cambrus Gambelii Girard, 1852:90 [lapsus for *Cambarus*].
Cambarus Gambeli.—Hagen, 1870:31.

Astacus Gambeli.—Hagen, 1870:28.
Astacus Gambelii.—Hagen, 1870:90, pl. 1: figs. 97, 98; pl. 3: fig. 170; pl. 11.
Astacus (Astacus) Gambelii.—Faxon, 1884:152 [by implication].
Astacus (Astacus) gambelii.—Faxon, 1898:666 by [implication].
Potamobius (Potamobius) gambeli.—Ortmann, 1902:286 [by implication].
Astacus gambelii gambelii.—Faxon, 1914:360 [by implication].
Astacus gambelii.—Rathbun, 1926:133.
Pacifastacus gambelii gambelii.—Bott, 1950:24 [by implication].
Astacus gambeli.—Pennak, 1953:461.
Pacifastacus gambelii.—Kozloff, 1955:156.—Hobbs, 1972b:22, figs. 13a, 14b.
Pacifastacus gambeli.—Riegel, 1959:29, 43–44, figs. 3c, 8.

TYPES.—Syntypes, ANSP 1531 (10+, mostly fragments), 1532 (5 specimens).

TYPE-LOCALITY.—"California."

RANGE.—Pacific slope and in the Missouri River drainage in California (?), Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming.

HABITAT.—Streams and lakes.

Pacifastacus leniusculus klamathensis (Stimpson)

FIGURE 6

Astacus Klamathensis Stimpson, 1857a:87.—Hagen, 1870:93, pl. 3: fig. 169.—Faxon, 1885a:131, pl. 6: figs. 1, 2.
Astacus (Astacus) Klamathensis.—Faxon, 1884:151 [by implication].
Astacus klamathensis.—Faxon, 1890:634.
Potamobius (Potamobius) klamathensis.—Ortmann, 1902:286.
Pacifastacus klamathensis.—Bott, 1950:24 [by implication].—Riegel, 1959:41, figs. 3B, 7, 10.

TYPES.—Not extant; "probably destroyed in the Chicago fire in 1871" (Faxon, 1914:409).

TYPE-LOCALITY.—Lake Klamath, Klamath County, Oregon.

RANGE.—Washington south to central California.

HABITAT.—Lakes and cold, swift streams.

Pacifastacus leniusculus leniusculus (Dana)

FIGURE 5

Astacus leniusculus Dana, 1852:522, 524; 1855, pl. 33: fig. 1a,b.—Hagen, 1870:94.
Astacus laeviusculus.—Lockington, 1878:304 [erroneous spelling].
Astacus (Astacus) leniusculus.—Faxon, 1884:151 [by implication]; 1885a:132, pl. 6: fig. 4.
Potamobius (Potamobius) leniusculus.—Ortmann, 1902:286 [by implication].
Potamobius leniusculus.—Roberts, 1944:363.
Pacifastacus leniusculus.—Bott, 1950:24 [by implication].—Riegel, 1959:39, figs. 1D–H, 3A, 6, 10.
"Astacus" (Pacifastacus) leniusculus.—Brinck, 1968:85.
Pacifastacus leniusculus leniusculus.—Hobbs, 1972b:21, figs. 12a, 14e.
Pacifastaculus leniuscus.—Kamita, 1973:123 [erroneous spellings].

TYPES.—Syntypes, USNM 2019 (♂), 2161 (♂), 44408 (♂).

TYPE-LOCALITY.—Columbia River and Puget Sound, Washington.

RANGE.—British Columbia, California, Idaho, Nevada, Oregon, and Washington. Introduced into Sweden (Svärdson, 1965:92) and Japan (Kamita, 1970:140).

HABITAT.—Streams and lakes.

REMARKS.—*Astacus leniusculus* was placed on the Official List of Specific Names in Zoology, name number 2244, in Opinion 855 of the International Commission on Zoological Nomenclature (1968:84).

Pacifastacus leniusculus trowbridgii (Stimpson)

FIGURE 7

Astacus Trowbridgii Stimpson, 1857a:87; 1857b:493.—Hagen, 1870:93, pl. 3: fig. 171; pl. 10.
Astacus (Astacus) Trowbridgii.—Faxon, 1884:152 [by implication].
Astacus (Astacus) trowbridgii.—Faxon, 1898:666 [by implication].
Astacus trowbridgii.—Hay, 1899b:958.
Potamobius (Potamobius) trowbridgei.—Ortmann, 1902:286 [by implication].
Pacifastacus trowbridgii.—Bott, 1950:24 [by implication].—Riegel, 1959:30, fig. 1C–F.—Mason, 1970a:37, figs. 1–16; 1970b:969, figs. 1–7.
Astacus trowbridgi.—Pennak, 1953:461.
Astacus trowbridgei.—Pilgrim, 1960:249 [erroneous spelling].
Pacifastacus trowbridgeii.—Sanders, 1967:33 [erroneous spelling].
Pasifastacus trowbridgeii.—Sanders, 1967:33 [erroneous spelling].
Pacifastacus leniusculus trowbridgii.—Hobbs, 1972b:22, figs. 5a, 12b.
Pacifastacus trowbridgi.—Goldman, 1973:106 [erroneous spelling].
Pacifastaculus trowbridgii.—Kamita, 1973:123 [erroneous spelling].

TYPES.—Syntypes, USNM 2080 (2♂, 2♀), MCZ 3510 (♂), BSNH, PM.

TYPE-LOCALITY.—Columbia River above Astoria, Oregon.

RANGE.—British Columbia, California, Idaho, Oregon and Washington. Introduced into Japan (Kamita, 1970:148).

HABITAT.—Streams and lakes.

Pacifastacus nigrescens (Stimpson)

FIGURE 4

Astacus nigrescens Stimpson, 1857a:87; 1857b:492.—Hagen, 1870:92, pl. 3: fig. 168.
Astacus (Astacus) nigrescens.—Faxon, 1884:152 [by implication].
Astacus nigrescens nigrescens.—Faxon, 1914:360 [by implication].
Potamobius (Potamobius) nigrescens.—Ortmann, 1902:286 [by implication].
Pacifastacus nigrescens nigrescens.—Bott, 1950:24 [by implication].
Pacifastacus nigrescens.—Riegel, 1959:44, figs. 3D, 9, 10.—Hobbs, 1972b:23, figs. 13b, 14d.
Pacifastacus nigresens.—Goldman, 1973:107 [erroneous spelling].

TYPES.—Not extant; "probably destroyed in Chicago fire in 1871" (Faxon, 1914:408).

TYPE-LOCALITY.—Vicinity of San Francisco, California.

RANGE.—Vicinity of San Francisco, California.

HABITAT.—Streams.

REMARKS.—This species is almost, if not already, extinct.

Family CAMBARIDAE Hobbs, 1942

Subfamily CAMBARELLINAE Laguarda, 1961

Genus *Cambarellus* Ortmann

Cambarellus Ortmann, 1905c:106. [Type-species by original designation, *Cambarus Montezumae* Saussure, 1857a:102. Gender: masculine.]
Cambarella Carlisle and Knowles, 1959:50 [erroneous spelling].

Cambarellus alvarezi Villalobos

FIGURE 14

Cambarellus alvarezi Villalobos, 1952:525, pl. 1: figs. 1–7; pl. 2: figs. 1–5.—Hobbs, 1972b:27, fig. 15f.

TYPES.—Holotype and morphotype, IBM 1–1952 (♂ I, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Potosí, Nuevo León, 23 km northwest of Galeana, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—"Colecta realizada en un deposito de agua de una cuenca cerrada, situada en la parte Norte de Valle Salado" (Villalobos, 1952:531).

Cambarellus areolatus (Faxon)

FIGURE 16

Cambarus Montezumae var. *areolata* Faxon, 1885a:123.
Cambarus montezumae areolatus.—Faxon, 1898:661, pl. 66: fig. 2.
Cambarus (Cambarellus) montezumae areolatus.—Ortmann, 1906a:23.
Cambarellus montezumae areolatus.—Hobbs, 1942a:350 [by implication].—Villalobos, 1955:276.
Cambarellus areolatus.—Hobbs, 1972b:27, figs. 16b, 17b.

TYPES.—Syntypes, MCZ 3650 (♂ I, 3 ♀, ♂ II).

TYPE-LOCALITY.—Near Parras, Coahuila, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—Unknown.

Cambarellus chapalanus (Faxon)

FIGURE 15

Cambarus chapalanus Faxon, 1898:661, pl. 67: figs. 1, 2.
Cambarus (Cambarellus) chapalanus.—Ortmann, 1905c:106.
Cambarus montezumae chapalanus.—Faxon, 1914:371.
Cambarus chapalamus.—Van Straelen, 1942:5 [erroneous spelling].
Cambarellus montezumae chapalanus.—Hobbs, 1942a:350 [by implication].
Cambarellus chapalanus.—Villalobos, 1955:277.—Hobbs, 1972b:28, figs. 16c, 17c.

TYPES.—Holotype, USNM 17698 (♂ I); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Lake Chapala, State of Jalisco, Mexico.

RANGE.—Jalisco and Michoacán, Mexico.

HABITAT.—Lentic situations.

Cambarellus diminutus Hobbs

FIGURE 12

Cambarellus diminutus Hobbs, 1945b:467, figs. 1, 2, 5, 6, 10, 12, 13, 17, 18, 20, 25, 26; 1972b:26, fig. 15b.

TYPES.—Holotype, allotype, and "morphotype," USNM 81554 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ, CM, TU.

TYPE-LOCALITY.—Sand-bottomed stream, 3.5 miles south of Irvington, Mobile County, Alabama.

RANGE.—Mobile County, Alabama, and George and Jackson counties, Mississippi.

HABITAT.—Pools, sluggish portions of streams and ditches. Burrows when water disappears from habitat.

Cambarellus montezumae (Saussure)

FIGURE 17

Cambarus Montezumae Saussure, 1857a:102; 1858:459, fig. 22.
Cambarus Montezumae var. *tridens* von Martens, 1872:130. [Syntypes, ZBM. Type-locality, Puebla, Mexico.]
Cambarus Montezumae Montezumae.—von Martens, 1872:130 [by implication].
Cambarus montezumae.—Faxon, 1890:633.
Cambarus montezumae montezumae.—Faxon, 1898:660 [by implication].
Cambarus montezumae dugesii Faxon, 1898:660, pl. 66: fig. 1. [Syntypes, USNM 16087 (4 ♂ II, 12 ♀), MCZ. Type-locality, State of Guanajuato, Mexico.]
Cambarus (*Cambarellus*) *montezumae*.—Ortmann, 1905c:106.
Cambarus (*Cambarellus*) *montezumae dugesi*.—Ortmann, 1906a:20.
Cambarellus montezumae.—Hobbs, 1942a:340; 1972b:28, figs. 16f, 18b,d.
Cambarellus montezumae montezumae.—Hobbs, 1942a:350 [by implication].—Villalobos, 1943:588, pl. 1; 1955:256.
Cambarellus montezumae dugesii.—Hobbs, 1942a:350 [by implication].
Cambarellus montezumae forma *lermensis* Villalobos, 1943: 603, pl. 2: figs. 3, 5, 8, 11, 14, 18, 20. [Holotype, allotype, and "morphotype," IBM 50043 (009) (♂ I, ♀, ♂ II); paratypes, IBM. Type-locality, Lerma, Estado de México, Mexico.]
Cambarellus Montezumae.—Villalobos, 1943:587 [error in title].
Cambarellus montezumae lermensis.—Villalobos, 1953:345, 359; 1955:262, pl. 59: figs. 3, 5, 8, 11, 14, 18, 20.
Cambarellus montezumae var. *tridens*.—Villalobos, 1953:345.
Cambarellus montezumae dugesi.—Villalobos, 1953:345, 358.

TYPES.—Syntypes, USNM 20583 (♂ I), GM (uncataloged, dry, 13 specimens), BMNH 3587.

TYPE-LOCALITY.—Swamps of the Valley of Mexico; ponds in Chapultepec Park, Mexico.

RANGE.—Pacific slope and Valley of Mexico.

HABITAT.—Sluggish streams and lentic situations.

Cambarellus ninae Hobbs

FIGURE 11

Cambarellus ninae Hobbs, 1950a:89, figs. 1–17; 1972b:26, fig. 15d.

TYPES.—Holotype, allotype, and morphotype, USNM 89768, 89770, 89769 (♂ I, ♀, ♂ II); paratypes, MCZ, ANSP, USNM, TU.

TYPE-LOCALITY.—Borrow ditches in the Aransas Refuge (along East Shore Road), Aransas County, Texas.

RANGE.—From Aransas to Matagorda and Wharton counties, Texas.

HABITAT.—Lentic habitats.

Cambarellus occidentalis (Faxon)

FIGURE 13

Cambarus montezumae occidentalis Faxon, 1898:661, pl. 66: figs. 3, 4.
Cambarus (*Cambarellus*) *montezumae occidentalis*.—Ortmann, 1905c:106 [by implication].
Cambarellus montezumae occidentalis.—Hobbs, 1942a:350 [by implication].—Villalobos, 1953:358; 1955:276.
Cambarellus occidentalis.—Hobbs, 1972b:27, figs. 16a, 17a.

TYPES.—Syntypes, MCZ 3652 (2 ♂ I, 2 ♂ II, ♀ dry).

TYPE-LOCALITY.—Mazatlán, State of Sinaloa, Mexico.

RANGE.—Michoacán and Sinaloa, Mexico.

HABITAT.—Lentic habitats.

Cambarellus patzcuarensis Villalobos

FIGURE 18

Cambarellus montezumae patzcuarensis Villalobos, 1943:607, pl. 2: figs. 1, 6, 9, 10, 12, 15, 19, 21, 23; 1953:345, 359; 1955:265, pl. 59: figs. 1, 6, 9, 10, 12, 15, 19, 21, 23.
Cambarellus patzcuarensis.—Villalobos, 1955:280.—Hobbs, 1972b:28, figs. 16d, 17d.

TYPES.—Holotype, allotype, and "morphotype," IBM 90040 (005) (♂ I, ♀, ♂ II); paratypes, IBM.

TYPE-LOCALITY.—Lago de Patzcuaro, Michoacán, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—Lake.

Cambarellus puer Hobbs

FIGURE 10

?*Cambarus schmittii* Penn, 1941:8 [nomen nudum].
Cambarellus puer Hobbs, 1945b:469, figs. 7–9, 11, 14–16, 19, 21–24; 1972b:27, figs. 5c, 15e.—Penn, 1950b:423.

TYPES.—Holotype, allotype, and "morphotype," USNM 81556 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ, ANSP, TU, USNM.

TYPE-LOCALITY.—Roadside ditch, 7 miles west of Dayton, Liberty County, Texas, on U.S. Highway 90.

RANGE.—From Brazos and Matagorda counties, Texas, to Green and Howard counties, Arkansas, and eastward to Ascension Parish, Louisiana, Holmes County, Mississippi, and western Tennessee.

HABITAT.—Swamps, ditches, sloughs, ponds, and sluggish streams.

Cambarellus schmitti Hobbs

FIGURE 9

Cambarellus schmitti Hobbs, 1942b:149, figs. 176–180, 286–295; 1972b:26, fig. 15c.

TYPES.—Holotype, allotype, and "morphotype," USNM 81291 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ, Chas. M., TU, UF (now in USNM).

TYPE-LOCALITY.—Small spring flowing into the Suwannee River at Brandford, Suwannee County, Florida.

RANGE.—From Mobile County, Alabama, eastward to the Suwannee River drainage system in Florida.

HABITAT.—Clear streams and springs.

Cambarellus shufeldtii (Faxon)

FIGURE 8

Cambarus Shufeldtii Faxon, 1884:134; 1885a:124, pl. 7: fig. 1; pl. 10: figs. 8, 8′, 8a, 8a′.
Cambarus shufeldtii.—Underwood, 1886:372.
Cambarus (Cambarellus) shufeldti.—Ortmann, 1905c:106.
Cambarellus shufeldtii.—Hobbs, 1942a:350 [by implication]; 1972b:25, fig. 15a.—Penn, 1942:644; 1959:14, figs. 24, 45, 63, 77, 86.—Hobbs and Marchand, 1943:17, figs. 1, 11, 15, 21.
Cambarellus shufeldti.—Pennak, 1953:462.
Cambarella shufeldti.—Carlisle and Knowles, 1959:50 [erroneous spelling].

TYPES.—Syntypes, USNM 4860 (3 ♂ I, 7 ♀), MCZ 3684 (♂ I, ♂ II, 2 ♀).

TYPE-LOCALITY.—Near New Orleans, Louisiana.

RANGE.—Mississippi River drainage system in southern Illinois, Tennessee, Arkansas, and in Louisiana east of the Mississippi and Atchafalaya rivers; Red River system in Louisiana and Texas; and Pascagoula and Pearl river systems in Mississippi. Introduced into Rapides, St. Bernard, and St. Tammany parishes, Louisiana (Penn, 1950b: 422), and into Harris County, Georgia (Penn, personal communication).

HABITAT.—Swamps, ditches, sloughs, lakes, ponds, and sluggish streams. Burrows when water disappears from habitat.

Cambarellus zempoalensis Villalobos

FIGURE 19

Cambarellus montezumae forma *zempoalensis* Villalobos, 1943:601, pl. 2: figs. 2, 4, 7, 13, 16, 17, 22.
Cambarellus montezumae zempoalensis.—Villalobos, 1953:345, 359; 1955:257, pl. 59: figs. 2, 4, 7, 13, 16, 17, 22.
Cambarellus zempoalensis.—Hobbs, 1972b:28, figs. 16e, 18a,c.

TYPES.—Holotype, allotype, and "morphotype," IBM 100042 (00FA) (♂ I, ♀, ♂ II); paratypes, IBM.

TYPE-LOCALITY.—Lagunas de Zempoala, Morelos, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—Crater lakes.

Subfamily CAMBARINAE Hobbs, 1942

Genus *Barbicambarus* Hobbs

Barbicambarus Hobbs, 1969b:98. [Type-species by original designation, *Cambarus cornutus* Faxon, 1884:120. Gender: masculine.]

Barbicambarus cornutus (Faxon)

FIGURE 20

Cambarus cornutus Faxon, 1884:120; 1885a:80, pl. 5: figs. 1, 2; pl. 9: figs. 3, 3′.—Cooper and Cooper, 1968:19–20, illustrated.
Cambarus (Bartonius) cornutus.—Ortmann, 1905c:120.
Cambarus (Cambarus) cornutus.—Fowler, 1912:341 [by implication].
2d, 5, 13k, 14j, 17b.
Cambarus (Barbicambarus) cornutus.—Hobbs, 1969b:98, figs.
Barbicambarus cornutus.—Bouchard, 1972:56.

TYPES.—MCZ 3566 (♂ I).

TYPE-LOCALITY.—Green River, near Mammoth Cave, Edmonson County, Kentucky.

RANGE.—Barren and upper Green river systems in Kentucky and Tennessee.

HABITAT.—Streams.

Genus *Cambarus* Erichson

Astacus.—Fabricius, 1798:407.

Cambarus Erichson, 1846:97. [Type-species by subsequent designation (Faxon, 1898:644), *Astacus Bartonii* Fabricius, 1798:407. Proposed as subgenus of *Astacus;* elevated to generic rank by Girard, 1852:88. Gender: masculine.]

Camburus Faxon, 1885c:358 [erroneous spelling].

Camparus Williamson, 1899:47 [erroneous spelling].

S[ambarus] Steele, 1902:11 [erroneous spelling].

Bartonius Ortmann, 1905c:97. [Type-species by original designation, *"C. bartoni"* Fabricius, 1798:407. Proposed as subgenus of *Cambarus,* treated unintentionally as generic name by Williamson, 1907:749, and declared a synonym of *Cambarus* by Fowler, 1912:341.]

Canbarus Thompson, 1967:47 [erroneous spelling].

cambarus Padgett, 1970:19 [lapsus calami].

Cambaras Bouchard, 1973:106 [erroneous spelling].

Subgenus *Aviticambarus* Hobbs

Aviticambarus Hobbs, 1969b:99. [Type-species by original designation, *Orconectes hamulatus* Cope, 1881:881. Gender: masculine.]

Cambarus (Aviticambarus) hamulatus (Cope)

FIGURE 21

Orconectes hamulatus Cope, 1881:881, pl. 7: fig. 1a,b.

Cambarus hamulatus.—Faxon, 1884:145.—Hobbs and Barr, 1960:17, figs. 1–10.

Cambarus (Bartonius) hamulatus.—Ortmann, 1905c:120.

Cambarus (Cambarus) hamulatus.—Fowler, 1912:341 [by implication].—Ortmann, 1931:96.

Cambarus hamueatus.—Fleming, 1938:303 [erroneous spelling].

Cambarus (Aviticambarus) hamulatus.—Hobbs, 1969b:99, figs. 5, 13f, 14f, 17j.

TYPES.—Syntypes, MCZ 3678 (♂ II, ♀).

TYPE-LOCALITY.—Nickajack Cave, Marion County, Tennessee.

RANGE.—From the upper Sequatchie Valley, Tennessee, southward to Blount County, Alabama.

HABITAT.—Subterranean streams.

Cambarus (Aviticambarus) jonesi Hobbs and Barr

FIGURE 22

Cambarus jonesi Hobbs and Barr, 1960:19, figs. 11–20.

Cambarus (Aviticambarus) jonesi.—Hobbs, 1969b:99, figs. 5, 17k.

TYPES.—Holotype, allotype, and morphotype, USNM 104407, 104408, 104799 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Cave Spring Cave, 12.1 miles northwest of Valhermosa, Morgan County, Alabama.

RANGE.—Tennessee River basin between Florence and environs of Guntersville, Alabama.

HABITAT.—Subterranean waters.

Subgenus *Cambarus* Erichson

Cambarus Erichson, 1846:88. [Type-species by subsequent designation (Faxon, 1898:644), *Astacus Bartonii* Fabricius, 1798:407. Gender: masculine.]

Cambarus (Cambarus) bartonii bartonii (Fabricius)

FIGURE 23

Astacus Bartonii Fabricius, 1798:407.

Astacus ciliaris Rafinesque, 1817:42. [Types not extant. Type-locality, brooks near Fishkill, Dutchess County, and Newburgh, Orange County, New York.]

Astacus pusillus Rafinesque, 1817:42. [Types not extant. Type-locality, brooks in New York, near "Saratoga, Lake George, Lake Champlain, Utica, Oswego, &c."]

Astacus bartonii.—De Kay, 1844:22.

Astacus Bartoni.—Tellkampf, 1845:85.

Astacus (Cambarus) Bartonii.—Erichson, 1846:97.

Cambarus Bartonii.—Girard, 1852:88.

Cambarus montanus Girard, 1852:88. [Types destroyed in the Chicago fire in 1871; paratype (?) ANSP 322 (♂ II), from James River, Virginia. Type-locality, restricted by Ortmann, 1931:114, "Tributary of James River, Rockbridge County, Virginia."]

Cambarus Bartoni.—Hagen, 1870:30.

Cambarus bartonii.—Packard, 1880:222.

Cambarus Bartonii Bartonii.—Faxon, 1885a:61 [by implication].

Cambarus bartoni.—Shufeldt, 1898:227.

Cambarus bartonii bartonii.—Hay, 1899b:959 [by implication].

Camparus bartonii.—Williamson, 1899:47 [erroneous spelling].

Cambarus bartoni bartoni.—Hay, 1902b:435.—Crocker, 1957: 42, pl. 1: figs. 2, 3, 6; pl. 2: figs. 5–7.

Cambarus (Bartonius) bartoni.—Ortmann, 1905c:117, 120 [in part].

Cambarus bartoni typicus.—Ortmann, 1906b:450.

Astacus bartoni.—Ortmann, 1906b:348.

Cambarus bartonius bartoni.—Chidester, 1908:710.

Cambarus (Cambarus) bartonii.—Fowler, 1912:341.
Cambarus bartonii montanus.—Faxon, 1914:385.
Cambarus montanus montanus.—Ortmann, 1931:106
Cambarus (Cambarus) bartoni bartoni.—Ortmann, 1931:130.
Cambarus bartoni montanus.—Ortmann, 1931:114.
Cambarus (Cambarus) bartonii bartonii.—Fleming, 1938: 303.—Hobbs, 1969b:109, figs. 5, 13, 14, 19*l*.
Cambarus bartonius.—Roberts, 1944:370 [erroneous spelling].
Canbarus bartoni.—Thompson, 1967:47 [erroneous spelling].
Cambarus bartonni.—Coleman, 1972:21 [erroneous spelling].
Cambaras bartoni.—Bouchard, 1973:106 [erroneous spelling].

TYPES.—Type, UZM (♂ II).

TYPE-LOCALITY.—North America; "probably neighborhood of Philadelphia, Pa." (Faxon, 1914:423).

RANGE.—New Brunswick, Canada, to northern Georgia, Ohio, and Tennessee to the Atlantic Ocean; restricted to the mountains and foothills in South Carolina and Georgia.

HABITAT.—Mostly lotic habitats, but occasionally frequenting ponds and often burrowing along streams and seepage areas.

Cambarus (Cambarus) bartonii carinirostris Hay

FIGURE 24

Cambarus bartonii carinirostris Hay, 1914:384.
Cambarus (Cambarus) bartoni carinirostris.—Ortmann, 1931: 107.
Cambarus (Cambarus) bartonii carinirostris.—Hobbs, 1969b: 109, fig. 19m.

TYPES.—"Type" and paratypes, USNM 23962 (♂ I, 7 ♂ II, 15 ♀); paratypes, MCZ 7399 (♂ I, ♂ II, ♀).

TYPE-LOCALITY.—Gandy Creek at Osceola, Randolph County, West Virginia.

RANGE.—Tributaries of the Cheat, Greenbrier, and Tygart rivers in West Virginia. Exact range not known.

HABITAT.—Streams of small to moderate size.

REMARKS.—Both Ortmann (1931) and Hobbs (1972b) have remarked on the advisability of recognizing this species, and the latter indicated that "it is questionable that this subspecies should be recognized."

Cambarus (Cambarus) bartonii cavatus Hay

FIGURE 25

Cambarus bartoni cavatus Hay, 1902b:435.
Cambarus (Bartonius) bartoni.—Ortmann, 1905c:120 [in part].
Cambarus (Cambarus) bartonii cavatus.—Fowler, 1912:341 [by implication].—Hobbs, 1969b:109, figs. 5, 19n.
Cambarus bartonii cavatus.—Faxon, 1914:425.
Cambarus (Cambarus) bartoni cavatus.—Ortmann, 1931:104.
Cambarus (Cambarus) species L.—Hobbs, 1969b:109, fig. 5.
Cambarus species K.—Hobbs, 1969b:145 [not p. 109 and fig. 5].

TYPES.—Syntypes, USNM 25017 (♂ II, ♀, 2 ♂ juv.).

TYPE-LOCALITY.—Powell River, Tazewell, Claiborne County, Tennessee.

RANGE.—Tributaries of the Tennessee River in eastern Tennessee, northwestern Georgia, and southwestern Virginia.

HABITAT.—Streams.

Cambarus (Cambarus) howardi Hobbs and Hall

FIGURE 26

Cambarus (Cambarus) species K Hobbs, 1969b:109, fig. 5.
Cambarus (Cambarus) howardi Hobbs and Hall, 1969:281, figs. 1–12.

TYPES.—Holotype, allotype, and morphotype, USNM 129866, 129867, 129868 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Sope Creek, tributary to the Chattahoochee River at Paper Mill Road, 1.5 miles above mouth, Cobb County, Georgia.

RANGE.—Chattahoochee drainage system from Hall to Douglas counties, Georgia.

HABITAT.—Riffle areas of streams.

Cambarus (Cambarus) ortmanni Williamson

FIGURE 28

Bartonius ortmanni Williamson, 1907:749 [*Bartonius* intended as a subgeneric name].
Cambarus (Bartonius) ortmanni Williamson, 1907:754, pl. 35: figs. 1–3.
Cambarus (Cambarus) ortmanni.—Fowler, 1912:341 [by implication].—Hobbs, 1969b:109, figs. 5, 19o.
Cambarus ortmanni.—Creaser, 1932:336.

TYPES.—Syntypes, CM 74.826 (♂ I, ♀), MCZ 7587 (♀).

TYPE-LOCALITY.—Six-Mile Creek and Craven Ditch, tributary to Wabash River, above Bluffton, Wells County, Indiana.

RANGE.—Southern Indiana and Ohio, and adjacent northern Kentucky.

HABITAT.—Burrows (secondary burrower).

Cambarus (Cambarus) sciotensis Rhoades

FIGURE 27

Cambarus bartoni sciotensis Rhoades, 1944b:96.
Cambarus sciotensis.—Holt, 1954:170.—Hobbs, Holt, and Walton, 1967:27, fig. 5.
Cambarus bartonii sciotensis.—Hobbs, 1955b:330.
Cambarus (Cambarus) sciotensis.—Hobbs, 1969b:109, figs. 5, 19p.

TYPES.—Holotype, allotype, and "morphotype," USNM 81533 (♂ I, ♀, ♂ II); paratypes, MCZ, RR, OSM.

TYPE-LOCALITY. — Limestone Cliffs below O'Shaughnessy Dam, Scioto River, Sec. 3, Liberty Township, Delaware County, Ohio.

RANGE.—Scioto River drainage, Ohio, and Kanawha drainage in southwestern Virginia and West Virginia.

HABITAT.—Riffle areas in small to large streams.

Subgenus *Depressicambarus* Hobbs

Depressicambarus Hobbs, 1969b:102. [Type-species by original designation, *Astacus latimanus* LeConte, 1856:402. Gender: masculine.]

Cambarus (Depressicambarus) catagius Hobbs and Perkins

FIGURE 36

Cambarus catagius Hobbs and Perkins, 1967:141, figs. 1–11.
Cambarus (Depressicambarus) catagius.—Hobbs, 1969b:104, figs. 8, 18c.

TYPES.—Holotype, allotype, and morphotype, USNM 117779, 117780, 117781 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Lawn at East Whittington Street in southeastern section of Greensboro, Guilford County, North Carolina.

RANGE.—Known only from the type-locality.

HABITAT.—Burrows (primary burrower).

Cambarus (Depressicambarus) cymatilis Hobbs

FIGURE 37

Cambarus (Depressicambarus) cymatilis Hobbs, 1970b:251, figs. 3, 4.

TYPES.—Holotype, allotype, and morphotype, USNM 129860, 129861, 129862 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Western city limits of Chatsworth, Murray County, Georgia, in lawn and rose garden of Mr. Charles S. Dunn, off Chestnut Street.

RANGE.—Known from only three localities in the immediate vicinity of Chatsworth, Murray County, Georgia.

HABITAT.—Burrows (primary burrower).

Cambarus (Depressicambarus) englishi Hobbs and Hall

FIGURE 30

Cambarus (Depressicambarus) englishi Hobbs and Hall, 1972: 151, fig. 1a–n.

TYPES.—Holotype, allotype, and morphotype, USNM 131700, 131701, 132519 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Tallapoosa River, in riffle area 1 mile north of Tallapoosa, Haralson County, Georgia, a few hundred yards east of bridge on State Route 100.

RANGE.—Known only from the Tallapoosa River in Haralson County, Georgia, and Clay County, Alabama.

HABITAT.—Stream.

Cambarus (Depressicambarus) floridanus Hobbs

FIGURE 34

Cambarus (Cambarus) floridanus Hobbs, 1941b:114, figs. 1, 4, 5, 8, 9, 16, 19, 22, 25, 31, 32.
Cambarus floridanus.—Hobbs, 1942a:356; 1942b:161, pl. 11: figs. 191–195.
Cambarus (Depressicambarus) floridanus.—Hobbs, 1969b:104, figs. 8, 18d.

TYPES.—Holotype and allotype, USNM 79341 (♂ I, ♀), and "morphotype," USNM 79344 (♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—12 miles west of Tallahassee on State Route 19, Leon County, Florida.

RANGE.—Gadsden, Jackson, and Leon counties, Florida.

HABITAT.—Burrows (primary burrower).

Cambarus (Depressicambarus) halli Hobbs

FIGURE 29

Cambarus halli Hobbs, 1968a:269, figs. 12–22.
Cambarus (Depressicambarus) halli.—Hobbs, 1969b:104, figs. 8, 18e.

TYPES.—Holotype, allotype, and morphotype, USNM 129288, 129289, 129290 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Tributary of the Tallapoosa River, 1.3 miles south of the river on U.S. Highway 27, Haralson County, Georgia.

RANGE.—Tallapoosa drainage system in Alabama and Georgia.

HABITAT.—Streams.

Cambarus (Depressicambarus) jordani Faxon

FIGURE 32

Cambarus Jordani Faxon, 1884:119; 1885a:83, pl. 3: fig. 3.
Cambarus jordani.—Hay, 1899b:959.
Cambarus (Bartonius) jordani.—Ortmann, 1905c:120.
Cambarus (Cambarus) jordani.—Fowler, 1912:341 [by implication].
Cambarus (Depressicambarus) jordani.—Hobbs, 1969b:104 [by implication]; 1972b:114, figs. 97d, 99d.

TYPES.—"Holotype," MCZ 3561 (♂ II).

TYPE-LOCALITY.—Etowah River, near Rome, Floyd County, Georgia.

RANGE.—Coosa River system in Alabama and Georgia.

HABITAT.—Streams.

Cambarus (Depressicambarus) latimanus (LeConte)

FIGURE 33

Astacus latimanus LeConte, 1856:402.
Cambarus latimanus.—Hagen, 1870:83, pl. 1: figs. 43–46; pl. 3: fig. 162.—Faxon, 1885a:69, pl. 2: fig. 3.—Hobbs, 1942b: 158, figs. 186–190.
Cambarus obesus var. *latimanus.*—Packard, 1880:222.
Cambarus (Bartonius) latimanus.—Ortmann, 1905c:120.
Cambarus (Cambarus) latimanus.—Fowler, 1912:341 [by implication].
Cambarus (Depressicambarus) latimanus.—Hobbs, 1969b:104, figs. 1f, 8, 13g, 14g, 18f.

TYPES.—Syntypes, MCZ 3378 (♂ I dry), MCZ, ANSP 329 (♀).

TYPE-LOCALITY.—Athens, Clarke County, Georgia.

RANGE.—North Carolina to Alabama, chiefly in the piedmont but extending into western Florida along the Apalachicola River.

HABITAT.—Small streams and burrows (secondary burrower).

Cambarus (Depressicambarus) obstipus Hall

FIGURE 31

Cambarus obstipus Hall, 1959:221, figs. 1–9.
Cambarus (Depressicambarus) obstipus.—Hobbs, 1969b:104, figs. 8, 18g.

TYPES.—Holotype and allotype, USNM 102123, 102124 (♂ I, ♀); paratypes, USNM.

TYPE-LOCALITY.—Black Warrior River at Underwood's Ferry, 8 miles downstream from Cordova, Walker County, Alabama.

RANGE.—Known only from the Black Warrior River system in Alabama.

HABITAT.—Streams.

Cambarus (Depressicambarus) reduncus Hobbs

FIGURE 39

Cambarus reduncus Hobbs, 1956b:61, figs. 1–11.
Cambarus (Depressicambarus) reduncus.—Hobbs, 1969b:104, figs. 8, 18h.

TYPES.—Holotype, allotype, and morphotype, USNM 99183, 99184, 99185 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Flood plain pools of Little River, 10.3 miles west of Winnsboro, Fairfield County, South Carolina.

RANGE.—Piedmont province from Orange County, North Carolina, to Richland County, South Carolina.

HABITAT.—Streams, ponds, and burrows (primary or secondary burrower).

Cambarus (Depressicambarus) sphenoides Hobbs

FIGURE 35

Cambarus sphenoides Hobbs, 1968a:262, figs. 1–11.
Cambarus (Depressicambarus) sphenoides.—Hobbs, 1969b: 104, figs. 8, 18i.

TYPES.—Holotype, allotype, and morphotype, USNM 129325, 129326, 129327 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Tributary to Clear Creek (Emory River drainage), 11.2 miles north of Crossville, Cumberland County, Tennessee, on U.S. Highway 127.

RANGE.—Stream tributaries of the Cumberland, Emory, Sequatchie, and Tennessee river systems on the Cumberland Plateau in Kentucky and Tennessee.

HABITAT.—Streams.

Cambarus (*Depressicambarus*) *striatus* Hay

FIGURE 38

Camburus sp. (Ashland City, Tennessee) Faxon, 1885c:358 [lapsus for *Cambarus*].
Cambarus latimanus striatus Hay, 1902b:437.
Cambarus graysoni Faxon, 1914:393. [Types, MCZ 3593 (♂ II, 3♀). Type-locality, Bear Creek, a tributary of Green River, Grayson Springs, Grayson County, Kentucky.]
Cambarus (*Cambarus*) *bartoni striatus*.—Ortmann, 1931:140.
Cambarus (*Cambarus*) *bartonii striatus*.—Fleming, 1938:303.
Cambarus latimanus.—Fleming, 1939:311 [erroneous spelling].
Cambarus latimus.—Fleming, 1939:319 [erroneous spelling].
Cambarus bartonii striatus.—Hobbs, 1942a:354 [by implication].
Cambarus bartoni striatus.—Rhoades, 1944a:114.
Cambarus striatus.—Hobbs, 1956b:61.
Cambarus (*Depressicambarus*) *striatus*.—Hobbs, 1969b:104, figs. 8, 18j.

TYPES.—Syntypes, USNM 25019 (♂ I, 3 ♂ II, 4 ♀), MCZ 7348 (♂ I, ♂ II, 3 ♀).

TYPE-LOCALITY.—Nashville, Davidson County, Tennessee.

RANGE.—Southern Kentucky and central Tennessee.

HABITAT.—Small streams, springs, and burrows (secondary burrower).

Subgenus *Erebicambarus* Hobbs

Erebicambarus Hobbs, 1969b:99. [Type-species by original designation, *Cambarus bartoni tenebrosus* Hay, 1902a:232. Gender: masculine.]

Cambarus (*Erebicambarus*) *cahni* Rhoades

FIGURE 44

Cambarus (*Cambarus*) *cahni* Rhoades, 1941b:146, fig. 36A–D.
Cambarus cahni.—Hobbs, 1942a:354.—Hobbs and Barr, 1960: 25, figs. 31–37.
Cambarus (*Erebicambarus*) *cahni*.—Hobbs, 1969b:100, figs. 6, 17c.

TYPES.—Holotype and allotype, USNM 80031, 80032 (♂ I, ♀); paratypes, MCZ, Alabama Mus. Nat. Hist., ANSP, Leslie Hubricht, RR.

TYPE-LOCALITY.—Belgreen Cave, NW ¼ SW ¼ sec. 12, T. 7 S., R. 13 W., Franklin County, Alabama.

RANGE.—Known only from the type-locality.

HABITAT.—Subterranean streams.

REMARKS.—It is probable that this species is either identical to *C.* (*E.*) *tenebrosus* Hay or should be accorded subspecific rank.

Cambarus (*Erebicambarus*) *hubbsi* Creaser

FIGURE 40

Cambarus (*Bartonius*) *hubbsi* Creaser, 1931a:4, figs. 7–12.
Cambarus hubbsi.—Hobbs, 1942a:356.—Williams, 1954:904, figs. 233, 235–245.
Cambarus (*Erebicambarus*) *hubbsi*.—Hobbs, 1969b:100, fig. 17d.

TYPES.—Holotype and allotype, USNM 98332, 98333 (♂ I, ♀); paratypes, USNM.

TYPE-LOCALITY.—Little Creek, tributary to St. Francis River, 1 mile northeast of Chloride, Iron County, Missouri.

RANGE.—Southeastern Missouri and northeastern Arkansas.

HABITAT.—Rocky streams.

Cambarus (*Erebicambarus*) *hubrichti* Hobbs

FIGURE 42

Cambarus hubrichti Hobbs, 1952c:689, figs. 1–8.—Hobbs and Barr, 1960:23, figs. 21–30.
Cambarus hubricht.—Hobbs, 1952c:693 [erroneous spelling].
Cambarus Hubrichti.—Cooper and Poulson, 1968:130, fig. 8.
Cambarus (*Erebicambarus*) *hubrichti*.—Hobbs, 1969b:100, fig. 17e.

TYPES.—Holotype and allotype, USNM 92295, 92296 (♂ II, ♀); paratypes, USNM.

TYPE-LOCALITY.—Stream in Lewis Cave, 15 miles northwest of Doniphan, Ripley County, Missouri.

RANGE.—White River basin in Carter, Ripley, and Oregon counties, Missouri.

HABITAT.—Subterranean waters.

Cambarus (Erebicambarus) laevis Faxon

FIGURE 46

Cambarus bartonii laevis Faxon, 1914:391.
Cambarus (Cambarus) bartoni laevis.—Ortmann, 1931:143.
Cambarus bartoni laevis.—Fleming, 1939:311.
Cambarus (Erebicambarus) laevis.—Hobbs, 1969b:100, figs. 6, 17f.
Cambarus laevis.—Hobbs III, 1971:140.

TYPES.—Syntypes, MCZ 3812 (♂ II, ♀). The male should be considered the holotype and the female a paratype (see Faxon, 1914:392).

TYPE-LOCALITY.—Bloomington, Monroe County, Indiana.

RANGE.—Southern Illinois and Indiana, southwestern Ohio, and northern Kentucky.

HABITAT.—Streams, springs, and caves.

Cambarus (Erebicambarus) ornatus Rhoades

FIGURE 45

Cambarus bartoni ornatus Rhoades, 1944a:144, fig. 10A–F.
Cambarus bartonii ornatus.—Hobbs and Shoup, 1947:145.
Cambarus ornatus.—Hobbs and Barr, 1960:15.
Cambarus (Erebicambarus) ornatus.—Hobbs, 1969b:100, figs. 6, 17g.

TYPES.—Holotype, allotype, and "morphotype," USNM 81330, 81331, 81332 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM, RR.

TYPE-LOCALITY.—Ellis Branch, 4 miles west of Carrollton, Carroll County, Kentucky.

RANGE.—Ohio Basin from the lower Kentucky River system to the Salt River, Kentucky.

HABITAT.—Intermittent streams.

Cambarus (Erebicambarus) rusticiformis Rhoades

FIGURE 41

Cambarus rusticiformis Rhoades, 1944a:133, fig. 8A–F.
Cambarus (Erebicambarus) rusticiformis.—Hobbs, 1969b:100, figs. 2a, 6, 13h, 17h.

TYPES.—Holotype, allotype, and "morphotype," USNM 81324, 81325, 81326 (♂ I, ♀, ♂ II); paratypes, MCZ, RR.

TYPE-LOCALITY.—Little River, 0.5 mile west of Cadiz, Trigg County, Kentucky.

RANGE.—Cumberland drainage system in Kentucky and Tennessee.

HABITAT.—Swift streams.

Cambarus (Erebicambarus) tenebrosus Hay

FIGURE 43

Cambarus bartoni tenebrosus Hay, 1902a:232.
Cambarus (Bartonius) bartoni.—Ortmann, 1905c:120 [in part].
Cambarus (Cambarus) bartoni tenebrosus.—Fowler, 1912:341 [by implication].
Cambarus bartonii tenebrosus.—Faxon, 1914:424.
Cambarus tenebrosus.—Garman, 1920:42.—Hobbs, 1959:898.
Cambarus Bartoni tenebrosus.—Chappuis, 1927:92.
Cambarus (Bartonius) Bartoni tenebrosus.—Fage, 1931:373.
Cambarus (Cambarus) bartoni tenebrosus.—Ortmann, 1931:145.
Cambarus (Bartonius) bartoni tenebrosus.—Hart, 1962:121.
Cambarus (Erebicambarus) tenebrosus.—Hobbs, 1969b:100, figs. 6, 14h, 17i.

TYPES.—Syntypes, USNM 22346 (♂ II, 2 ♀).

TYPE-LOCALITY.—Echo River, Mammoth Cave, Edmonson County, Kentucky.

RANGE.—Mammoth Cave southward to northern Alabama.

HABITAT.—Streams and subterranean waters (troglophilic).

Subgenus *Hiaticambarus* Hobbs

Hiaticambarus Hobbs, 1969b:105. [Type-species by original designation, *Cambarus longulus* Girard, 1852:90. Gender: masculine.]

Cambarus (Hiaticambarus) chasmodactylus James

FIGURE 50

Cambarus longulus chasmodactylus James, 1966:14, fig. 1, pl. 1b,d,e,q,u–z,zz.
Cambarus chasmodactylus.—Hobbs, 1968b:K–17.
Cambarus (Hiaticambarus) chasmodactylus.—Hobbs, 1969b:106, figs. 10, 18k.

TYPES.—Holotype, allotype, and morphotype, USNM 115513, 115514, 115516 (♂ I, ♀, ♂ II); paratypes, MCZ, TU, IBM, USNM, Hugo L. James.

TYPE-LOCALITY.—East Fork of the Greenbrier River, 9.7 miles west of Virginia State line on U.S. Highway 250, Pocahontas County, West Virginia.

RANGE.—New River drainage system in northwestern North Carolina, Virginia, and eastern West Virginia.

HABITAT.—Rocky streams.

Cambarus (Hiaticambarus) girardianus Faxon

FIGURE 47

Cambarus Girardianus Faxon, 1884:117; 1885a:78, pl. 4: fig. 1; pl. 9: figs. 2a, 2a'.
Cambarus girardianus.—Faxon, 1898:650.
Cambarus extraneus girardianus.—Faxon, 1898:650.
Cambarus (Bartonius) extraneus girardianus.—Ortmann, 1905c:120 [by implication].
Cambarus (Cambarus) extraneus girardianus.—Fowler, 1912: 341 [by implication].
Cambarus extraneus Girardianus.—Fleming, 1938:299.
Cambarus (Hiaticambarus) girardianus.—Hobbs, 1969b:106, figs. 10, 18*l*.

TYPES.—Syntypes, MCZ 3560 (♂ II, ♀), USNM 4882 (♂ II, 2 ♀).

TYPE-LOCALITY.—Cypress Creek, Lauderdale County, Alabama.

RANGE.—Tennessee River drainage system in Alabama, Georgia, Mississippi, and Tennessee.

HABITAT.—Streams.

Cambarus (Hiaticambarus) longirostris Faxon

FIGURE 48

Cambarus Bartonii var. *longirostris* Faxon, 1885a:64.
Cambarus bartonii longirostris.—Faxon, 1890:623.
Cambarus bartonii spinirostris.—Faxon, 1890:623 [lapsus for *C. b. longirostris*].
Cambarus longulus longirostris.—Hay, 1899b: 959.—James, 1966:9, fig. 2a,b, pl. 1c,f,g,n,o,r,s.
Cambarus (Bartonius) bartoni longirostris.—Ortmann, 1905c: 135 [by implication].
Cambarus (Cambarus) bartonii longirostris.—Fowler, 1912: 341 [by implication].
Cambarus (Cambarus) longulus longirostris.—Ortmann, 1931: 121.
Cambarus longerosilis.—Brimley, 1938:503 [erroneous spelling].
Cambarus (Hiaticambarus) longirostris.—Hobbs, 1969b:106, figs. 10, 18m.

TYPE.—Holotype, MCZ 3629 (♂ II).

TYPE-LOCALITY.—"Eastern Tennessee and West Virginia" (Faxon, 1885a). Doe River, Elizabethton, Carter County, Tennessee, designated by Ortmann, 1931.

RANGE.—Tennessee River drainage in eastern Tennessee, southwestern Virginia, and western North Carolina, in the Coosa drainage in northeastern Alabama and Georgia.

HABITAT.—Rocky streams.

Cambarus (Hiaticambarus) longulus Girard

FIGURE 49

Cambarus longulus Girard, 1852:90.
Cambarus Bartonii longulus.—Faxon, 1885a:66 [by implication].
Cambarus longulus longulus.—Hay, 1899b:959 [by implication].—James, 1966:4, fig. 2c, pl. 1a,h–m,p,t,mm.
Cambarus (Bartonius) longulus.—Ortmann, 1905c:120.
Cambarus (Cambarus) longulus longulus.—Fowler, 1912:341 [by implication].—Ortmann, 1931:106.
Cambarus bartonii longulus.—Faxon, 1914:387.
Cambarus bartoni longulus.—Ortmann, 1931:118.
[*Cambarus longulus*] *longulous.*—James, 1966:22 [erroneous spelling].
Cambaroides longulus.—Unestam, 1969:204 [lapsus for *Cambarus*].
Cambarus (Hiaticambarus) longulus.—Hobbs, 1969b:106, figs. 1a, 10, 13c, 14c, 18n.

TYPES.—Destroyed in the Chicago fire, 1871.

TYPE-LOCALITY.—"Middle States" (Girard, 1852). South River, Waynesboro, Augusta County, Virginia, designated by Ortmann, 1931. Emended by Hobbs (1967a:129) to Rockfish River, south of Afton, Nelson County, Virginia.

RANGE.—Atlantic watershed from the James drainage in Virginia south to the Yadkin drainage in North Carolina, in mountains and piedmont.

HABITAT.—Rocky streams.

Subgenus *Jugicambarus* Hobbs

Jugicambarus Hobbs, 1969b:106. [Type-species by original designation, *Cambarus bartonii asperimanus* Faxon, 1914: 391. Gender: masculine.]

Cambarus (Jugicambarus) asperimanus Faxon

FIGURE 57

Cambarus bartonii asperimanus Faxon, 1914:391.
Cambarus (Cambarus) bartoni asperimanus.—Ortmann, 1931: 137.
Cambarus asperimanus.—Brimley, 1938:503.
Cambarus (Jugicambarus) asperimanus.—Hobbs, 1969b:107, figs. 1d, 9, 13d, 14d, 18o.

TYPES.—Syntypes, USNM 47375 (2 ♂ I).

TYPE-LOCALITY.—Flat Creek, Montreat, Buncombe County, North Carolina.

RANGE.—Headwaters of the French Broad, Little Tennessee, Catawba, Broad, Savannah, and Saluda rivers in Georgia, North Carolina, and South Carolina.

HABITAT.—Small mountain streams.

Cambarus (Jugicambarus) bouchardi Hobbs

FIGURE 51

Cambarus (Veticambarus) bouchardi Hobbs, 1970b:245, figs. 1, 2.
Cambarus (Jugicambarus) bouchardi.—Bouchard, 1973:105.

TYPES.—Holotype, allotype, and morphotype, USNM 130295, 130296, 130297 (♂ I, ♀, ♂ II); paratypes, USNM, Raymond W. Bouchard.

TYPE-LOCALITY.—Perkins Creek, 6.9 miles north of Oneida, Scott County, Tennessee, on U.S. Highway 27.

RANGE.—Known from only three localities in the Big South Fork of the Cumberland River in Scott County, Tennessee.

HABITAT.—Streams.

Cambarus (Jugicambarus) brachydactylus Hobbs

FIGURE 58

Cambarus brachydactylus Hobbs, 1953c:20, pl. 1: figs. 1–10.
Cambarus (Jugicambarus) brachydactylus.—Hobbs, 1969b: 107, figs. 9, 18p.

TYPES.—Holotype and allotype, USNM 93155 (♂ I, ♀); morphotype, USNM 93156 (♂ II); paratypes, MCZ, USNM, TU.

TYPE-LOCALITY.—Louise Creek, 13.9 miles south of Clarksville, Montgomery County, Tennessee.

RANGE.—Tributaries of the Cumberland River on the western Highland Rim in Montgomery and Dickson counties, Tennessee.

HABITAT.—Riffle areas of streams.

Cambarus (Jugicambarus) carolinus (Erichson)

FIGURE 62

Astacus Carolinus Erichson, 1846:87.
Astacus (Cambarus) Carolinus Erichson, 1846:96.
Astacus (Cambarus) carolinus.—Dana, 1852:522 [by implication].
Cambarus carolinus.—Girard, 1852:88.
Cambarus Carolinus.—Hagen, 1870:8.
Cambarus (Bartonius) carolinus.—Ortmann, 1905c:120.
Cambarus carolinensis.—Adams, 1907:899 [erroneous spelling].
Cambarus (Cambarus) carolinus.—Fowler, 1912:341 [by implication].
Cambarus carolinus carolinus.—Faxon, 1914:399.
Cambarus (Jugicambarus) carolinus.—Hobbs, 1969b:107 [in part], figs. 9, 19a.—Hobbs and Bouchard, 1973:51, figs. 3, 4.

TYPES.—Not extant. Topotypes, USNM 144164 (2 ♂ I, ♀, ♀ with young), R. W. Bouchard.

TYPE-LOCALITY.—Greenville, Greenville County, South Carolina. Restricted by Hobbs and Bouchard (1973:55) to "Along Wildcat Creek, 8.8 miles north of the junction of U.S. Highway 29 and State Route 101, on latter. . . ."

RANGE.—Known with certainty only in the upper Enoree and Saluda drainage basins in South Carolina.

HABITAT.—Burrows (primary burrower).

Cambarus (Jugicambarus) causeyi Reimer

FIGURE 65

Cambarus causeyi Reimer, 1966:9, figs. 1–8.
Cambarus (Jugicambarus) causeyi.—Hobbs, 1969b:107, fig. 19b.

TYPES.—Holotype, allotype, USNM 116678, 116679 (♂ I, ♀); paratype, USNM.

TYPE-LOCALITY.—Spring and natural pond, 4 miles west of Sandgap, Pope County, Arkansas, on State Route 124.

RANGE.—Known only from the vicinity of the type-locality.

HABITAT.—Complex burrows on hillside and near spring and pond.

Cambarus (Jugicambarus) conasaugaensis Hobbs and Hobbs

FIGURE 56

Cambarus conasaugaensis Hobbs and Hobbs, 1962:41, figs. 1–10.
Cambarus (Jugicambarus) conasaugaensis.—Hobbs, 1969b: 107, figs. 9, 19c.

TYPES.—Holotype, allotype, and morphotype, USNM 107156, 107157, 107158 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Small tributary of the Conasauga River 2 miles east of Chatsworth, Murray County, Georgia, on U.S. Highway 76.

RANGE.—Tributaries of the Coosawattee and Conasauga rivers in Gilmer and Murray counties, Georgia.

HABITAT.—Streams.

Cambarus (Jugicambarus) cryptodytes Hobbs

FIGURE 64

Cambarus cryptodytes Hobbs, 1941b:110, figs. 2, 3, 7, 11, 13, 15, 18, 21, 24, 28, 29; 1942b:162, pl. 11: figs. 196–200.—Hobbs and Barr, 1960:31, figs. 48–57.
Cambarus (Jugicambarus) cryptodytes.—Hobbs, 1969b:107, figs. 9, 19d.
cambarus cryptodytes.—Padgett, 1970:19 [lapsus calami].

TYPES.—Holotype, allotype, and "morphotype," USNM 79339, 79340, 79343 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—R. W. Williams farm, 2 miles south of Graceville, Jackson County, Florida.

RANGE.—Known from several caves in Jackson County, Florida, and Climax Cave, 3 miles north of Climax, Decatur County, Georgia.

HABITAT.—Subterranean waters.

Cambarus (Jugicambarus) distans Rhoades

FIGURE 53

Cambarus distans Rhoades, 1944a:136, fig. 9a–f.
Cambarus (Jugicambarus) distans.—Hobbs, 1969b:107, figs. 9, 19e.

TYPES.—Holotype, allotype, and "morphotype," USNM 81327, 81329, 81328 (♂ I, ♀, ♂ II); paratypes, CM, USNM, RR.

TYPE-LOCALITY.—"Cumberland River and small tributary, just above Cumberland Falls, McCreary County, Kentucky" (Rhoades, 1944a:139).

RANGE.—Cumberland drainage in southeastern Kentucky and tributaries on Cumberland Plateau in Tennessee.

HABITAT.—Streams.

Cambarus (Jugicambarus) dubius Faxon

FIGURE 60

Cambarus dubius Faxon, 1884:114; 1885a:70, pl. 4: fig. 3; pl. 8: figs. 7, 7'.
Cambarus carolinus dubius.—Faxon, 1914:396, 425.
Cambarus (Jugicambarus) dubius.—Hobbs and Bouchard, 1973:62.

TYPES.—Holotype, MCZ 3631 (♂ I).

TYPE-LOCALITY.—Terra Alta (Cranberry Summit), Preston County, West Virginia.

RANGE.—Poorly known, but extending southward through the Allegheny Mountains from southwestern Pennsylvania into Virginia. The same, or a closely allied, species also occurs in southeastern Kentucky, eastern Tennessee, and northwestern North Carolina.

HABITAT.—Burrows (primary burrower).

Cambarus (Jugicambarus) friaufi Hobbs

FIGURE 59

Cambarus friaufi Hobbs, 1953c:24, figs. 11–18.
Cambarus (Jugicambarus) friaufi.—Hobbs, 1969b:107, figs. 9, 19f.

TYPES.—Holotype, and allotype, USNM 93157 (♂ I, ♀); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Small stream tributary of Cumberland River at Elmwood, Smith County, Tennessee.

RANGE.—Eastern Highland Rim in Smith and De Kalb counties, Tennessee.

HABITAT.—Swift reaches of small streams.

Cambarus (Jugicambarus) gentryi Hobbs

FIGURE 63

Cambarus (Jugicambarus) gentryi Hobbs, 1970a:163, fig. 1.

TYPES.—Holotype, allotype, and morphotype, USNM 130283, 130284, 130285 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Boggy area below seepage along small tributary to Turnbull Creek (Harpeth-Cumberland drainage system), 1 mile west of Kingston Springs, Cheatham County, Tennessee.

RANGE.—Portions of the Cumberland (Stones River, Harpeth River, and Yellow Creek) and Duck rivers in middle Tennessee.

HABITAT.—Burrows (primary burrower).

Cambarus (Jugicambarus) monongalensis Ortmann

FIGURE 61

Cambarus monongalensis Ortmann, 1905a:395.
Cambarus (Bartonius) monongalensis.—Ortmann, 1905c:120; 1906b:398, pl. B: fig. 4; pl. 39: figs. 4, 10; pl. 40: fig. 5; pl. 41: figs. 2–4.
Cambarus (Cambarus) monongalensis.—Fowler, 1912:341 [by implication].

Cambarus carolinus monongalensis.—Faxon, 1914:396, 399, 425.
Cambarus carolinus monongalenses.—Hand, 1954:437 [erroneous spelling].
Cambarus (Jugicambarus) monongalensis.—Hobbs, 1969b:109, figs. 9, 19g.

TYPES.—Syntypes, CM 74.316, USNM 30613 (♂ I, 2 ♀), MCZ 6953 (♂ I, ♀), ZIAS 1/44968 (4 specimens), ANSP 1601 (♂ I, 3 ♀).

TYPE-LOCALITY.—Edgewood Park, Allegheny County, Pennsylvania.

RANGE.—Western Pennsylvania and adjacent northern West Virginia.

HABITAT.—Burrows (primary burrower).

Cambarus (Jugicambarus) obeyensis Hobbs and Shoup

FIGURE 52

Cambarus obeyensis Hobbs and Shoup, 1947:138, figs. 1–11.
Cambarus (Jugicambarus) obeyensis.—Hobbs, 1969b:107, figs. 9, 19h.—Bouchard, 1973:105.
Cambarus (Veticambarus) obeyensis.—Hobbs, 1970b:243.

TYPES.—Holotype, allotype, and "morphotype," USNM 82260 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM, TU.

TYPE-LOCALITY.—Big Hurricane Creek on the Monterey-Clarkrange road, Putnam-Cumberland county line, Tennessee.

RANGE.—Headwaters of East Fork of Obey River in Cumberland, Fentress, Putnam, and Overton counties, Tennessee.

HABITAT.—Rocky streams.

Cambarus (Jugicambarus) parvoculus Hobbs and Shoup

FIGURE 55

Cambarus parvoculus Hobbs and Shoup, 1947:142, figs. 12–22.
Cambarus (Jugicambarus) parvoculus.—Hobbs, 1969b:107, figs. 9, 19i.

TYPES.—Holotype, allotype, and "morphotype," USNM 82259 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ, TU.

TYPE-LOCALITY.—Tributary to Big Hurricane Creek, Fentress County (southwestern part), Tennessee.

RANGE.—Cumberland River drainage in Overton, Fentress, and Putnam counties, Tennessee, and Bell County, Kentucky, and Tennessee River drainage in Lee County, Virginia.

HABITAT.—Rocky streams.

Cambarus (Jugicambarus) setosus Faxon

FIGURE 66

Cambarus setosus Faxon, 1889:237, pl. 1: figs. 1–3, 7; pl. 2: fig. 1.—Hobbs and Barr, 1960:26, figs. 38–47.
Cambarus ayersii Steele, 1902:18, pl. 5: fig. A; pl. 6: fig. 14. [Types, USNM 62316 (♂ II). Type-locality, Fisher's Cave (Sequiota Cave in Galloway, T. 28 N., R. 21 W., sec. 9), near Springfield, Green County, Missouri.]
Cambarus (Bartonius) setosus.—Ortmann, 1905c:120.
Cambarus (Cambarus) setosus.—Fowler, 1912:341 [by implication].
Cambarus (Jugicambarus) setosus.—Hobbs, 1969b:107, fig. 19j.

TYPES.—Syntypes, MCZ 4200 (4 ♂ II, ♀), MCZ 4201 (3 ♂ I, ♂ II, 4 ♀, 4 ♂ juv., 2 ♀ juv.), MCZ 4202 (2 ♂ II, 3 ♀, 3 ♂ juv., 4 ♀ juv.), USNM 25828 (♂ II, ♀).

TYPE-LOCALITY.—Wilson's Cave [Whisner Cave, 2 miles northwest of Sarcoxie, T. 27 N., R. 29 W., sec. 6], near Springfield, Jasper County, Missouri.

RANGE.—Southwestern Missouri and northeastern Oklahoma (?).

HABITAT.—Subterranean streams.

Cambarus (Jugicambarus) tartarus Hobbs and Cooper

FIGURE 68

Cambarus (Jugicambarus) tartarus Hobbs and Cooper, 1972:51, figs. 1–12.

TYPES.—Holotype, allotype, and morphotype, USNM 131951, 131411, 132754 (♂ I, ♀, ♂ II).

TYPE-LOCALITY.—Stansberry-January Cave System, 4 miles north of Colcord (T. 21 N., R. 22 E., sec. 11), Delaware County, Oklahoma.

RANGE.—Known only from the type-locality.

HABITAT.—Subterranean stream.

Cambarus (Jugicambarus) unestami Hobbs and Hall

FIGURE 54

Cambarus (Depressicambarus) unestami Hobbs and Hall, 1969:287, figs. 13–24.
Cambarus (Jugicambarus) unestami.—Bouchard, 1973:105.

TYPES.—Holotype, allotype, and morphotype, USNM 129863, 129864, 129865 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Daniel Creek, 2.5 miles west of the Walker County line on State Route 143, Dade County, Georgia.

RANGE.—Tributaries of the Tennessee River in Dade County, Georgia.

HABITAT.—Swift portions of small streams.

Cambarus (Jugicambarus) zophonastes Hobbs and Bedinger

FIGURE 67

Cambarus zophonastes Hobbs and Bedinger, 1964:11, figs. 1, 2, 4–11.

Cambarus (Jugicambarus) zophonastes.—Hobbs, 1969b:107, fig. 19k.

TYPES.—Holotype and allotype, USNM 108356, 108357 (♂ I, ♀); paratypes, USNM.

TYPE-LOCALITY.—Hell Creek Cave, Stone County, Arkansas (NE¼NE¼, sec. 30, T. 15 N., R. 10 W.).

RANGE.—Known only from the type-locality.

HABITAT.—Subterranean stream.

Subgenus *Lacunicambarus* Hobbs

Lacunicambarus Hobbs, 1969b:110. [Type-species by original designation, *Cambarus diogenes* Girard, 1852:88. Gender: masculine.]

Cambarus (Lacunicambarus) diogenes diogenes Girard

FIGURE 69

Astacus fossor Rafinesque, 1817:42. [Name suppressed by International Commission, Opinion 522, 1958.]

Cambarus diogenes Girard, 1852:88.

Cambarus nebrascensis Girard, 1852:91. [Location of types (if extant) unknown. Type-locality, Fort Pierre, Nebraska (now in Stanley County, South Dakota).]

Cambarus Diogenes.—Hagen, 1870:6.

Cambarus obesus Hagen, 1870:81, pl. 1: figs. 39–42; pl. 3: fig. 163; pl. 9. [Syntypes: MCZ 195 (2 ♂ I, ♀), 165 (♀), 3361 (♂ I), 229 (♂ I), 3363 (♂); MHNP (2 dry); St. Petersburg Mus., U.S.S.R. (♀), lost. Type-locality, Lawn Ridge, Illinois.]

Cambarus Diogenenes.—Abbott, 1873:83 [erroneous spelling].

Cambarus Diogenes Diogenes.—Faxon, 1884:144 [by implication].

Cambarus diogenes diogenes.—Hay, 1899b:959 [by implication].—Marlow, 1960:229.

S[ambarus] diogenes.—Steele, 1902:11 [erroneous spelling].

Cambarus (Bartonius) diogenes.—Ortmann, 1905c:120; 1906b: 402, pl. A: fig. 3; pl. 39: fig. 11; pl. 40: figs. 6, 7.

Bartonius diogenes.—Williamson, 1907:749 [*Bartonius* intended as a subgeneric name].

Cambarus (Cambarus) diogenes.—Fowler, 1912:341, 348.

Cambarus (Lacunicambarus) diogenes diogenes.—Hobbs, 1969b:110, figs. 2c, 11, 13i, 14i, 20a.

TYPES.—Not known to be extant except for a questionable paratype (♀), ANSP.

TYPE-LOCALITY.—Vicinity of Washington, D. C.

RANGE.—Very widespread east of the Rockies and south of the Great Lakes, except peninsular Florida and the Alleghenies; not reported northeast of New Jersey in the East and east of western Pennsylvania in the Mississippi drainage system.

HABITAT.—Burrows (primary burrower); occasionally found in ponds or streams.

REMARKS.—This is a species complex and needs considerable attention.

Cambarus (Lacunicambarus) diogenes ludovicianus Faxon

FIGURE 70

Cambarus Diogenes var. *Ludoviciana* Faxon, 1885:144.

Cambarus diogenes ludovicianus.—Hay, 1899b:959.—Marlow, 1960:229.

Cambarus diogenes, ludoviciana.—Steele, 1902:21.

Cambarus diogenes ludoviciana.—Penn, 1941:8.

Cambarus ludovicianus.—Roberts, 1944:363.

Cambarus (Lacunicambarus) diogenes ludovicianus.—Hobbs, 1969b:110, fig. 20b.

TYPES.—Syntypes, USNM 5504 (♂ I, ♂ II, 4 ♀), 5625 (♂ II, ♀), MCZ 3617 (♂ I).

TYPE-LOCALITY.—New Orleans, Orleans Parish, Louisiana.

RANGE.—Lower Mississippi drainage in Louisiana.

HABITAT.—Primary burrower.

Subgenus *Puncticambarus* Hobbs

Puncticambarus Hobbs, 1969b:101. [Type-species by original designation, *Cambarus extraneus* Hagen, 1870:73. Gender: masculine.]

Cambarus (Puncticambarus) acuminatus Faxon

FIGURE 74

Cambarus acuminatus Faxon, 1884:113; 1885a:67, pl. 3: fig.

5; pl. 8: figs. 6a, 6a'.—Hobbs and Walton, 1966:136.
Cambarus (Bartonius) acuminatus.—Ortmann, 1905c:120.
Cambarus (Cambarus) acuminatus.—Fowler, 1912:341 [by implication].
Cambarus bartonii acuminatus.—Faxon, 1914:424.
Cambarus montanus acuminatus.—Ortmann, 1931:106.
Cambarus bartoni acuminatus.—Ortmann, 1931:108.
Cambarus (Cambarus) montanus acuminatus.—Ortmann, 1931:108.
Cambarus (Puncticambarus) acuminatus.—Hobbs, 1969b:101, figs. 7, 14*a*, 17*l*.

TYPES.—Syntype, MCZ 3624 (♀). "Cotypes" formerly said to have been at Butler University (Faxon, 1914:424) are no longer there.

TYPE-LOCALITY.—Saluda River, at Farr's Mills, west of Greenville, Greenville County, South Carolina.

RANGE.—Atlantic watershed from Maryland to Georgia.

HABITAT.—Streams.

Cambarus (Puncticambarus) chaugaensis Prins and Hobbs

FIGURE 75

Cambarus (Puncticambarus) sp. E Hobbs, 1969b:102, 134, 135.
Cambarus (Puncticambarus) chaugaensis Prins and Hobbs, 1972:413, fig. 1.

TYPES.—Holotype, allotype, and morphotype, USNM 131926, 131927, 131928 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Chauga River at Cassidy Bridge (off County Road 290), Oconee County, South Carolina.

RANGE.—Tributaries of the Savannah River in Oconee County, South Carolina.

HABITAT.—Streams.

Cambarus (Puncticambarus) extraneus Hagen

FIGURE 71

Cambarus extraneus Hagen, 1870:73, pl. 1: figs. 88, 89; pl. 3: fig. 156.
Cambarus extranus.—Steele, 1902:7 [erroneous spelling].
Cambarus (Bartonius) extraneus.—Ortmann, 1905c:120.
Cambarus (Cambarus) extraneus.—Fowler, 1912:341 [by implication].
Cambarus extranius.—Unestam, 1969:203 [erroneous spelling].
Cambarus (Puncticambarus) extraneus.—Hobbs, 1969b:101, figs. 1b, 7, 13b, 14b, 17m.

TYPES.—MCZ 175 (3 ♂ II, ♀), USNM (♀).

TYPE-LOCALITY.—"Tennessee River, Georgia" (Hagen). The emendation by Ortmann (1931) to Etowah River, Rome, Floyd County, Georgia, must be rejected because this crayfish does not occur in the Coosa (Etowah) basin.

RANGE.—Known only from the Chickamauga Creek basin in northwestern Georgia.

HABITAT.—Streams.

Cambarus (Puncticambarus) nerterius Hobbs

FIGURE 73

Cambarus nerterius Hobbs, 1964:189, figs. 1–10.
Cambarus (Puncticambarus) nerterius.—Hobbs, 1969b:101, figs. 7, 17n.

TYPES.—Holotype, allotype, and morphotype, USNM 111295, 111296, 111297 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Matt's Black Cave, 2 miles south of Renick, Greenbrier County, West Virginia.

RANGE.—Greenbrier River drainage system, West Virginia.

HABITAT.—Subterranean waters.

Cambarus (Puncticambarus) reburrus Prins

FIGURE 76

Cambarus reburrus Prins, 1968:458, figs. 1–11.
Cambarus (Puncticambarus) reburrus.—Prins and Hobbs, 1972:412.

TYPES.—Holotype, allotype, and morphotype, USNM 129501, 129502, 129503 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ, Rudolph Prins.

TYPE-LOCALITY.—Small tributary to Horsepasture River from Sapphire Lake off U.S. Highway 64, 5.5 miles east of Cashiers, Jackson County, North Carolina (Savannah Drainage).

RANGE.—Type-locality and tributaries of the French Broad River in Buncombe, Madison, and Transylvania counties, North Carolina.

HABITAT.—Streams.

Cambarus (Puncticambarus) robustus Girard

FIGURE 77

Cambarus robustus Girard, 1852:90.—Hagen, 1870:80, pl. 3:

fig. 167.—Crocker and Barr, 1968:118, figs. 30, 39, 48, 55, 65, 67, 81.
Cambarus Bartonii robustus.—Faxon, 1885a:9.
Cambarus Bartonii var. *robusta*.—Faxon, 1885a:61.
Cambarus bartonii robustus.—Faxon, 1890:622.
Cambarus (Bartonius) bartoni robustus.—Ortmann, 1905c: 122 [by implication].
Cambarus bartoni robustus.—Ortmann, 1905c:135.
Cambarus (Cambarus) bartonii robustus.—Fowler, 1912:341 [by implication].
Cambarus (Cambarus) bartoni robustus.—Ortmann, 1931:126.
Cambarus (Bartonius) robustus.—Creaser, 1931b:260.
Cambarus (Puncticambarus) robustus.—Hobbs, 1969b:101, figs. 1c, 13a, 17o.

TYPES.—Syntype, ANSP 328 (♂ II); others probably destroyed in the Chicago fire, 1871.

TYPE-LOCALITY.—Humber River, near Toronto, Canada.

RANGE.—Ontario and New York, to Illinois, and southward to Tennessee, North Carolina, and Virginia.

HABITAT.—Streams.

Cambarus (Puncticambarus) spicatus Hobbs

FIGURE 72

Cambarus spicatus Hobbs, 1956c:116, figs. 1–11.
Cambarus (Puncticambarus) spicatus.—Hobbs, 1969b:102, figs. 7, 18a.

TYPES.—Holotype, allotype, and morphotype, USNM 99323, 99324, 99325 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Little River, 10.3 miles west of Winnsboro, Fairfield County, South Carolina.

RANGE.—Little River in Fairfield and Richland counties, South Carolina.

HABITAT.—Streams.

Cambarus (Puncticambarus) veteranus Faxon

FIGURE 78

Cambarus bartonii veteranus Faxon, 1914:389, pl. 13: fig. 2.
Cambarus bartoni veteranus.—Ortmann, 1931:112.
Cambarus (Cambarus) montanus veteranus.—Ortmann, 1931: 112 [in part].
Cambarus veteranus.—Hobbs, 1955b:330.
Cambarus (Puncticambarus) veteranus.—Hobbs, 1969b:102, figs. 7, 18b.

TYPES.—Holotype, USNM 44712 (♂ I); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Indian Creek, Baileysville, Wyoming County, West Virginia.

RANGE.—Guyandot drainage in southern West Virginia. Limits of range very indefinite and poorly known.

HABITAT.—Streams.

Subgenus *Veticambarus* Hobbs

Veticambarus Hobbs, 1969b:96. [Type-species by original designation, *Cambarus pristinus* Hobbs, 1965:268. Gender: masculine.]

Cambarus (Veticambarus) pristinus Hobbs

FIGURE 79

Cambarus pristinus Hobbs, 1965:268, figs. 1–12.
Cambarus (Veticambarus) pristinus.—Hobbs, 1969b:98, figs. 1e, 5, 13l, 14k, 17a.

TYPES.—Holotype, allotype, morphotype, USNM 115528, 115529, 115530 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ.

TYPE-LOCALITY.—White Oak Creek, a tributary to the Caney Fork of the Cumberland River, 3.9 miles east of the White-Cumberland county line and 0.1 mile south of U.S. Highway 70S, Cumberland County, Tennessee.

RANGE.—Three localities in the Caney Fork drainage in Cumberland County, Tennessee.

HABITAT.—Lotic habitats, under stones.

Genus *Fallicambarus* Hobbs

Fallicambarus Hobbs, 1969b:111. [Type-species by original designation, *Cambarus strawni* Reimer, 1966:11. Gender: masculine.]

Fallicambarus byersi (Hobbs)

FIGURE 87

Cambarus byersi Hobbs, 1941:118, figs. 6, 10, 14, 17, 20, 23, 26, 27, 30; 1942b:167, pl. 12: figs. 206–210.
Procambarus byersi.—Hobbs, 1942b:14 [erroneous combination].
Fallicambarus byersi.—Hobbs, 1969b:111, fig. 20c; 1972b:101, figs. 81e, 83e.

TYPES.—Holotype, allotype, USNM 79342 (♂ I, ♀), and "morphotype," USNM 87969 (♂ II); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Phifer Creek, 5.5 miles north-

west of Pensacola, near U.S. Highway 90, Escambia County, Florida.

RANGE.—Okaloosa County, Florida, west to Bay St. Louis, Hancock County, Mississippi.

HABITAT.—Primary burrower.

Fallicambarus dissitus (Penn)

FIGURE 88

Cambarus dissitus Penn, 1955:73, figs. 1–13.
Fallicambarus dissitus.—Hobbs, 1969b:111, fig. 20d; 1972b:99, figs. 81c, 82d.

TYPES.—Holotype, allotype, and morphotype, USNM 98125, 98126, 98127 (♂ I, ♀, ♂ II); paratypes, ANSP, AMNH, CM, TU, USNM.

TYPE-LOCALITY.—Three miles east of Choudrant, Lincoln Parish, Louisiana.

RANGE.—Caldwell and Lincoln parishes, Louisiana.

HABITAT.—Burrows (primary burrower).

Fallicambarus fodiens (Cottle)

FIGURE 82

Astacus fodiens Cottle, 1863:217.
Cambarus argillicola Faxon, 1884:115. [Types, MCZ 3459 (♂ I, 4 ♀, 3 juv.). Type-locality, Detroit, Michigan.]
Cambarus (Bartonius) argillicola.—Ortmann, 1905c:120.
Bartonius argillicola.—Williamson, 1907:749 [*Bartonius* intended as subgeneric name].
Cambarus fodiens.—Huntsman, 1915:158, figs. 8f, 9d, 10e, 11a, 12e.—Crocker and Barr, 1968:129–135, figs. 28, 37, 46, 57, 62, 85.
Cambarus (Bartonius) fodiens.—Creaser, 1931b:260, fig. 37.
Fallicambarus fodiens.—Hobbs, 1969b:111, fig. 20e; 1972b:102, figs. 83c, 84b, 85b.

TYPES.—If extant, location unknown.

TYPE-LOCALITY.—"Upper Canada." Probably Ontario.

RANGE.—Lower Ontario, Michigan, Ohio, Indiana, and Illinois southward to Arkansas and southwestern Georgia.

HABITAT.—Lentic and lotic habitats and burrows (primary or secondary burrower).

Fallicambarus hedgpethi (Hobbs)

FIGURE 83

Cambarus hedgpethi Hobbs, 1948d:224, fig. 17*a–f,h–j,l*.—Penn, 1959:14, figs. 9, 27, 46, 64, 86.—Reimer, 1969:53, figs. 2, 39.
Fallicambarus hedgpethi.—Hobbs, 1969b:111, fig. 20f; 1972b:102, figs. 82c, 83d.

TYPES.—Holotype, morphotype, USNM 85146 (♂ I, ♂ II), and allotype, USNM 85147 (♀); paratypes, USNM.

TYPE-LOCALITY.—Lower middle part of the Aransas National Wildlife Refuge, Aransas County, Texas.

RANGE.—Texas and Oklahoma eastward to Louisiana and western Tennessee.

HABITAT.—Temporary bodies of water and burrows (primary burrower).

Fallicambarus hortoni Hobbs and Fitzpatrick

FIGURE 85

Fallicambarus hortoni Hobbs and Fitzpatrick, 1970:829, figs. 1–12.—Hobbs, 1972b:100, fig. 81d.

TYPES.—Holotype, allotype, and morphotype, USNM 129895, 129897, 129896 (♂ I, ♀, ♂ II); paratypes, USNM, J. F. Fitzpatrick, Jr.

TYPE-LOCALITY.—Low area along roadside ditch leading to tributary of Cypress Creek, 7.5 miles east of the Hardeman County line on State Route 57 (Hatchie River drainage), McNairy County, Tennessee.

RANGE.—Known only from the type-locality.

HABITAT.—Burrows (primary burrower).

Fallicambarus macneesei (Black)

FIGURE 80

Cambarus macneesei Black, 1967:173, figs. 1–12.
Fallicambarus macneesei.—Hobbs, 1969b:111, fig. 20g; 1972b:99, figs. 4c, 81a.

TYPES.—Holotype, allotype, and morphotype, USNM 117681, 117683, 117682 (♂ I, ♀, ♂ II); paratypes, USNM, TU, MCZ, Joe B. Black, J. F. Fitzpatrick, Jr.

TYPE-LOCALITY.—Roadside ditches along East McNeese Road, 1.8 miles west of intersection with State Route 14, Lake Charles, Calcasieu Parish, Louisiana.

RANGE.—Calcasieu River system in Calcasieu Parish, Louisiana.

HABITAT.—Pools, roadside ditches, and burrows (?secondary burrower).

Fallicambarus oryktes (Penn and Marlow)

FIGURE 86

Cambarus oryktes Penn and Marlow, 1959:197, figs. 1–14.
Fallicambarus oryktes.—Hobbs, 1969b:111, fig. 20h; 1972b:101, figs. 81f, 83a.

TYPES.—Holotype, allotype, and morphotype, USNM 101735, 101736, 101737 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Roadside ditch at Alton, St. Tammany Parish, Louisiana.

RANGE.—St. Tammany Parish, Louisiana, and southern Mississippi.

HABITAT.—Burrows (primary burrower).

Fallicambarus strawni (Reimer)

FIGURE 81

Cambarus strawni Reimer, 1966:11, figs. 9–18.
Fallicambarus strawni.—Hobbs, 1969b:111, figs. 2f, 13j, 20i; 1972b:99, figs. 4a, 81b.

TYPES.—Holotype, allotype, and morphotype, USNM 116675, 116676, 116677 (♂ I, ♀, ♂ II); paratypes, R. D. Reimer.

TYPE-LOCALITY.—Small marshy area in the Saline River drainage, 2.7 miles north of Dierks, Howard County, Arkansas.

RANGE.—Sevier, Howard, and Pike counties, Arkansas.

HABITAT.—Burrows, both simple and complex.

Fallicambarus uhleri (Faxon)

FIGURE 84

Cambarus Uhleri Faxon, 1884:116; 1885a:77, pl. 8: figs. 8, 8′, 8a, 8a′.
Cambarus uhleri.—Hay, 1899b:959.—Meredith and Schwartz, 1960:28, figs. 11, 16.
Cambarus (*Bartonius*) *uhleri*.—Ortmann, 1905c:120.
Cambarus (*Cambarus*) *uhleri*.—Fowler, 1912:341 [by implication].
Fallicambarus uhleri.—Hobbs, 1969b:111, fig. 20j; 1972b:102, figs. 82a, 83b, 84a, 85a.

TYPES.—Holotype, MCZ 3634 (♂ I); paratypes, MCZ.

TYPE-LOCALITY.—"Swamp on Eastern Road near Felsbury, Somerset County, Maryland" (restricted by Faxon, 1914:426).

RANGE.—Atlantic coastal plain, from Maryland to South Carolina.

HABITAT.—Lotic and lentic habitats and burrows (secondary burrower).

Genus *Faxonella* Creaser

Faxonella Creaser, 1933b:21. [Type-species by monotypy, *Cambarus clypeatus* Hay, 1899a:122. Gender: feminine.]

Faxonella beyeri (Penn)

FIGURE 91

Orconectes (*Faxonella*) *beyeri* Penn, 1950a:166, figs. 1–9.
Faxonella beyeri.—Creaser, 1962:3 [by implication].—Fitzpatrick, 1963:61.—Hobbs, 1972b:29, fig. 19b.

TYPES.—Holotype, allotype, and morphotype, USNM 90361, 90362, 90363 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Roadside ditch on U.S. Highway 84, 2 miles northeast of Naborton, De Soto Parish, Louisiana.

RANGE.—Known only from De Soto and Natchitoches parishes, Louisiana.

HABITAT.—Roadside ditches.

Faxonella clypeata (Hay)

FIGURE 89

Cambarus clypeatus Hay, 1899a:122, fig. 2.
Faxonius (*Faxonella*) *clypeatus*.—Creaser, 1933b:19, pl. 1: figs. 7, 8; pl. 2: figs. 1, 2.
Orconectes clypeatus.—Hobbs, 1942a:352 [by implication].
Orconectes (*Faxonella*) *clypeata*.—Hobbs, 1942b:154, pl. 11: figs. 181–185.
Orconectes (*Faxonella*) *clypeatus*.—Hobbs, 1959:890.
Faxonella clypeata.—Creaser, 1962:3 [by implication].—Fitzpatrick, 1963:61.—Hobbs, 1972b:29, fig. 19c.

TYPES.—Holotype, USNM 17277 (♀).

TYPE-LOCALITY.—Bay St. Louis, Hancock County, Mississippi.

RANGE.—Le Flore County, Oklahoma, and Marion County, Texas, east to Gadsden County, Florida, and Richland County, South Carolina.

HABITAT.—Sluggish streams and lentic situations and burrows (tertiary burrower).

Faxonella creaseri Walls

FIGURE 90

Faxonella creaseri Walls, 1968:413, figs. 1–9.—Hobbs, 1972b: 29, figs. 5w, 19a.

TYPES.—Holotype, allotype, and morphotype, USNM 129215, 129216, 129214 (♂ I, ♀, ♂ II); paratypes, TU, MCZ, IBM, AMS, Joe B. Black, J. F. Fitzpatrick, Jr., and Jerry G. Walls.

TYPE-LOCALITY.—Roadside ditch 3.0 miles north of Grayson on U.S. Highway 165, Caldwell Parish, Louisiana.

RANGE.—Known only from several localities in Caldwell Parish, Louisiana.

HABITAT.—Temporary pools in roadside ditches.

Genus *Hobbseus* Fitzpatrick and Payne

Hobbseus Fitzpatrick and Payne, 1968:15. [Type-species by original designation, *Cambarus cristatus* Hobbs, 1955a:95. Gender: masculine.]

Hobbseus attenuatus Black

FIGURE 95

Hobbseus attenuatus Black, 1969:193, figs. 1–12.—Hobbs, 1972b:75, fig. 58c.

TYPES.—Holotype, allotype, and morphotype, USNM 129535, 129536, 129537 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ, TU, Joe B. Black, J. F. Fitzpatrick, Jr.

TYPE-LOCALITY.—"Roadside ditch adjacent to Noxapater Creek, on gravel road two miles north of State Route 395, six miles west of Noxapater, Winston County, Mississippi (R. 11 E, T. 14 N)."

RANGE.—Pearl River drainage in Winston and Neshoba counties, Mississippi.

HABITAT.—Lentic situations.

Hobbseus cristatus (Hobbs)

FIGURE 93

Cambarus cristatus Hobbs, 1955a:95, figs. 1–11.
Hobbseus cristatus.—Fitzpatrick and Payne, 1968:15.—Hobbs, 1972b:75, figs. 5o, 58b.

TYPES.—Holotype, allotype, and morphotype, USNM 96985, 96986, 96987 (♂ I, ♀, ♂ II); paratypes, MCZ, TU, USNM.

TYPE-LOCALITY.—Roadside ditch, 11.3 miles south of Macon on U.S. Highway 45, Noxubee County, Mississippi.

RANGE.—Kemper, Lauderdale, Lowndes, and Noxubee counties, Mississippi.

HABITAT.—Lentic and lotic habitats and burrows (probably secondary burrower).

Hobbseus orconectoides Fitzpatrick and Payne

FIGURE 92

Hobbseus orconectoides Fitzpatrick and Payne, 1968:17, figs. 1–12.—Hobbs, 1972b:75, fig. 58a.

TYPES.—Holotype, allotype, and morphotype, USNM 129191, 129193, 129194 (♂ I, ♀, ♂ II); paratypes, MCZ, TU, OSM, USNM, J. F. Fitzpatrick, Jr.

TYPE-LOCALITY.—Woodland pond near Rock Hill community, about 4.25 miles north of Starkville, Oktibbeha County, Mississippi (T. 19 N., R. 14 E., sec. 1).

RANGE.—Known only from the vicinity of the type-locality.

HABITAT.—Lentic situations and burrows (probably secondary burrower).

Hobbseus prominens (Hobbs)

FIGURE 94

Cambarus prominens Hobbs, 1966a:110, figs. 1–10.
Hobbseus prominens.—Fitzpatrick and Payne, 1968:15.—Hobbs, 1972b:76, figs. 58e, 59b.

TYPES.—Holotype, allotype, and morphotype, USNM 115603, 115604, 115605 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Roadside ditch, 3 miles west of Demopolis, on U.S. Highway 80, Sumter County, Alabama.

RANGE.—Mobile River drainage in Choctaw, Clarke, Dallas, Hale, Marengo, Perry, and Sumter counties, Alabama.

HABITAT.—Lentic and lotic habitats and burrows (probably secondary burrower).

Hobbseus valleculus (Fitzpatrick)

FIGURE 96

Cambarus valleculus Fitzpatrick, 1967b:163–167, figs. 1–12.

Hobbseus valleculus.—Fitzpatrick and Payne, 1968:15.—Hobbs, 1972b:76, figs. 58d, 59a.

TYPES.—Holotype, allotype, and morphotype, USNM 117963, 117964, 117965 (♂ I, ♀, ♂ II); paratypes, MCZ, TU, J. F. Fitzpatrick, Jr.

TYPE-LOCALITY.—Small creek, 6.8 miles south of junction of State Routes 15 and 12 on State Route 15, Choctaw County, Mississippi.

RANGE.—Known only from the vicinity of the type-locality, tributaries to Pearl River.

HABITAT.—Streams.

Genus *Orconectes* Cope

Astacus.—Rafinesque, 1817:42.

Orconectes Cope, 1872:419. [Type-species by subsequent designation (Fowler, 1912:339), *Orconectes inermis* Cope, 1872: 419. Gender: masculine.]

Camtarus Packard, 1888:156 [erroneous spelling].

Camborus Williamson, 1899:47 [erroneous spelling].

Cambrus Price, 1900:155 [erroneous spelling].

Orconectis Harris, 1903:113 [erroneous spelling].

Faxonius Ortmann, 1905c:97. [Type-species by original designation, *Astacus limosus* Rafinesque, 1817:42. Gender: masculine. Proposed as subgenus of *Cambarus*, elevated to generic rank by Creaser, 1933a:1.]

G[ambarus] Ortmann, 1905c:112 [erroneous spelling].

Cambarrus Fleming, 1939:305 [erroneous spelling].

Orconecctes Williams, 1952:330 [erroneous spelling].

Gambarus Croizat, 1958:908 [erroneous spelling].

Orconnectes Threinen, 1958:1 [erroneous spelling].

Camburus Bacescu, 1967:218 [erroneous spelling].

Orchonectes Dimond et al., 1968:760 [erroneous spelling].

Orconectus Ray and Stevens, 1970:58 [erroneous spelling].

Orconetes Avault, 1973:242 [erroneous spelling].

REMARKS.—Hobbs (1942a:350) erroneously indicated that *Orconectes inermis* Cope was the type-species by monotypy. Cope (1872:419) stated that "The present genus embraces two species, *O. inermis* of the Wyandotte and the *O. pellucidus* of the Mammoth Cave."

Orconectes acares Fitzpatrick

FIGURE 132

Orconectes leptogonopodus acares Fitzpatrick, 1965:87, figs. A–J.

Orconectes acares.—Hobbs, 1972b:94, fig. 74f.

TYPES.—Holotype, allotype, and morphotype, USNM 115517, 115518, 115519 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ, TU.

TYPE-LOCALITY.—Stream tributary to Ouachita River, 6 miles northwest of Mount Ida, Montgomery County, Arkansas.

RANGE.—Tributaries of the Ouachita River in Garland, Hot Springs, Montgomery, Perry, Pike, Polk, and Saline counties, Arkansas.

HABITAT.—Streams.

Orconectes alabamensis (Faxon)

FIGURE 166

Cambarus Alabamensis Faxon, 1884:125; 1885a:104, pl. 4: fig. 4; pl. 10: figs. 3, 3′, 3a, 3a′.

Cambarus alabamensis.—Hay, 1899b:960.

Cambarus (Faxonius) alabamensis.—Ortmann, 1905c:112.

Faxonius alabamensis.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].

Faxonius (Faxonius) alabamensis.—Creaser, 1933b:16 [by implication].

Orconectes alabamensis.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].

Orconectes (Orconectes) alabamensis.—Hobbs, 1942b:154 [by implication].

TYPES.—Syntypes, USNM 4876 (14 ♂ I, 16 ♀, 4 ♂ II), MCZ 3565 (2 ♂ I, 2 ♀, 2 ♂ II).

TYPE-LOCALITY.—Second Creek, Waterloo, Lauderdale County, Alabama.

RANGE.—Known only from tributaries of the Tennessee River along the Alabama-Tennessee-Mississippi border.

HABITAT.—Streams.

Orconectes australis australis (Rhoades)

FIGURE 97

Cambarus (Faxonius) pellucidus australis Rhoades, 1941b: 142, fig. 35A–F.

Orconectes pellucidus australis.—Hobbs, 1942a:353; 1948a:20, figs. 6, 13.—Fitzpatrick, 1963:61 [by implication].

Orconectes (Orconectes) pellucidus australis.—Hobbs, 1942b: 154 [by implication].

Orconectes Pellucidus.—Cooper and Poulson, 1968:130, fig. 8.

Orconectes australis australis.—Hobbs and Barr, 1972:3, 11, figs. 2, 3, 5o–v, 6, 7, 8i–cc.

TYPES.—Holotype, allotype, and "morphotype," USNM 79363, 79364, 79365 (♂ I, ♀, ♂ II); paratypes, RR, ANSP, Alabama Mus. Nat. Hist., L. Hubricht.

TYPE-LOCALITY.—Shelta Cavern (SE¼NE¼ sec. 27, T. 3 S., R. 1 W.), north of Huntsville, Madison County, Alabama.

RANGE.—Madison and Jackson counties, Alabama, north to middle Tennessee where it intergrades with *O. australis packardi*.

HABITAT.—Subterranean streams and pools.

Orconectes australis packardi Rhoades

FIGURE 98

Orconectes pellucidus packardi Rhoades, 1944a:121, fig. 3a–f.—Hobbs, 1948a:20, figs. 8, 11.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) pellucidus packardi.—Hobbs, 1959: 890 [by implication].
Orconectes pellucidus packardii.—Nicholas, 1960:133.
Orconectes australis packardi.—Hobbs and Barr, 1972:4, 22, figs. 2, 4, 5a–n, 8a–h.

TYPES.—Holotype, allotype, and "morphotype," USNM 81310, 81312, 81311 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM, RR.

TYPE-LOCALITY.—Cumberland Crystal Cave (Sloans Valley Cave), Alpine, Pulaski County, Kentucky.

RANGE.—Pulaski and McCreary counties, Kentucky, and south to Tennessee where it intergrades with *O. australis australis*.

HABITAT.—Subterranean streams.

Orconectes barrenensis Rhoades

FIGURE 139

Orconectes rusticus barrenensis Rhoades, 1944a:125, fig. 6A–F.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) rusticus barrenensis.—Hobbs, 1959: 893 [by implication].
Faxonius rusticus barrenensis.—Creaser, 1962:2 [by implication].
Orconectes rusticus barrensis.—Fitzpatrick, 1967a:143 (erroneous spelling].
Orconectes barrenensis.—Hobbs, 1972b:97, figs. 74h, 76b.

TYPES.—Holotype, allotype, and "morphotype" (designated as allotype by Rhoades), USNM 81319, 81321, 81320 (♂ I, ♀, ♂ II); paratypes, CM, MCZ, USNM, RR.

TYPE-LOCALITY.—Barren River, Beech Bend, 2 miles north of Bowling Green, Warren County, Kentucky.

RANGE.—Barren River drainage in Kentucky and Tennessee, and in the Green River system in Kentucky.

HABITAT.—Swift streams.

Orconectes bisectus Rhoades

FIGURE 125

Orconectes bisectus Rhoades, 1944a:129, fig. 7A–D.—Fitzpatrick, 1963:61 [by implication].—Prins and Fitzpatrick, 1965:141, figs. 1–12.
Orconectes (Orconectes) bisectus.—Hobbs, 1959:890 [by implication].
Faxonius bisectus.—Creaser, 1962:2 [by implication].

TYPES.—Holotype and allotype, USNM 81322, 81323 (♂ II, ♀); paratypes, MCZ, RR.

TYPE-LOCALITY.—Brushy Fork, 1 mile west of Repton, Crittenden County, Kentucky.

RANGE.—Crooked Creek drainage in Crittenden County, Kentucky.

HABITAT.—Medium-sized streams.

Orconectes causeyi Jester

FIGURE 163

Orconectes causeyi Jester, 1967:518, figs. 1–12.—Reimer, 1969: 52, figs. 4, 10, 24, 37.

TYPES.—Holotype, allotype, and morphotype, USNM 115698, 115699, 115700 (♂ I, ♀, ♂ II); paratypes, USNM, TU.

TYPE-LOCALITY.—Conchas Reservoir, 32 miles northwest of Tucumcari on State Route 104, San Miguel County, New Mexico.

RANGE.—"New Mexico, Texas, Arkansas, Oklahoma, Missouri, and Kansas" (Reimer, 1969).

HABITAT.—Streams and impounded lakes.

REMARKS.—This crayfish, insofar as I am able to determine, is indistinguishable from *Orconectes virilis* (Hagen). Until the relationships of these two species and *O. nais* (Faxon) become more adequately understood, the conservative recognition of the three seems advisable.

Orconectes compressus (Faxon)

FIGURE 169

Cambarus compressus Faxon, 1884:127; 1885a:105, pl. 5: fig. 6; pl. 10: figs 2, 2′, 2a, 2a′.
Cambarus (Faxonius) compressus.—Ortmann, 1905c:112.
Faxonius compressus.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) compressus.—Creaser, 1933b:16 [by implication].
Orconectes compressus.—Hobbs, 1942a:352 [by implication]; 1949a:17.—Fitzpatrick, 1963:61 [by implication].

Orconectes (Orconectes) compressus.—Hobbs, 1942b:154 [by implication].

TYPES.—Syntypes, USNM 4878 (11 ♂ I, 13 ♀), USNM 4879 (5 ♂ I, 3 ♀, ♂ II), MCZ 3583 (3 ♂ I, 2 ♀, ♂ II).

TYPE-LOCALITY.—Second Creek, Waterloo, Lauderdale County, Alabama. Restricted by Faxon (1914:419).

RANGE.—Tributaries of the Tennessee River in Alabama, Mississippi, and Tennessee; tributaries of the Cumberland River in Tennessee and Kentucky; and tributaries of the Barren River in Tennessee and Kentucky.

HABITAT.—Clear, rock- or gravel-bedded streams.

Orconectes difficilis blacki Walls

FIGURE 107

Orconectes difficilis blacki Walls, 1972:454, figs. 3A–E, 4A.

TYPES.—Holotype, USNM 131255 (♂ I); paratypes, USNM, MCZ, TU, J. B. Black, J. F. Fitzpatrick, Jr., and J. G. Walls.

TYPE-LOCALITY.—Bearhead Creek, 4 miles southwest of Juanita on State Route 109, Beauregard Parish, Louisiana.

RANGE.—Known only from six localities in Beauregard and Calcasieu parishes, Louisiana, and intergrading with *O. d. hathawayi* "in the Calcasieu River drainage of Allen, Beauregard, Calcasieu, and Vernon Parishes, Louisiana" (Walls, 1972: 455).

HABITAT.—Streams.

Orconectes difficilis difficilis (Faxon)

FIGURE 106

Cambarus difficilis Faxon, 1898:656, pl. 65: figs. 1–4.
Cambarus (Faxonius) difficilis.—Ortmann, 1905c:113.
Faxonius difficilis.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) difficilis.—Creaser, 1933b:16 [by implication].
Cambarus difficulis.—Fleming, 1938:300 [erroneous spelling].
Orconectes difficilis.—Hobbs, 1942a:352 [by implication].—Williams, 1954:898, figs. 217–224, 233.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) difficilis.—Hobbs, 1942b:154 [by implication]; 1959:892.
Orconectes difficilis difficilis.—Walls, 1972:456.

TYPES.—Syntypes, USNM 19687 (9 ♂ I, 10 ♀, 5 ♂ II), MCZ 4359 (♂ I, ♀, ♂ II), Mus. Zool. Torino.

TYPE-LOCALITY.—McAlester, Pittsburg County, Oklahoma.

RANGE.—Known from Pittsburg and Latimer counties, Oklahoma, Upshur County, Texas, to Washington County, Arkansas, southeastward to Louisiana (see Walls, 1972).

HABITAT.—Rocky streams.

Orconectes difficilis hathawayi Penn

FIGURE 109

Orconectes (Orconectes) hathawayi Penn, 1952b:1, figs. 1–14.
Faxonius hathawayi.—Creaser, 1962:2 [by implication].
Orconectes hathawayi.—Fitzpatrick, 1963:61 [by implication].
Orconectes difficilis hathawayi.—Walls, 1972:453.

TYPES.—Holotype, allotype, and morphotype, USNM 92998, 92999, 93000, (♂ I, ♀, ♂ II); paratypes, MCZ, CM, ANSP, USNM, AMNH, TU.

TYPE-LOCALITY.—Spring Creek, 5.1 miles east of Hineston on State Route 85, Rapides Parish, Louisiana.

RANGE.—Jackson and Rapides parishes south to Vermilion Parish, Louisiana; intergrading with *O. d. blacki* in the Calcasieu River system in Allen, Beauregard, Calcasieu, and Vernon parishes.

HABITAT.—Streams.

Orconectes difficilis maletae Walls

FIGURE 108

Orconectes difficilis maletae Walls, 1972:456, figs. 2A–E, 4B.

TYPES.—Holotype, USNM 131254 (♂ I); paratypes, USNM, MCZ, TU, J. B. Black, J. F. Fitzpatrick, Jr., and J. G. Walls.

TYPE-LOCALITY.—Bayou Santabarb "(third branch north of Kisatchie)" on State Route 117, Natchitoches Parish, Louisiana.

RANGE.—Known from only seven localities in Natchitoches and Sabine parishes, Louisiana, and Upshur County, Texas. Specimens from Coal County, Oklahoma, are interpreted as intergrades between this and the nominate subspecies.

HABITAT.—Streams (?).

Orconectes erichsonianus (Faxon)

FIGURE 123

Cambarus erichsonianus Faxon, 1898:659, pl. 64: figs. 7–12.
Cambarus erichsoni.—Ortmann, 1905c:109 [erroneous spelling].
Cambarus (Faxonius) erichsonianus.—Ortmann, 1905c:112.
Cambarus spinosus gulielmi Faxon, 1914:375. [Syntypes, USNM 26379 (6 ♂ II, 6 ♀, 4 ♂ juv.), MCZ 7448 (♂ II, ♀). Type-locality, stream from John Ross Spring, near Rossville, Walker County, Georgia.]
Faxonius erichsonianus.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) erichsonianus.—Creaser, 1933b:7 [by implication].
Cambarus erichsonionus.—Fleming, 1938:299 [erroneous spelling].
Orconectes erichsonianus.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication]; 1967a:131, 147, figs. 2–18, 20.
Orconectes (Orconectes) erichsonianus.—Hobbs, 1942b:154 [by implication].

TYPES.—Syntypes, USNM 20787 (3 ♂ I, 4 ♀), MCZ 4347 (♂ I, ♀, ♂ II).

TYPE-LOCALITY.—Rip Roaring Fork, 5 miles northwest of Greeneville, Greene County, Tennessee.

RANGE.—Tennessee, Elk, and Coosa river systems in eastern Tennessee, northwestern Georgia, and northern Alabama.

HABITAT.—Streams.

Orconectes eupunctus Williams

FIGURE 116

Orconecctes eupunctus Williams, 1952:330 [erroneous spelling of generic name].
Orconectes eupunctus Williams, 1952:334, 335, pl. 1: figs. 1–8; 1954:840, figs. 41–49.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) eupunctus.—Hobbs, 1959:894.
Faxonius eupunctus.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, allotype, and "morphotype," USNM 129200 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Eleven Point River at Riverton, Oregon County, Missouri.

RANGE.—Spring River and Eleven Point drainage systems in Arkansas and Missouri.

HABITAT.—Clear, cold, rapid streams.

Orconectes forceps (Faxon)

FIGURE 137

Cambarus forceps Faxon, 1884:133; 1885a:119, pl. 5: fig. 4; pl. 9: figs. 5, 5′, 5a, 5a′.
Cambarus (Faxonius) forceps.—Ortmann, 1905c:112.
Cambarus (Faxonius) rusticus forceps.—Ortmann, 1931:72.
Faxonius forceps.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) forceps.—Creaser, 1933b:10 [by implication].
Orconectes rusticus forceps.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) rusticus forceps.—Hobbs, 1942b:154 [by implication].
Orconectes forceps.—Fitzpatrick, 1967a:143.—Hobbs, 1972b: 98, figs. 77i, 80d.

TYPES.—Syntypes, USNM 4880 (3 ♂ I, 4 ♀), MCZ 3582 (♂ I, ♀).

TYPE-LOCALITY.—Cypress Creek, Lauderdale County, Alabama.

RANGE.—Tennessee River drainage, chiefly above Walden Gorge, from northern Alabama to southwestern Virginia.

HABITAT.—Streams.

Orconectes harrisonii (Faxon)

FIGURE 111

Cambarus Harrisonii Faxon, 1884:130; 1885a:94, pl. 3: fig. 1; pl. 9: figs. 9, 9′.
Cambarus harrisonii.—Hay, 1899b:960.
Cambarus harrisoni.—Ortmann, 1902:278.
Cambarus (Faxonius) harrisoni.—Ortmann, 1905c:111.
Faxonius harrisoni.—Creaser, 1933a:3 [by implication]; 1962: 2 [by implication].
Faxonius (Faxonius) harrisoni.—Creaser, 1933b:21 [by implication].
Faxonius harrisonii.—Creaser, 1934a:1.
Orconectes harrisoni.—Hobbs, 1942a:352 [by implication].
Orconectes (Orconectes) harrisoni.—Hobbs, 1942b:154 [by implication].
Orconectes harrisonii.—Williams, 1954:839, figs. 35–41.—Fitzpatrick, 1963:61 [by implication].

TYPES.—Syntypes, MCZ 3586 (11 ♂ I, 5 ♀), USNM 25826 (♂ I, ♀).

TYPE-LOCALITY.—Irondale, Washington County, Missouri.

RANGE.—St. Genevieve and Washington counties, Missouri.

HABITAT.—Streams.

Orconectes hobbsi Penn

FIGURE 160

Orconectes hobbsi Penn, 1950c:381, figs. 1–10; 1959:18, figs. 32, 52, 68, 82.—Fitzpatrick, 1963:61 [by implication].

Orconectes (Orconectes) hobbsi.—Hobbs, 1959:895.
Faxonius hobbsi.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, allotype, and morphotype, USNM 90952, 90953, 90954 (♂ I, ♀, ♂ II); paratypes, MCZ, ANSP, USNM, TU, AMNH.

TYPE-LOCALITY.—Headwater creek of Bayou Lacombe at St. Tammany, 6 miles north of Lacombe on State Route 187, St. Tammany Parish, Louisiana.

RANGE.—Lake Pontchartrain watershed in Louisiana and Mississippi.

HABITAT.—Rapidly flowing streams.

Orconectes hylas (Faxon)

FIGURE 134

Cambarus hylas Faxon, 1890:632.
Cambarus (Faxonius) hylas.—Ortmann, 1905c:112.
Faxonius hylas.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) hylas.—Creaser, 1933b:21 [by implication].
Orconectes hylas.—Hobbs, 1942a:352 [by implication].—Williams, 1954:847, figs. 74–82.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) hylas.—Hobbs, 1942b:154 [by implication].

TYPES.—Syntypes, MCZ 3858 (3 ♂ II, ♀), USNM 25827 (♂ II, ♀).

TYPE-LOCALITY.—West Fork of Black River, Reynolds County, Missouri.

RANGE.—Tributaries of the Big and Black rivers in southeastern Missouri.

HABITAT.—Streams.

Orconectes illinoiensis Brown

FIGURE 128

Orconectes illinoiensis Brown, 1956:163, figs. 1–9.
Faxonius illinoiensis.—Creaser, 1962:2 [by implication].
Orconectes illinoisensis.—Hobbs and Fitzpatrick, 1962:207 [erroneous spelling].—Fitzpatrick, 1967a:131, 149, figs. 2–18, 21.

TYPES.—Holotype, allotype, and morphotype, USNM 97997, 97998, 97999 (♂ I, ♀, ♂ II); paratypes, Max R. Matteson, Troy C. Dorris, USNM.

TYPE-LOCALITY.—Cypress Creek, 3.25 miles south of Mount Pleasant, Union County, Illinois.

RANGE.—Alexander, Gallatin, Hardin, Pope, and Union counties, Illinois.

HABITAT.—Streams.

Orconectes immunis (Hagen)

FIGURE 164

Cambarus immunis Hagen, 1870:71, pl. 1: figs. 101, 102; pl. 3: fig. 160; pl. 8: fig. b.
Cambarus signifer Herrick, 1882:253, fig. 7. [Types, MCZ 3515 (2 ♂ I, ♀). Type-locality, Grass Lake, Richfield, Hennepin County, Minnesota.]
Cambarus immunis spinirostris Faxon, 1884:146. [Types, USNM 4655 (6 ♂ II, 8 ♀), MCZ 3562 (2 ♂ II, 2 ♀). Type-locality, Reelfoot Lake, Obion County, Tennessee.]
Cambarus immunis immunis.—Faxon, 1884:146 [by implication].
Cambarus immunis var. *spinostris.*—Harris, 1901b:115 [erroneous spelling].
Cambarus rinmunis.—Steele, 1902:3 [erroneous spelling].
Cambarus (Faxonius) immunis.—Ortmann, 1905c:113.
Faxonius immunis.—Williamson, 1907:749 [*Faxonius* intended as subgeneric name].—Creaser, 1933a:4; 1962:2.
Faxonius (Faxonius) immunis immunis.—Creaser, 1933b:21 [by implication].
Faxonius (Faxonius) immunis pedianus Creaser, 1933b:14. [Subgenus by implication. Holotype and allotype, USNM 98334, 98335 (♂ I, ♀); paratypes, USNM. Type-locality, reservoir at Englewood, Denver, Colorado.]
Cambarus immunis Hagenianus.—Fleming, 1938:303 [lapsus for *C. immunis* Hagen].
Orconectes immunis immunis.—Hobbs, 1942a:352 [by implication].—Williams, 1954:890, figs. 200–208.—Fitzpatrick, 1963:61 [by implication].
Orconectes immunis pedianus.—Hobbs, 1942a:352.
Orconectes (Orconectes) immunis immunis.—Hobbs, 1942b: 154 [by implication].
Orconectes immunis.—Penn, 1950d:645.
Orconnectes immunis.—Threinen, 1958:2 [erroneous spelling].
Orconectes (Orconectes) immunis.—Hobbs, 1959:894.
Orchonectes immunis.—Dimond et al., 1968:760 [erroneous spelling of generic name].

TYPES.—Syntypes, MCZ 188 (2 ♂ I, 2 ♀). The "paratypes" of Faxon (1914:421), MCZ 3355, are dubious "types" because this number was not listed by Hagen (1870:73). The "paratype" said to be in MHNP could not be located.

TYPE-LOCALITY.—Lawn Ridge, Marshall County, Illinois.

RANGE.—Massachusetts to Wyoming and Alabama to Ontario.

HABITAT.—Ponds, roadside ditches, and sluggish streams.

Orconectes incomptus Hobbs and Barr

FIGURE 99

Orconectes incomptus Hobbs and Barr, 1972:32, fig. 9.

TYPES.—Holotype, allotype, and morphotype, USNM 130299, 130300, 130301 (♂ I, ♀, ♂ II); paratypes, USNM, H. H. Hobbs III.

TYPE-LOCALITY.—Cherry Cave, lat. 36°28′09″ N., long. 85°36′28″ W., Jackson County, Tennessee.

RANGE.—Known only from three localities in Jackson County, Tennessee.

HABITAT.—Subterranean waters.

Orconectes indianensis (Hay)

FIGURE 105

Cambarus indianensis Hay, 1896:494, fig. 9.
Cambarus (Faxonius) indianensis.—Ortmann, 1905c:112.
Faxonius indianensis.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) indianensis.—Creaser, 1933b:21 [by implication].
Orconectes indianensis.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) indianensis.—Hobbs, 1942b:154 [by implication].

TYPES.—Syntypes, USNM 14624 (2 ♂ I, 2 ♀), MCZ 3859 (2 ♂ I, 2 ♀).

TYPE-LOCALITY.—Patoka River, Patoka, Gibson County, Indiana.

RANGE.—Southern Illinois and Indiana.

HABITAT.—Streams.

Orconectes inermis inermis Cope

FIGURE 100

Orconectes inermis Cope, 1872:419.—Hobbs, 1948a:20, figs. 10, 14.
Cambarus pellucidus inermis.—Faxon, 1885a:83.—Packard, 1888:41.
Cambarus pellucidus variety *inermis.*—Hay, 1893:284.
Cambarus inermis.—Faxon, 1898:647.
Orconectis inermis.—Harris, 1903:113 [erroneous spelling].
Orconectes (Orconectes) inermis.—Hobbs, 1942b:154 [by implication].
Orconectes pellucidus inermis.—Rhoades, 1959:401 [in part].
Orconectes inermis inermis.—Hobbs and Barr, 1972:4, 36, figs. 1, 10, 12c–z, 13.

TYPES.—Not extant. Topotypes, USNM 131405 (♂ I, ♀, ♂ II).

TYPE-LOCALITY.—Wyandotte Cave, Indiana. Actually Sibert's Well Cave, just below Wyandotte Cave, Crawford County, Indiana, according to Hobbs (1942a:335).

RANGE.—From Hart County, Kentucky, northwestward to Crawford and Harrison counties, Indiana, where it intergrades with *O. inermis testii.*

HABITAT.—Subterranean waters.

Orconectes inermis testii (Hay)

FIGURE 101

Cambarus pellucidus var. *testii* Hay, 1891:148.
Cambarus pellucidus testii.—Hay, 1893:285.
Cambarus pellucidus testi.—Hay, 1902a:233.
Cambarus (Faxonius) pellucidus testi.—Ortmann, 1931:64 [by implication].
Orconectes pellucidus testii.—Hobbs, 1942a:352 [by implication].
Orconectes (Orconectes) pellucidus testii.—Hobbs, 1942b:154 [by implication].
Orconectes pellucidus inermis.—Rhoades, 1959:401 [in part].
Orconectes inermis testii.—Hobbs and Barr, 1972:4, 49, figs. 1, 11, 12a,b.

TYPES.—Syntypes, USNM 17702 (2 ♂ II, ♀), MCZ 7431 (♂ II, ♀).

TYPE-LOCALITY.—Mayfield's Cave, SW¼NE¼ SW¼ sec. 26, T. 9 N., R. 2 W., Monroe County, Indiana.

RANGE.—Monroe County, Indiana, intergrading immediately to the south with the typical subspecies.

HABITAT.—Subterranean waters.

Orconectes iowaensis Fitzpatrick

FIGURE 127

Orconectes species A Fitzpatrick, 1967a:150–151, 167, 168, 169, figs. 2–18, 27.
Orconectes iowaensis Fitzpatrick, 1968:507, figs. 1–10.

TYPES.—Holotype, allotype, and morphotype, USNM 117963, 117964, 117965 (♂ I, ♀, ♂ II); paratypes, MCZ, Coe College, USNM.

TYPE-LOCALITY.—Turkey River, 2.5 miles south of Cresco, Howard County, Iowa.

RANGE.—Mississippi drainage system in eastern Iowa.

HABITAT.—Streams.

Orconectes jeffersoni Rhoades

FIGURE 119

Orconectes propinquus jeffersoni Rhoades, 1944a:123, fig. 5A–F.—Fitzpatrick, 1963:61 [by implication].

Orconectes (Orconectes) propinquus jeffersoni.—Hobbs, 1959: 894 [by implication].
Faxonius propinquus jeffersoni.—Creaser, 1962:2 [by implication].
Orconectes jeffersoni.—Fitzpatrick, 1967a:131, 152, figs. 2–18, 22.

TYPES.—Holotype, allotype, and "morphotype" (designated by Rhoades as allotype), USNM 81316, 81318, 81317 (♂ I, ♀, ♂ II); paratypes, MCZ, CM, USNM, RR.

TYPE-LOCALITY.—Tributary of Muddy Fork of Beargrass Creek, 2 miles east of Louisville corporation line on U.S. Highway 42, Jefferson County, Kentucky.

RANGE.—Tributaries to Beargrass Creek, Ohio River, Jefferson County, Kentucky.

HABITAT.—Streams.

Orconectes juvenilis (Hagen)

FIGURE 147

Cambarus juvenilis Hagen, 1870:66, pl. 1: figs. 29–33; pl. 3: fig. 157.
Cambarus juvenalis.—Harris, 1900:271 [erroneous spelling].
Cambarus (Faxonius) juvenilis.—Ortmann, 1931:84 [in part].
Faxonius juvenilis.—Creaser, 1933a:3 [by implication]; 1962: 2 [by implication].
Faxonius (Faxonius) juvenilis.—Creaser, 1933b:21 [by implication].
Orconectes juvenilis.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) juvenilis.—Hobbs, 1942b:154 [by implication].
Orconectes Juvenils.—Hobbs and Walton, 1966:136 [erroneous spelling in title].
Orconectes juvenalis.—Merkle, 1969:228 [erroneous spelling].

TYPES.—Syntypes, MCZ 3347 (26 ♂ II, ♀, 8 ♂ juv.), USNM 4967 (♂ I), USNM 25830 (♂ I, ♀), MHNP (2 ♂, 2 ♀). Other types cited by Faxon (1914:418) apparently no longer extant.

TYPE-LOCALITY.—Kentucky River, Little Hickman, Jessamine County, Kentucky.

RANGE.—Streams in the Ohio drainage system in northern Kentucky and in Indiana (?). The limits of the ranges of *O. juvenilis* and the closely related *O. putnami* and *O. spinosus* have not been determined.

HABITAT.—Streams.

REMARKS.—Following Ortmann (1931), *O. putnami* and *O. spinosus* were considered synonyms of *O. juvenilis.* Ortmann considered *O. spinosus* Bundy (not Faxon) to be a "doubtful form" but indicated that "it may be different from *juvenilis.*"

Orconectes kentuckiensis Rhoades

FIGURE 113

Orconectes kentuckiensis Rhoades, 1944a:122, fig. 4A–F.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) kentuckiensis.—Hobbs, 1959:894.
Faxonius kentuckiensis.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, allotype, and "morphotype" (designated as allotype by Rhoades), USNM 81313, 81315, 81314 (♂ I, ♀, ♂ II); paratypes, MCZ, ANSP, RR.

TYPE-LOCALITY.—Piney Creek, 3 miles west of Shady Grove, Crittenden County, Kentucky.

RANGE.—Crittenden and Union counties, Kentucky.

HABITAT.—Mud-bottomed streams.

Orconectes lancifer (Hagen)

FIGURE 114

Cambarus lancifer Hagen, 1870:59, pl. 1: figs. 86, 87; pl. 3: fig. 159.
Cambarus faxonii Meek, 1894:1042, figs. 1–4. [Syntypes, MCZ 4220 (4 ♂ II, 3 ♀), USNM 19331 (63 ♂ ♀), USNM 22425 (♂ II, ♀). Type-locality, St. Francis River at Greenway and Big Bay, Clay County, Arkansas.]
Cambarus (Faxonius) lancifer.—Ortmann, 1905c:113.
Faxonius lancifer.—Penn, 1939:215.
Orconectes lancifer.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) lancifer.—Hobbs, 1942b:154 [by implication].

TYPE.—Holotype, MCZ 306 (♂ I).

TYPE-LOCALITY.—"Root Pond, Miss." Rocky Ford near Etta, Union County, Mississippi, fide Penn (1939:215).

RANGE.—Known from Texas, Louisiana, Arkansas, Mississippi, Tennessee, and extreme southern Illinois.

HABITAT.—Sluggish streams and lentic situations.

Orconectes leptogonopodus Hobbs

FIGURE 131

Orconectes leptogonopodus Hobbs, 1948b:146, figs. 24–32; 1972b:87, figs. 68a,e, 69b.—Williams, 1954:854, figs. 18, 99–106.—Fitzpatrick, 1963:61 [by implication].

Orconectes (Orconectes) leptogonopodus.—Hobbs, 1959:892.
Faxonius leptogonopodus leptogonopodus.—Creaser, 1962:2 [by implication].
Orconectes leptogonopodus leptogonopodus.—Fitzpatrick, 1965:87.

TYPES.—Holotype, allotype, and "morphotype," USNM 82262 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ, TU.

TYPE-LOCALITY.—McKinney's Creek, 4.7 miles northeast of Hatfield, Polk County, Arkansas, on U.S. Highway 71.

RANGE.—Red River drainage in Arkansas and eastern Oklahoma.

HABITAT.—Small, clear, rocky streams.

Orconectes limosus (Rafinesque)

FIGURE 103

Astacus limosus Rafinesque, 1817:42.
Astacus affinis Say, 1817:168. [Type unknown. Type-locality, Delaware River.]
Astacus (Cambarus) affinis.—Erichson, 1846:96.
Cambarus Pealei Girard, 1852:87. [Syntypes, USNM 2081 (2 ♂ I, 2 ♀). Type-locality, Potomac River at Washington, D.C.]
Cambarus affinis.—Girard, 1852:87.
Cambarus (Faxonius) limosus.—Ortmann, 1905c:107.—Fowler, 1912:353, pls. 104, 105.
Cambarus limosus.—Ortmann, 1905c:107.
Faxonius limosus.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) limosus.—Creaser, 1933b:21 [by implication].
Orconectes limosus.—Hobbs, 1942a:352 [by implication]; 1948a:20, fig. 22.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) limosus.—Hobbs, 1942b:154 [by implication].
Faxonius affinis.—Hobbs, 1942c:55.
Orconectes limosa.—Mobberly, 1963:80 [erroneous spelling].
Camburus affinis.—Bacescu, 1967:218 [erroneous spelling].
Orconetes limosus.—Avault, 1973:242 [erroneous spelling].

TYPES.—Not known to exist.

TYPE-LOCALITY.—Delaware River near Philadelphia, Pennsylvania.

RANGE.—The Atlantic watershed from Maine to the lower James River in Virginia. Introduced into western Europe.

HABITAT.—Streams.

Orconectes longidigitus (Faxon)

FIGURE 142

Cambarus longidigitus Faxon, 1898:653, pl. 62: figs. 6–9.
Cambarus whitmani Steele, 1902:24, pl. 3: figs. c1, c2; pl. 5: fig. B. [Location of types unknown. Type-locality, James River, Missouri.]
Cambarus (Faxonius) longidigitus.—Ortmann, 1905c:113.
Faxonius longidigitus.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) longidigitus.—Creaser, 1933b:21 [by implication].
Orconectes longidigitus.—Hobbs, 1942a:352 [by implication].—Williams, 1954:884, figs. 149, 183–190.
Orconectes (Orconectes) longidigitus.—Hobbs, 1942b:154 [by implication].

TYPES.—Syntypes, MCZ 4364 (2 ♂ II, ♀, 2 ♀ juv.), USNM 19683 (♂ II, 3 ♀, ♂ juv., 2 ♀ juv.).

TYPE-LOCALITY.—Oxford Bend, White River (Izard County?), Arkansas.

RANGE.—Tributaries of the White and Little Red rivers in Missouri and Arkansas.

HABITAT.—Streams.

Orconectes luteus (Creaser)

FIGURE 150

Faxonius (Faxonius) luteus Creaser, 1933b:7, pl. 1: figs. 3, 4 [subgenus by implication].
Faxonius luteus.—Creaser, 1934a:1; 1962:2 [by implication].
Orconectes luteus.—Hobbs, 1942a:353.—Williams, 1954:872, figs. 149–157.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) luteus.—Hobbs, 1942b:154 [by implication].
Orconectes luetus.—Fitzpatrick, 1967a:143 [erroneous spelling].

TYPES.—Holotype and allotype, USNM 98344, 98345 (♂ I, ♀); paratypes, USNM.

TYPE-LOCALITY.—Niangua River at mouth of Greasy Creek, 5 miles southeast of Buffalo, Dallas County, Missouri.

RANGE.—From the Marais des Cygnes River, Kansas, eastward through southern Missouri.

HABITAT.—Clear, swiftly flowing streams.

Orconectes macrus Williams

FIGURE 145

Orconectes nana macrus Williams, 1952:337, figs. 17–24; 1954: 851, figs. 82, 91–98.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) nana macrus.—Hobbs, 1959:892 [by implication].
Faxonius nana macrus.—Creaser, 1962:2 [by implication].
Orconectes macrus.—Hobbs, 1972b:93, fig. 74e.

TYPES.—Holotype, allotype, and "morphotype,"

USNM 118847 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Spring River, 2 miles southwest of Mount Vernon, Lawrence County, Missouri.

RANGE.—Upper Arkansas River system in southwestern Missouri and northwestern Arkansas.

HABITAT.—Streams and in shallow burrows along them.

Orconectes marchandi Hobbs

FIGURE 115

Orconectes marchandi Hobbs, 1948b:140, figs. 1–4, 10–14, 17.—Williams, 1954:843, figs. 1, 50–57.—Fitzpatrick, 1963: 61 [by implication].
Orconectes (Orconectes) marchandi.—Hobbs, 1959:895.
Faxonius marchandi.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, allotype and "morphotype," USNM 82072, 82073, 82074 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM, TU.

TYPE-LOCALITY.—Stream 3.2 miles southeast of Hardy, Sharp County, Arkansas, on U.S. Highway 63.

RANGE.—Spring River drainage system in Lawrence and Sharp counties, Arkansas, and Oregon County, Missouri.

HABITAT.—Clear, rocky streams.

Orconectes medius (Faxon)

FIGURE 149

Cambarus medius Faxon, 1884:121; 1885a:107, pl. 3: fig. 4; pl. 9: figs. 4, 4'.
Cambarus (Faxonius) medius.—Ortmann, 1905c:112.
Faxonius medius.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) medius.—Creaser, 1933b:21 [by implication].
Orconectes medius.—Hobbs, 1942a:352 [by implication].—Williams, 1954:876, figs. 158–166.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) medius.—Hobbs, 1942b:154 [by implication].

TYPES.—Syntypes, MCZ 3585 (♂ I, ♀).

TYPE-LOCALITY.—Irondale, Washington County, Missouri.

RANGE.—Headwaters of the Big and Meramec rivers in eastern Missouri.

HABITAT.—Streams.

Orconectes meeki brevis Williams

FIGURE 156

Orconectes meeki brevis Williams, 1952:348, figs. 41–48; 1954: 881, figs. 166, 175–182.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) meeki brevis.—Hobbs, 1959:895 [by implication].
Faxonius meeki brevis.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, allotype, and "morphotype," USNM 118848 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Stream, approximately 5 miles north of Stilwell on U.S. Highway 59, Adair County, Oklahoma.

RANGE.—Tributaries of the Arkansas River in eastern Oklahoma and extreme northwestern Arkansas.

HABITAT.—Rocky streams.

Orconectes meeki meeki (Faxon)

FIGURE 155

Cambarus meeki Faxon, 1898:657, pl. 65: figs. 5–9.
Cambarus meekii.—Hay, 1899b:960 [erroneous spelling].
Cambarus (Faxonius) meeki.—Ortmann, 1905c:112.
G[ambarus] (Faxonius) meeki.—Ortmann, 1905c:112 [erroneous spelling].
Faxonius meeki.—Creaser, 1933a:3 [by implication]
Faxonius (Faxonius) meeki.—Creaser, 1933b:21 [by implication].
Orconectes meeki.—Hobbs, 1942a:352 [by implication].
Orconectes (Orconectes) meeki meeki.—Hobbs, 1942b:154 [by implication].
Orconectes meeki meeki.—Williams, 1952:350; 1954:878, figs. 166–174.—Fitzpatrick, 1963:61 [by implication].
Faxonius meeki meeki.—Creaser, 1962:2 [by implication].

TYPES.—Syntypes, MCZ 4363 (2 ♂ II, 3 ♀), USNM 19680 (10 ♂ II, 13 ♀), Mus. Zool. Torino 433.

TYPE-LOCALITY.—Walnut Fork of Big Piney Creek, Swain, Newton County, Arkansas.

RANGE.—Arkansas, Red, and White river systems in Arkansas.

HABITAT.—Streams.

Orconectes menae (Creaser)

FIGURE 151

Faxonius (Faxonius) menae Creaser, 1933b:5, pl. 1: figs. 9, 10 [subgenus by implication].

Orconectes menae.—Hobbs, 1942a:353.—Williams, 1954:863, figs. 123–131.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) menae.—Hobbs, 1942b:154 [by implication].
Faxonius menae.—Creaser, 1962:2 [by implication].

TYPES.—Holotype and allotype, USNM 98330, 98331 (♂ I, ♀); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Stream tributary to Irons Fork of the Ouachita River, Mena, Polk County, Arkansas.

RANGE.—Tributaries of the Ouachita River in Polk and Montgomery counties, Arkansas.

HABITAT.—Rocky creeks.

Orconectes mirus (Ortmann)

FIGURE 143

Cambarus (Faxonius) rusticus mirus Ortmann, 1931:81.
Faxonius (Faxonius) mirus.—Creaser, 1933b:10 [by implication].
Orconectes rusticus mirus.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) rusticus mirus.—Hobbs, 1942b:154 [by implication].
Faxonius mirus.—Creaser, 1962:2 [by implication].
Orconectes mirus.—Hobbs, 1972b:97, figs. 74i, 76c,e.

TYPES.—Syntypes, CM 74.1378 (♂ I, 3 ♂ II, ♀).

TYPE-LOCALITY.—Hurricane Creek, Cumberland Springs, Moore County, Tennessee.

RANGE.—Elk and Duck river drainages in Alabama and Tennessee.

HABITAT.—Small creeks.

Orconectes mississippiensis (Faxon)

FIGURE 161

Cambarus mississippiensis Faxon, 1884:123; 1885a:101, pl. 3: fig. 2; pl. 10: figs. 4, 4′, 4a, 4a′.
Cambarus (Faxonius) mississippiensis.—Ortmann, 1905c:113.
Faxonius mississippiensis.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) mississippiensis.—Creaser, 1933b:19 [by implication].
Orconectes mississippiensis.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) mississippiensis.—Hobbs, 1942b:154 [by implication].

TYPES.—Syntypes, USNM 19760 (♂ I, ♀), USNM 19759 (♂ II, ♀), MCZ 3563 (♀).

TYPE-LOCALITY.—Eastern Mississippi. Restricted to Macon, Noxubee County, Mississippi, by Faxon (1914:422).

RANGE.—Eastern Mississippi.

HABITAT.—Streams and roadside ditches.

Orconectes nais (Faxon)

FIGURE 165

Cambarus Nais Faxon, 1885b:140.
Cambarus nais.—Underwood, 1886:371.
Cambarus naïs.—Faxon, 1890:631.
Cambarus pilosus Hay, 1899a:121, fig. 1 [Types, USNM 19761 (6 ♂ II), MCZ 7389 (♂ II). Type-locality, Beloit, Mitchell County, Kansas.]
Cambarus pelosus.—Harris, 1901:115 [erroneous spelling].
Cambarus (Faxonius) nais.—Ortmann, 1905c:113.—Creaser and Ortenberger, 1933:37, figs. 10, 14, 24.
Faxonius nais.—Creaser, 1933a:3; 1962:2 [by implication].
Faxonius (Faxonius) nais.—Creaser, 1933b:5.
Orconectes nais.—Hobbs, 1942a:352 [by implication].—Williams, 1954:886, figs. 191–199.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) nais.—Hobbs, 1942b:154 [by implication].
Orconectus nais.—Ray and Stevens, 1970:58 [erroneous spelling].

TYPES.—Syntypes, MCZ 3755 (2 ♂ I, ♂ II, ♀), USNM 129213 (3 ♂ I, 3 ♂ II); Mus. Washburn Coll. (no longer there).

TYPE-LOCALITY.—Labette County, Kansas.

RANGE.—Great Plains and Ozark region.

HABITAT.—Streams.

REMARKS.—The syntypes in the United States National Museum are specimens collected by W. S. Newlon from the type-locality and were received from the Kansas Museum of Natural History; presumably they represent a part of the lot that was said by Faxon (1914) to have been at Washburn College. See remarks under *O. causeyi*.

Orconectes nana Williams

FIGURE 144

Orconectes nana nana Williams, 1952:333, figs. 9–16; 1954:849, figs. 82–90.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) nana nana.—Hobbs, 1959:892 [by implication].
Faxonius nana nana.—Creaser, 1962:2 [by implication].
Orconectes nana.—Hobbs, 1972b:96, figs. 74g, 76a.

TYPES.—Holotype, allotype, and "morphotype," USNM 129824, 129825, 129826 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Flint Creek, 5 miles east of Kansas, Delaware County, Oklahoma.

RANGE.—Spring River drainage in Arkansas and eastern Oklahoma.

HABITAT.—Swift, cold streams.

Orconectes neglectus chaenodactylus Williams

FIGURE 140

Orconectes neglectus chaenodactylus Williams, 1952:344, figs. 33–40; 1954:869, figs. 140–148.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) neglectus chaenodactylus.—Hobbs, 1959:893 [by implication].
Faxonius neglectus chaenodactylus.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, allotype, and "morphotype," USNM 118840 (♂ I, ♀, ♂ II); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Whites Creek, 8.6 miles southeast of Ava, Douglas County, Missouri.

RANGE.—North Fork of the White River in Arkansas and Missouri, intergrading in the headwaters with the nominate subspecies.

HABITAT.—Streams.

Orconectes neglectus neglectus (Faxon)

FIGURE 141

Cambarus neglectus Faxon, 1885b:142.
Cambarus (Faxonius) neglectus.—Ortmann, 1905c:112.—Creaser and Ortenburger, 1933:17, figs. 9, 15, 23.
Faxonius neglectus.—Creaser, 1933a:3 [by implication].
Faxonius (Faxonius) neglectus.—Creaser, 1933b:9 [by implication].
Cambarus neglecta.—Parks, Smith, and Garrett, 1939:2 [erroneous spelling].
Orconectes neglectus.—Hobbs, 1942a:352 [by implication].
Orconectes (Orconectes) neglectus.—Hobbs, 1942b:154 by implication].
Orconectes neglectus neglectus.—Williams, 1952:344 [by implication]; 1954:866, figs. 132–139, 148.—Fitzpatrick, 1963:61 [by implication].
Faxonius neglectus neglectus.—Creaser, 1962:2 [by implication].

TYPES.—Syntypes, MCZ 3757 (♂ I, ♀); MCZ 3590 (♂ II) [questionable type]; Mus. Washburn Coll. [no longer there].

TYPE-LOCALITY.—Mill Creek, Wabaunsee County, Kansas.

RANGE.—Streams in the White (except North Fork) and Arkansas river systems in Missouri, Oklahoma, and Arkansas, and in tributaries of the Kansas River in Colorado, Nebraska, and east-central Kansas.

HABITAT.—Rocky streams.

Orconectes obscurus (Hagen)

FIGURE 117

Cambarus obscurus Hagen, 1870:69, pl. 1: figs. 72–75; pl. 3: fig. 154.
Astacus obscurus.—Hagen, 1870:5 [lapsus].
Cambarus propinquus var. *obscura.*—Faxon, 1885a:92.
Cambarus propinquus obscurus.—Hay, 1899b:960.
Cambarus (Faxonius) obscurus.—Ortmann, 1905c:112; 1906b:369, pl. A: figs. 1, 2; pl. 39: fig. 7; pl. 40: fig. 1; pl. 42: figs. 2, 3.
Faxonius obscurus.—Creaser, 1933a:5; 1962:2 [by implication].
Faxonius (Faxonius) obscurus.—Creaser, 1933a:5 [by implication].
Orconectes obscurus.—Hobbs, 1942a:352 [by implication].—Crocker, 1957:36, 53, 75, pl. 3: figs. 5, 6; pl. 5: fig. 2.—Fitzpatrick, 1963:61 [by implication]; 1967a:131, 160, figs. 3, 11–15, 25.
Orconectes (Orconectes) obscurus.—Hobbs, 1942b:154 [by implication].
Cambarus obscura.—Fitzpatrick, 1967a:161 [erroneous spelling].

TYPES.—Lectotype, MCZ 181 (♂ I); paralectotypes, MCZ 181 (9 ♂ I, 6 ♀), MCZ 3353 (7 ♂ I, ♀), MCZ 3354 (3 ♂ II), USNM 4971 (♂ I), MHNP (♂, ♀), Würzburg Mus.; "cotypes" previously reported to be in the Australian Museum are not there. The lectotype (♂ I) was selected by Fitzpatrick (1967a:162) from MCZ 181, and all other "types" were designated paralectotypes.

TYPE-LOCALITY.—Genesee River, Rochester, Monroe County, New York.

RANGE.—Southeastern Ontario, New York, Pennsylvania, eastern Ohio, West Virginia, northern Virginia, and western Maryland.

HABITAT.—Rocky streams.

Orconectes ozarkae Williams

FIGURE 153

Orconectes ozarkae Williams, 1952:339, figs. 25–32; 1954:860, figs. 115–123.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) ozarkae.—Hobbs, 1959:892.
Faxonius ozarkae.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, allotype, USNM 118846 (♂ I, ♀) and "morphotype," USNM 118844 (♂ II); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Hackney Creek, 4.6 miles west-southwest of Stuart, Sharp County, Arkansas.

RANGE.—White River system in southern Missouri and northern Arkansas.

HABITAT.—Streams.

Orconectes palmeri creolanus (Creaser)

FIGURE 159

Faxonius (Faxonius) creolanus Creaser, 1933b:16, pl. 1: figs. 1, 2 [subgenus by implication].
Cambarus creolanus.—Penn, 1941:8.
Orconectes creolanus.—Hobbs, 1942a:352.
Orconectes (Orconectes) creolanus.—Hobbs, 1942b:154 [by implication].
Orconectes (Orconectes) palmeri creolanus.—Penn, 1952a:744.
Orconectes palmeri creolanus.—Penn, 1953e:6; 1957:231, figs. 24, 27, 30.—Fitzpatrick, 1963:61 [by implication].
Faxonius palmeri creolanus.—Creaser, 1962:2 [by implication].

TYPES.—Holotype and allotype, USNM 101972 and 98341 (♂ I, ♀); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Tributary to Amite River, 0.5 mile north of Ethel, East Feliciana Parish, Louisiana.

RANGE.—Mississippi and Louisiana in "the Lake Pontchartrain drainage area plus the Pearl and Pascagoula rivers" (Penn, 1957:258).

HABITAT.—Rapid and sluggish streams.

Orconectes palmeri longimanus (Faxon)

FIGURE 158

Cambarus palmeri longimanus Faxon, 1898:655, pl. 64: figs. 1–6.
Cambarus longimanus.—Creaser and Ortenburger, 1933:16, 38, figs. 4, 16, 26.
Faxonius longimanus.—Creaser, 1933a:3 [by implication].
Faxonius (Faxonius) longimanus.—Creaser, 1933b:19 [by implication].
Orconectes palmeri longimanus.—Hobbs, 1942a:352 [by implication].—Williams, 1954:894, figs. 200, 209–216.—Penn, 1957:231, figs. 25, 28.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) palmeri longimanus.—Hobbs, 1942b:154 [by implication].
Faxonius palmeri longimanus.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, MCZ 7390 (♂ I); paratypes, MCZ, USNM, Mus. Zool. Torino.

TYPE-LOCALITY.—Red River, Arthur City, Lamar County, Texas.

RANGE.—Texas, Oklahoma, Kansas, Arkansas, and Louisiana, "all western tributaries of the Mississippi River from the Arkansas River to the Gulf, and Gulf drainage streams from the Mississippi River to the Guadalupe River in Texas" (Penn, 1957:258).

HABITAT.—Streams.

Orconectes palmeri palmeri (Faxon)

FIGURE 157

Cambarus palmeri Faxon, 1884:124; 1885a:103, pl. 3: fig. 6; pl. 10: figs. 5a, 5a'.
Cambarus palmeri palmeri.—Faxon, 1898:655 [by implication].
Cambarus (Faxonius) palmeri.—Ortmann, 1905c:113.
Faxonius palmeri.—Creaser, 1933a:3 [by implication].
Faxonius (Faxonius) palmeri.—Creaser, 1933b:19 [by implication].
Orconectes palmeri palmeri.—Hobbs, 1942a:352 [by implication].—Hobbs and Marchand, 1943:28, figs. 7, 13, 19, 26.—Penn, 1957:231, figs. 26, 29.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) palmeri.—Hobbs, 1942b:154 [by implication].
Faxonius palmeri palmeri.—Creaser, 1962:2 [by implication].

TYPES.—Syntypes, USNM 4872 (8 ♂ II, 7 ♀), MCZ 3564 (2 ♂ II, 2 ♀).

TYPE-LOCALITY.—Creek at eastern side of Reelfoot Lake, Obion County, Tennessee.

RANGE.—Lower Mississippi Valley, occurring in western Tennessee and Mississippi and in eastern Missouri and Arkansas.

HABITAT.—Streams.

Orconectes pellucidus (Tellkampf)

FIGURE 102

Astacus pellucidus Tellkampf, 1844a:684; 1844b:383; 1845:85.
Astacus (Cambarus) pellucidus.—Erichson, 1846:95.
Cambarus pellucidus.—Girard, 1852:87.—Hagen, 1870:55, pl. 1: figs. 68–71; pl. 3: fig. 148; pl. 6.
Cambarus pelulcidus.—Hagen, 1870:106 [erroneous spelling].
Orconectes pellucidus.—Cope, 1872:409.—Hobbs and Barr, 1972:58, figs. 1, 14–16.
Cambarus typhlobius Joseph, 1880:202 [see Holthuis, 1964].
Cambarus coecus Joseph, 1881:237 [nomen nudum; see Holthuis, 1964].
Cambarus stygius Joseph, 1881:241 [nomen nudum]; 1882:12 [validation of nomen nudum of 1881, becoming homonym of *Cambarus stygius* Bundy=*Procambarus acutus acutus* (Girard); see Holthuis, 1964].

Cambarus (Orconectes) pellucidus.—Hovey, 1882:222 [in part].
Cambarus Stygius.—Faxon, 1884:139.
Cambarus pellucidus pellucidus.—Packard, 1888:41 [by implication].
Camtarus (Orconectes) pellucidus, form *inermis.*—Packard, 1888:156 [erroneous spelling].
Astacus Cambarus Stigius.—Rabé, 1890:9 [erroneous spelling].
Cambrus pellucidus.—Price, 1900:155 [erroneous spelling].
Cambarus (Faxonius) pellucidus.—Ortmann, 1905c:107.
Cambarus caecus.—Bouvier, 1940:68 [erroneous spelling].
Cambarus pelludicus.—Dearolf, 1942:50 [erroneous spelling].
Cambarus Pellucidus.—Jackson, 1942:4.
Orconectes pellucidus pellucidus.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) pellucidus pellucidus.—Hobbs, 1942b:154 [by implication].
Cambarus (Cambaruş) pellucidus.—Balss, 1944:402.
Orconectes pellucidus pelluicdus.—Hobbs, 1948a:16 [erroneous spelling].
Cambarus Coecus.—Bott, 1950:25.
Gambarus typhlobius.—Croizat, 1958:908 [erroneous spelling].

TYPES.—Holotype, ZBM 1562 (♂ I).

TYPE-LOCALITY.—Mammoth Cave, Edmonson County, Kentucky.

RANGE.—Area extending "southwestward from Hart County to Trigg County, Kentucky, and Montgomery County, Tennessee" (Hobbs and Barr, 1972).

HABITAT.—Subterranean waters and springs.

Orconectes perfectus Walls

FIGURE 110

Orconectes perfectus Walls, 1972:451, figs. 1A–E, 4C.

TYPES.—Holotype, USNM 131256 (♂ I); paratypes, USNM.

TYPE-LOCALITY.—Satilpa Creek, 8.7 miles northwest (not "east") of Grove Hill on Chilton Road, Clarke County, Alabama.

RANGE.—Known from five localities in Clarke and Choctaw counties, Alabama, and Clay and Lowndes counties, Mississippi.

HABITAT.—Streams.

Orconectes peruncus (Creaser)

FIGURE 135

Cambarus (Faxonius) peruncus Creaser, 1931a:7, figs. 13–17.
Faxonius (Faxonius) peruncus.—Creaser, 1933b:12 [by implication].
Faxonius peruncus.—Creaser, 1934a:1; 1962:2 [by implication].
Orconectes peruncus.—Hobbs, 1942a:353.—Williams, 1954: 845, figs. 18, 66–73.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) peruncus.—Hobbs, 1942b:154 [by implication].

TYPES.—Holotype and allotype, USNM 98339, 98340 (♂ I, ♀); paratypes, USNM.

TYPE-LOCALITY.—Little Creek, tributary to St. Francis River, 1 mile northeast of Chloride, Iron County, Missouri.

RANGE.—Headwaters of the St. Francis River in central Missouri.

HABITAT.—Rocky streams.

Orconectes placidus (Hagen)

FIGURE 138

Cambarus placidus Hagen, 1870:65, pl. 1: figs. 76–79; pl. 3: fig. 158.
Cambarus rusticus, var. *placida.*—Faxon, 1885a:65.
Cambarus rusticus, var. *placidus.*—Faxon, 1885b:142.
Cambarus rusticus placidus.—Faxon, 1890:630.
Cambarus (Faxonius) rusticus placidus.—Ortmann, 1931:76.
Faxonius placidus.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) placidus.—Creaser, 1933b:10 [by implication].
Orconectes rusticus placidus.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) rusticus placidus.—Hobbs, 1942b:154 [by implication].
Orconectes placidus.—Hobbs, 1966b:69; 1967a:125.

TYPES.—Syntypes, MCZ 289 (4 ♂ II, 3 ♀), USNM 4966 (♂ II).

TYPE-LOCALITY.—Lebanon, Wilson County, Tennessee.

RANGE.—Cumberland, Duck, and Tennessee drainage systems in southern Kentucky, Tennessee, and northern Alabama.

HABITAT.—Streams.

Orconectes propinquus (Girard)

FIGURE 118

Cambarus propinquus Girard, 1852:88.
Astacus propinquus.—Hagen, 1870:61.
Cambarus propinquus propinquus.—Faxon, 1885a:91 [by implication].
Camborus propinquus.—Williamson, 1899:47 [erroneous spelling].
Cambarus propinquus typicus.—Ortmann, 1905c:133.

Cambarus (Faxonius) propinquus.—Ortmann, 1905c:112; 1906b:358, pl. 39: fig. 6a,b.
Faxonius propinquus.—Williamson, 1907:754.—Creaser, 1933a:1.
Faxonius (Faxonius) propinquus propinquus.—Creaser, 1933a: 3 [by implication].
Cambarus propinguus.—Fleming, 1939:304 [erroneous spelling].
Cambarus propinkuus.—Fleming, 1939:305 [in part; erroneous spelling].
Cambarrus propinquus.—Fleming, 1939:305 [erroneous spelling].
Orconectes propinquus propinquus.—Hobbs, 1942a:352 [by implication].—Crocker, 1957:35, 48, 75; frontispiece; pl. 3: figs. 1, 2; pl. 5: fig. 1.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) propinquus propinquus.—Hobbs, 1942b:154 [by implication].
Orconectes propinquus.—Hoff, 1943:281.—Fitzpatrick, 1967a: 143, figs. 2–19.
Orconnectes propinquus.—Threinen, 1958:1 [erroneous spelling].
Faxonius propinquus propinquus.—Creaser, 1962:2 [by implication].

TYPES.—Destroyed in the Chicago fire in 1871.

TYPE-LOCALITY.—Three localities were originally given by Girard. From these, Faxon designated Garrison Creek, Sackett's Harbor, Jefferson County, New York, as the type-locality. Ortmann cited Oswego, Oswego County, New York. Crocker (1957:35) and Fitzpatrick (1967a:146) accepted Ortmann's designation.

RANGE.—Ontario and New York west to Illinois and Wisconsin.

HABITAT.—Streams.

Orconectes punctimanus (Creaser)

FIGURE 133

Faxonius (Faxonius) punctimanus Creaser, 1933b:1, pl. 1: figs. 5, 6 [subgenus by implication].
Faxonius punctimanus.—Creaser, 1934a:1; 1962:2 [by implication].
Orconectes punctimanus.—Hobbs, 1942a:353.—Williams, 1954:856, figs. 107–114, 200.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) punctimanus.—Hobbs, 1942b:154 [by implication].

TYPES.—Holotype and allotype, USNM 98342, 98343 (♂ I, ♀); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Rubidoux Creek at Waynesville, Pulaski County, Missouri.

RANGE.—Between the White, St. Francis, and Missouri rivers in Arkansas and Missouri.

HABITAT.—Streams.

Orconectes putnami (Faxon)

FIGURE 148

Cambarus Putnami Faxon, 1884:131; 1885a:118, pl. 5: fig. 5; pl. 9: figs. 6, 6′, 6a, 6a′.
Cambarus putnami.—Underwood, 1886:372.
Cambarus (Faxonius) putnami.—Ortmann, 1905c:112.
Cambarus (Faxonius) juvenilis.—Ortmann, 1931:84 [in part].
Orconectes putnami.—Rhoades, 1944a:129.—Hobbs, 1972b:86, figs. 68d, 69a.

TYPES.—Syntypes, MCZ 3568 (4 ♂ I, 7 ♀, 8 ♂ juv., 5 ♀ juv.), USNM 10130 (♂ I).

TYPE-LOCALITY.—Bear Creek, Grayson Springs, Grayson County, Kentucky.

RANGE.—Ohio drainage system in western Kentucky, southern Indiana (?), and Tennessee (?). The limits of the range of *O. putnami* and the closely related *O. juvenilis* and *O. spinosus* have not been determined.

HABITAT.—Streams.

REMARKS.—Following Ortmann (1931) this species has been largely relegated to synonymy with *O. juvenilis* (Hagen). Even Rhoades, in using the combination *Orconectes putnami* for the first time, considered it a synonym of *O. juvenilis*. Not until 1972 was it proposed that it again be accorded specific status.

Orconectes quadruncus (Creaser)

FIGURE 130

Faxonius (Faxonius) quadruncus Creaser, 1933b:10, pl. 1: figs. 11, 12 [subgenus by implication].
Faxonius quadruncus.—Creaser, 1934a:1; 1962:2 [by implication].
Orconectes quadruncus.—Hobbs, 1942a:353.—Williams, 1954: 844, figs. 1, 58–65.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) quadruncus.—Hobbs, 1942b:154 [by implication].

TYPES.—Holotype and allotype, USNM 98346, 98347 (♂ I, ♀); paratypes, USNM, MCZ.

TYPE-LOCALITY.—Stout's Creek, tributary to St. Francis River, between Ironton and Arcadia, Iron County, Missouri.

RANGE.—Restricted to the headwaters of the St. Francis River system in Iron, St. Genevieve, and Madison counties, Missouri.

HABITAT.—Rapidly flowing, rocky streams.

Orconectes rafinesquei Rhoades

FIGURE 124

Orconectes rafinesquei Rhoades, 1944a:116, fig. 1A–F.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) rafinesquei.—Hobbs, 1959:893.
Faxonius rafinesquei.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, allotype, and morphotype, USNM 81304, 81306, 81305 (♂ I, ♀, ♂ II); paratypes, ANSP, MCZ, RR.

TYPE-LOCALITY.—Rough River, at Falls-of-Rough, Grayson-Breckenridge counties, Kentucky.

RANGE.—Breckenridge, Grayson, and Ohio counties in central Kentucky.

HABITAT.—Streams.

Orconectes rhoadesi Hobbs

FIGURE 167

Cambarus validus Faxonianus.—Fleming, 1938:303 [error for "*C. validus* Faxon"].
Orconectes rhoadesi Hobbs, 1949a:19, pl. 3: figs. 1–10.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) rhoadesi.—Hobbs, 1959:895.
Faxonius rhoadesi.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, morphotype, USNM 87953 (♂ I, ♂ II), and allotype, USNM 87954 (♀); paratypes, USNM.

TYPE-LOCALITY.—Otter Creek, between Granny White Pike and Hillsboro Pike, about 7 miles south of Nashville, Davidson County, Tennessee.

RANGE.—Cumberland, Duck, and Tennessee basins in central Tennessee.

HABITAT.—Streams.

Orconectes rusticus (Girard)

FIGURE 136

Cambarus rusticus Girard, 1852:88.—Faxon, 1885a:108, pl. 9: figs. 8, 8′, 8a, 8a′.
Cambarus (Faxonius) rusticus.—Ortmann, 1905c:112.
Faxonius rusticus.—Williamson, 1907:753 [*Faxonius* intended as a subgeneric name].—Creaser, 1933a:5.
Cambarus (Faxonius) rusticus rusticus.—Ortmann, 1931:82.
Faxonius (Faxonius) rusticus rusticus.—Creaser, 1933b:21 [by implication].
Orconectes rusticus rusticus.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) rusticus rusticus.—Hobbs, 1942b:154 [by implication].
Orconectes rusticus.—Spoor, 1955:78.—Hobbs, 1972b:92, figs. 74c, 75b,d.
Orconnectes rusticus.—Threinen, 1958:3 [erroneous spelling].
Faxonius rusticus rusticus.—Creaser, 1962:2 [by implication].

TYPES.—"Types probably destroyed in the Chicago fire in 1871" (Faxon, 1914:418). A questionable type (in very poor condition) is USNM 4968 (♂ II); also questionable is a dry female, ANSP 195.

TYPE-LOCALITY.—Ohio River at Cincinnati, Hamilton County, Ohio.

RANGE.—Michigan, Ohio, Indiana, Kentucky, Tennessee, and southern Ontario; introduced in Massachusetts.

HABITAT.—Streams, ponds, and lakes.

Orconectes sanbornii erismophorous Hobbs and Fitzpatrick

FIGURE 122

Orconectes propinquus erismophorous Hobbs and Fitzpatrick, 1962:208, figs. 1–15.
Orconectes sanborni erismophorus.—Fitzpatrick, 1967a:131, figs. 2–18, 24 [erroneous spelling].
Orconectes sanborni erismophorous.—Fitzpatrick, 1967a:160.
Orconectes sanbornii erismophorous [original genitive of species].

TYPES.—Holotype, allotype, and morphotype, USNM 107597, 107598, 107599 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Crane Nest Creek at Pee Wee, Wirt County, West Virginia.

RANGE.—Little Kanawha River system, West Virginia.

HABITAT.—Streams.

Orconectes sanbornii sanbornii (Faxon)

FIGURE 121

Cambarus Sanbornii Faxon, 1884:128.
Cambarus propinquus Sanbornii.—Faxon, 1885a:91, pl. 5: fig. 3; pl. 9: figs. 10, 10′, 10a, 10a′.
Cambarus propinquus var. *sanborni.*—Underwood, 1886:372.
Cambarus propinquus var. *sanbornii.*—Osborn and Williamson, 1898:21.
Cambarus propinquus sanbornii.—Faxon, 1898:660.
Cambarus propinquus sanborni.—Ortmann, 1905c:128.
Cambarus obscurus sanborni.—Ortmann, 1906b:437.
Faxonius sanborni.—Creaser, 1933a:3 [by implication].
Faxonius (Faxonius) sanborni.—Creaser, 1933b:21 [by implication].

Orconectes propinquus sanborni.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) propinquus sanborni.—Hobbs, 1942b:154 [by implication].
Faxonius sanborni sanborni.—Creaser, 1962:2 [by implication].
Orconectes sanborni sanborni.—Fitzpatrick, 1967a:131, 157, figs. 2–18, 23.
Orconectes sanborni.—Stevenson, 1967:208.
Orconectes sanbornii sanbornii [original genitive].

TYPES.—Lectotype, MCZ 3692 (♂ I); paralectotypes, MCZ 3587 (lost), MCZ 3692 (♂ II, ♀) [see Fitzpatrick (1967a:157)].

TYPE-LOCALITY.—Oberlin, Lorain County, Ohio. Restricted by Faxon (1914:418).

RANGE.—Southern Ohio and adjacent West Virginia and Kentucky.

HABITAT.—Streams.

Orconectes shoupi Hobbs

FIGURE 129

Cambarus propinkuus.—Fleming, 1939:305 [in part; erroneous spelling].
Cambarus propinquus sanborni.—Fleming [not Faxon], 1939: 305 [in part], pl. 14.
Orconectes shoupi Hobbs, 1948a:14, figs. 1–5, 9, 15, 16, 19, 20.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) shoupi.—Hobbs, 1959:893.
Faxonius shoupi.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, allotype, and morphotype, USNM 84072 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Mill Creek, tributary of Cumberland River, east of Oglesby near Antioch Pike, 10 miles south of Nashville, Davidson County, Tennessee.

RANGE.—Known only from the vicinity of Nashville, Tennessee.

HABITAT.—Streams.

Orconectes sloanii (Bundy)

FIGURE 112

Cambarus sloanii Bundy, 1876:24.
Cambarus Sloanii.—Faxon, 1885a:89, pl. 4: fig. 5; pl. 10: figs. 1, 1′, 1a, 1a′.
Cambarus sloanei.—Ortmann, 1902:278 [erroneous spelling].
Cambarus (Faxonius) sloanei.—Ortmann, 1905c:107 [erroneous spelling].
Faxonius sloanii.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) sloanii.—Creaser, 1933b:21 [by implication].
Cambarus sloani.—Rhoades, 1941a:93.
Orconectes sloani.—Hobbs, 1942a:352 [by implication]; 1948a: 20.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) sloani.—Hobbs, 1942b:154 [by implication]; 1959:894.
Orconectes sloanii.—Eberly, 1955:281.
Orconectes sloanei.—Eberly, 1958:2 [erroneous spelling].

TYPES.—Syntypes, MCZ 3806 (♂ I, ♀).

TYPE-LOCALITY.—New Albany, Floyd County, Indiana.

RANGE.—Southern Indiana and southwestern Ohio.

HABITAT.—Streams.

Orconectes spinosus (Bundy)

FIGURE 146

Cambarus spinosus Bundy, 1877:173.—Faxon, 1885a:115, pl. 9: figs. 7, 7′, 7a, 7a′.
Cambarus (Faxonius) spinosus.—Ortmann, 1905c:112.
Cambarus (Faxonius) juvenilis.—Ortmann, 1931:84 [in part].
Orconectes spinosus.—Hobbs, 1944:340; 1972b:87, figs. 68b,g, 69d.

TYPES.—Syntypes, MCZ 3540 (2 ♂ II, 2 ♀), MCZ 3541 (♂ II, ♀), USNM 19779 (3 ♂ II, 2 ♀).

TYPE-LOCALITY.—Etowah, Oostanaula, and Coosa rivers, in the vicinity of Rome, Floyd County, Georgia.

RANGE.—Stream tributaries of the Coosa, Kanawha (?), and Tennessee rivers in Alabama, Georgia, eastern Tennessee, Virginia (?), and West Virginia (?). The limits of the ranges of *O. spinosus* and the closely related *O. juvenilis* and *O. putnami* have not been determined.

HABITAT.—Streams.

REMARKS.—Following Ortmann (1931) this species has been largely relegated to synonomy with *O. juvenilis* (Hagen). Not until 1972 was it proposed that it again be accorded specific status.

Orconectes transfuga Fitzpatrick

FIGURE 152

Orconectes transfuga Fitzpatrick, 1966b:178, figs. A–T.
Orconectes transfugus.—Fitzpatrick, 1967a:143 [erroneous spelling].

TYPES.—Holotype, allotype, USNM 114763 (♂ I,

♀), and morphotype, USNM 114762 (♂ II); paratypes, MCZ, USNM, J. F. Fitzpatrick, Jr.

TYPE-LOCALITY.—Rogue River, 6 miles upstream from Grants Pass, Jackson County, Oregon.

RANGE.—Only two localities known, both in Rogue River drainage in Jackson County, Oregon.

HABITAT.—Streams.

Orconectes tricuspis Rhoades

FIGURE 126

Orconectes tricuspis Rhoades, 1944a:117, fig. 2A–F.—Hobbs, 1948a:20.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) tricuspis.—Hobbs, 1959:894.
Faxonius tricuspis.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, allotype, and "morphotype" (latter designated as allotype by Rhoades), USNM 81307, 81309, 81308 (♂ I, ♀, ♂ II); paratypes, ANSP, MCZ, RR.

TYPE-LOCALITY.—Pete Lights' spring, 3 miles east of Canton, Trigg County, Kentucky.

RANGE.—Cumberland drainage in Lyon, Trigg, and Christian counties, Kentucky.

HABITAT.—Small streams.

Orconectes validus (Faxon)

FIGURE 168

Cambarus validus Faxon, 1914:382, pl. 7: figs. 3, 4, 8; pl. 13: fig. 1.
Faxonius validus.—Creaser, 1933a:3 [by implication]; 1962:2 [by implication].
Faxonius (Faxonius) validus.—Creaser, 1933b:21 [by implication].
Cambarus validus Faxonianus.—Fleming, 1938:303 [not *validus* Faxon; see *O. rhoadesi*].
Orconectes validus.—Hobbs, 1942a:352 [by implication].—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) validus.—Hobbs, 1942b:154 [by implication].

TYPE.—Holotype, MCZ 301 (♂ I).

TYPE-LOCALITY.—Huntsville, Madison County, Alabama.

RANGE.—Tennessee drainage below Walden Gorge in Alabama and southern Tennessee, and upper Black Warrior and Tombigbee drainages in Alabama.

HABITAT.—Streams.

Orconectes virginiensis Hobbs

FIGURE 120

Orconectes virginiensis Hobbs, 1951a:122, figs. 1–10.—Fitzpatrick, 1963:61 [by implication]; 1967a:131, 164, figs. 2–18, 26.
Orconectes (Orconectes) virginiensis.—Hobbs, 1959:893.
Faxonius virginiensis.—Creaser, 1962:2 [by implication].
Orconectes virginianus.—Fitzpatrick, 1967a:133 [erroneous spelling].

TYPES.—Holotype, allotype, and morphotype, USNM 91659, 91660, 91661 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Rowanty Creek, tributary of the Nottoway River, 3.3 miles south of Reams Station on U.S. Highway 301, Dinwiddie County, Virginia.

RANGE.—Chowan drainage system in North Carolina and Virginia.

HABITAT.—Streams.

Orconectes virilis (Hagen)

FIGURE 162

Cambarus virilis Hagen, 1870:63, pl. 1: figs. 23–28; pl. 2: figs. 128–132; pl. 3: fig. 155; pl. 8.
Cambarus debilis Bundy, 1876:24. [Type, MCZ 3449 (♂ II). Type-locality, Barraboo River, Ironton, Sauk County, Wisconsin.]
Cambarus wisconsinensis Bundy, 1876:4. [Type, MCZ 3448 (♂ II). Type-locality, Racine, Racine County, Wisconsin.]
Cambarus couesi Streets, 1877:803. [Syntypes, USNM 3154 (7 ♂ I, 3 ♂ juv., 5 ♀ juv.), MCZ 3545 (♂ I, ♀, ♂ II). Type-locality, Red River of the North, near Pembina, Pembina County, North Dakota.]
Cambarus viriles.—Bundy, 1882:180 [erroneous spelling].
Cambarus viridis.—Moenkhaus, 1904:17 [erroneous spelling].
Cambarus (Faxonius) virilis.—Ortmann, 1905c:113.—Creaser, 1932:326, figs. 1, 2, 8.
Faxonius virilis.—Creaser, 1933a:3; 1962:2 [by implication].
Faxonius (Faxonius) virilis.—Creaser, 1933b:21 [by implication].
Orconectes virilis.—Hobbs, 1942a:352 [by implication]; 1972b: 91, figs. 72h, 73e.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) virilis.—Hobbs, 1942b:154 [by implication].
Orconnectes virilis.—Threinen, 1958:1 [erroneous spelling].
Cambarus virilus.—Hama, 1961:329 [erroneous spelling].
Camburus viridis.—Bacescu, 1967:218 [erroneous spelling].
Orconectes (Cambarus) virilis.—Mason, 1970b:975.

TYPES.—Syntypes, MCZ 194 (♂ I, ♂ II, 4 ♀, 2 ♀ ovig.), MCZ 196 (7 ♂ I, 3 ♂ II, 3 ♀, ♂ juv., ♀ juv.), MCZ 203 (♂ II, 3 ♀), MCZ 1151 (♂ I),

MCZ 3342 (♂ I, 5 ♂ II, ♀, 2 ♂ juv., ♀ juv.), MCZ 3343 (4 ♂ I, ♀), MCZ 3344 (♂ II, 2 ♀, ♂ juv., 3 ♀ juv.), MHNP, Würzburg Mus., AMS.

TYPE-LOCALITY.—"Lake Superior," restricted by Faxon (1914:420).

RANGE.—From Saskatchewan to Ontario, Canada, and from Montana and Wyoming to New York and southwestern Maine. Introduced into California (Riegel, 1959:29, 37), Maryland (Meredith and Schwartz, 1960:28), parts of New England, and Tennessee (R. W. Bouchard, personal communication).

HABITAT.—Lakes and streams.

Orconectes williamsi Fitzpatrick

FIGURE 154

Orconectes williamsi Fitzpatrick, 1966a:145, figs. 1–10.

TYPES.—Holotype, allotype, and morphotype, USNM 115520, 115521, 115522 (♂ I, ♀, ♂ II); paratypes, MCZ, OSM, J. F. Fitzpatrick, Jr.

TYPE-LOCALITY.—White River, 2.8 miles east of Pettigrew, Madison County, Arkansas.

RANGE.—Three localities in headwaters of the White River in Madison County, Arkansas.

HABITAT.—Pools in small streams.

Orconectes wrighti Hobbs

FIGURE 104

Orconectes wrighti Hobbs, 1948c:85, pl. 3: figs. 1–9.—Fitzpatrick, 1963:61 [by implication].
Orconectes (Orconectes) wrighti.—Hobbs, 1959:893.
Faxonius wrighti.—Creaser, 1962:2 [by implication].

TYPES.—Holotype, USNM 85144 (♂ I); allotype and morphotype, USNM 85145 (♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Robinson Creek on State Route 57, Hardin County, Tennessee.

RANGE.—Known only from Hardin County, Tennessee.

HABITAT.—Streams.

Genus *Procambarus* Ortmann

Astacus.—Harlan, 1830:464.
Camborus Williamson, 1899:47 [erroneous spelling].
Cambarus.—Ortmann, 1905c:96. [Proposed as typical subgenus of *Cambarus* for which *Astacus Blandingii* Harlan, 1830:464, was designated type-species.]
Procambarus Ortmann, 1905d:437. [Type-species by subsequent designation (Fowler, 1912:340), *Cambarus Digueti* Bouvier, 1897:225. Gender: masculine. Proposed as subgenus of *Cambarus* and elevated to generic rank by Hobbs, 1942a:341.]
Paracambarus Ortmann, 1906a:1. [Type-species by monotypy, *Cambarus (Paracambarus) paradoxus* Ortmann, 1906a:3. Gender: masculine. Proposed as subgenus of *Cambarus*, elevated to generic rank by Hobbs, 1942a:344, and reduced to subgenus of *Procambarus* by Hobbs, 1972a:10.]
Ortmannicus Fowler, 1912:341. [Replacement name for Ortmann's subgenus *Cambarus*. Utilized as generic name by Rhoades, 1944a:114.]
Cambarellus.—Creaser, 1933b:21 [lapsus calami].
procambarus.—Padgett, 1970:19 [lapsus calami].

Subgenus *Acucauda* Hobbs

Acucauda Hobbs, 1972a:5. [Type-species by original designation, *Procambarus fitzpatricki* Hobbs, 1971a:461. Gender: feminine.]

Procambarus (Acucauda) fitzpatricki Hobbs

FIGURE 170

Cambarus (Paracambarus) harnedi Lyle, 1938:76 [nomen nudum].
Procambarus fitzpatricki Hobbs, 1971a:461, fig. 1.
Procambarus (Acucauda) fitzpatricki.—Hobbs, 1972a:5, figs. 1*l*, 2*a*, 4*a–g*.

TYPES.—Holotype, allotype, and morphotype, USNM 131205, 131206, 131207 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Roadside ditch at junction of State Route 67 and Woolmarket Road, just north of D'Iberville, Harrison County, Mississippi.

RANGE.—Southern Mississippi between the Wolf and Pascagoula rivers.

HABITAT.—Burrows (primary or secondary burrower).

Subgenus *Austrocambarus* Hobbs

Austrocambarus Hobbs, 1972a:5. [Type-species by original designation, *Procambarus vazquezae* Villalobos, 1954b:328. Gender: masculine.]

Procambarus (Austrocambarus) acanthophorus Villalobos

FIGURE 180

Procambarus acanthophorus Villalobos, 1948:175, pl. 1: figs. 1–10; pl. 2: figs. 1–9.

Procambarus (Austrocambarus) acanthophorus.—Hobbs, 1972a:6.

TYPES.—Holotype, allotype, and morphotype, IBM 90847 (035) (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—Four km east of Tuxtepec, Oaxaca, Mexico.

RANGE.—Atlantic drainage in southern Veracruz and Oaxaca, Mexico.

HABITAT.—Streams and canals.

Procambarus (Austrocambarus) atkinsoni (Ortmann)

FIGURE 183

Cambarus (Procambarus) atkinsoni Ortmann, 1913:414.
Procambarus atkinsoni.—Hobbs, 1942a:342 [by implication].—Hobbs and Villalobos, 1964:346, figs. 40–50.
Procambarus Atkinsoni.—Creaser, 1962:7 [erroneous spelling].
Procambarus (Austrocambarus) atkinsoni.—Hobbs, 1972a:6.

TYPES.—Lectoholotype, lectoallotype, and lectomorphotype, CM 74.924 (♂ I, ♀, ♂ II); paralectotypes, CM 74.924, 74.925. Designated by Hobbs and Villalobos, 1964:347, 349, 350.

TYPE-LOCALITY.—Tributaries of Río de los Indios, Isla de Pinos, Cuba.

RANGE.—Isla de Pinos, Cuba.

HABITAT.—Streams (?).

Procambarus (Austrocambarus) aztecus (Saussure)

FIGURE 172

Cambarus aztecus Saussure, 1857b:503; 1858:460, figs. 23, 23a, 23b.
Cambarus mexicanus.—[not Erichson.] Most authors from Faxon, 1884, to present [in part].
Procambarus aztecus.—Hobbs, 1942a:342 [by implication].
Procambarus (Austrocambarus) aztecus.—Hobbs, 1972a:6.

TYPES.—Syntypes, USNM 20682 (♂ I), GM (uncataloged, dry).

TYPE-LOCALITY.—"Pris à Tomatlán, Dans les Terres Chaudes." (Veracruz, Mexico.)

RANGE.—Vicinity of Jalapa, Veracruz, Mexico.

HABITAT.—Streams.

REMARKS.—Specimens described as *Procambarus aztecus* by Villalobos (1954b:314) are not members of this species and must receive a new name.

Procambarus (Austrocambarus) cubensis cubensis (Erichson)

FIGURE 185

Astacus (Cambarus) Cubensis Erichson, 1846:100.
Cambarus Cubensis.—Girard, 1852:87 [by implication].—Faxon, 1885a:51, pl. 2: fig. 1; pl. 8: figs. 5, 5′, 5a, 5a′.
Cambarus consobrinus Saussure, 1857a:101. [Syntypes, GM (uncataloged, dry, 2♂), specimens formerly in MHNP no longer there, BMNH 1163 (2♀), USNM 20684 (♂ II). Type-locality, ponds in the central part of Cuba.]
Cambarus (Cambarus) cubensis.—Ortmann, 1905c:101.
Cambarus (Procambarus) cubensis.—Ortmann, 1905d:438.
Cambarus cubensis cubensis.—Faxon, 1912:458 [by implication].
Cambarus cubensis consobrinus.—Faxon, 1912:458.
Cambarellus cubensis.—Creaser, 1933b:21 [lapsus calami].
Procambarus cubensis cubensis.—Hobbs, 1942a:342 [by implication].—Hobbs and Villalobos, 1964:319, figs. 1–13.
Procambarus cubensis consobrinus.—Hobbs, 1942a:342 [by implication].
Procambarus consobrinus.—Villalobos, 1954b:303; 1955:160.
Procambarus (Austrocambarus) cubensis cubensis.—Hobbs, 1972a:6.

TYPES.—BMNH 4140.

TYPE-LOCALITY.—Cuba.

RANGE.—Scattered localities throughout Cuba. except in the southwestern mountains.

HABITAT.—Lentic and lotic situations.

Procambarus (Austrocambarus) cubensis rivalis (Faxon)

FIGURE 184

Cambarus cubensis rivalis Faxon, 1912:459.
Procambarus cubensis rivalis.—Hobbs, 1942a:342 [by implication].—Hobbs and Villalobos, 1964:335, figs. 14–24.
Procambarus (Austrocambarus) cubensis rivalis.—Hobbs, 1972a:6.

TYPES.—Syntypes, MCZ 7406 (2♂ II, 3♀).

TYPE-LOCALITY.—San Diego de los Baños, Province of Pinar del Río, Cuba.

RANGE.—Known only from a few localities in the province of Pinar del Río, Cuba.

HABITAT.—Mountain streams.

Procambarus (Austrocambarus) llamasi Villalobos

FIGURE 181

Procambarus llamasi Villalobos, 1954b:364, pls. 16, 17.
Procambarus (Austrocambarus) llamasi.—Hobbs, 1972a:6.

TYPES.—Holotype, allotype, and morphotype, IBM (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—Santa Rita, 47 km east of Escárcega, Campeche, Mexico.

RANGE.—Veracruz to Yucatán, Mexico, and northern Guatemala.

HABITAT.—Small streams and drainage ditches.

Procambarus (Austrocambarus) mexicanus (Erichson)

FIGURE 173

Astacus (Cambarus) mexicanus Erichson, 1846:99.
Astacus mexicanus.—Dana, 1852:522.
Cambarus mexicanus.—Saussure, 1858:461.
Cambarus (Cambarus) mexicanus.—Ortmann, 1905c:101.
Cambarus (Procambarus) mexicanus.—Ortmann, 1905d:438.
Procambarus mexicanus.—Hobbs, 1942a:342 [by implication].—Villalobos, 1954b:307, pls. 1, 2.
Procambarus Mexicanus.—Creaser, 1962:7 [erroneous spelling].
Procambarus (Austrocambarus) mexicanus.—Hobbs, 1972a:6.

TYPES.—Lost, formerly in ZBM. Neoholotype, ANSP 421 (♂ I); neoallotype and neoparatypes, IBM (Villalobos, 1954b:312).

TYPE-LOCALITY.—Mexico. Restricted by Villalobos (1954b:312) to "El Mirador de Zacuapan," 8 km northeast of Huatusco, Veracruz.

RANGE.—Known from a single locality.

HABITAT.—Not reported.

Procambarus (Austrocambarus) mirandai Villalobos

FIGURE 176

Procambarus mirandai Villalobos, 1954b:355, pls. 13–15.
Procambarus mirandae.—Hobbs and Villalobos, 1964:313 [erroneous spelling].
Procambarus (Austrocambarus) mirandai.—Hobbs, 1972a:6.

TYPES.—Holotype, allotype, and morphotype, IBM (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—Cerro Hueco, 4 km southeast of Tuxtla Gutierrez, Chiapas, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—"Los ejemplares fueron colectados dentro de una gruta, que es la salida de un río subterráneo."

Procambarus (Austrocambarus) niveus Hobbs and Villalobos

FIGURE 186

Procambarus niveus Hobbs and Villalobos, 1964:342, figs. 26–39.
Procambarus (Austrocambarus) niveus.—Hobbs, 1972a:6.

TYPES.—Holotype and allotype, USNM 109076, 109077 (♂ I, ♀).

TYPE-LOCALITY.—"Cuevas de Santo Tomás, Sierra de los Organos, cerca de Ponce, Pinar del Río, Cuba."

RANGE.—Known only from the type-locality.

HABITAT.—Subterranean waters.

Procambarus (Austrocambarus) pilosimanus (Ortmann)

FIGURE 182

Cambarus (Procambarus) pilosimanus Ortmann, 1906a:6, fig. 2.
Procambarus pilosimanus.—Hobbs, 1942a:342 [by implication].—Villalobos, 1954b:371, pls. 18, 19.
Procambarus pelosimanus.—Creaser, 1962:7 [erroneous spelling].
Procambarus (Austrocambarus) pilosimanus.—Hobbs, 1972a:6.

TYPES.—Syntypes, MHNP (8 ♂, 6 ♀), CM 74.678.

TYPE-LOCALITY.—"Coche, prés de la rivére de Coban, Guatemala." Probably Río Cahabón at Cobán, Province of Alta Verapaz, Guatemala.

RANGE.—Guatemala, British Honduras, and Chiapas and Quintana Roo, Mexico.

HABITAT.—Lentic habitats.

Procambarus (Austrocambarus) rodriguezi Hobbs

FIGURE 174

Procambarus rodriguezi Hobbs, 1943b:203, pl. 2.
Procambarus (Austrocambarus) rodriguezi.—Hobbs, 1972a:6.

TYPES.—Holotype, allotype, and "morphotype," USNM 81302 (♂ I, ♀, ♂ II); paratypes, USNM, IBM, MCZ.

TYPE-LOCALITY.—Cueva de Ojo de Agua, west-northwest of Hacienda Potrero Viejo, Paraje Nuevo, Córdoba, Veracruz, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—Subterranean stream.

Procambarus (Austrocambarus) ruthveni ruthveni (Pearse)

FIGURE 177

Cambarus ruthveni Pearse, 1911:110, fig. 3.
Procambarus ruthveni.—Hobbs, 1942a:342 [by implication].
Procambarus ruthveni ruthveni.—Villalobos, 1954b:336, pls. 9, 10.
Procambarus (Austrocambarus) ruthveni ruthveni.—Hobbs, 1972a:6.

TYPES.—Holotype and allotype, USNM 98348, 98349 (♂ I, ♀).

TYPE-LOCALITY.—Cuatotolapan, Cantón de Acayucan, Veracruz, Mexico.

RANGE.—Known from only one additional locality: "San Juan Díaz Covarrubias, 10 Km. SO. de Cuatotolapan, Ver." (Villalobos, 1954b:344).

HABITAT.—Temporary ponds, pools, and burrows (secondary burrower).

Procambarus (Austrocambarus) ruthveni zapoapensis Villalobos

FIGURE 178

Procambarus ruthveni zapoapensis Villalobos, 1954b:347, pls. 11, 12.
Procambarus (Austrocambarus) ruthveni zapoapensis.—Hobbs, 1972a:6.

TYPES.—Holotype, allotype, and morphotype, IBM (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—Zapoapan de Cabaña, 11 km southeast of Catemaco, Veracruz, Mexico.

RANGE.—Known only from the vicinity of the type-locality.

HABITAT.—Small, rocky streams.

Procambarus (Austrocambarus) vazquezae Villalobos

FIGURE 171

Procambarus vazquezae Villalobos, 1954b:328, pls. 7, 8.
Procambarus vasquezae.—Hobbs, 1966b:71 [erroneous spelling].
Procambarus (Austrocambarus) vazquezae.—Hobbs, 1972a:6, figs. 2b, 5a–g.

TYPES.—Holotype, allotype, and morphotype, IBM (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—"Playa Norte de la Laguna de Catemaco," Veracruz, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—Under rocks along the shore of Laguna de Catemaco.

Procambarus (Austrocambarus) veracruzanus Villalobos

FIGURE 175

Procambarus veracruzanus Villalobos, 1954b:323, pls. 5, 6.
Procambarus (Austrocambarus) veracruzanus.—Hobbs, 1972a:6.

TYPES.—Holotype, allotype, and morphotype, IBM (♂ I, ♀, ♂ II); paratypes, IBM.

TYPE-LOCALITY.—Presidio, 30 km southeast of Córdoba, Veracruz, Mexico. "Cuenca del río Papaloapan."

RANGE.—Known only from the type-locality.

HABITAT.—Stream.

Procambarus (Austrocambarus) williamsoni (Ortmann)

FIGURE 179

Cambarus (Procambarus) williamsoni Ortmann, 1905d:439, figs. 1–3.
Procambarus williamsoni.—Hobbs, 1942a:342 [by implication].
Procambarus (Austrocambarus) williamsoni.—Hobbs, 1972a:6.

TYPES.—Syntypes, CM 74.560 (♂ I, ♀, ♂ II), CM 74.561 (♂ I, ♀, ♂ II).

TYPE-LOCALITY.—Los Amates, Province of Izabal, four to five miles south of Río Motagua, Guatemala. (Not "Malagua" as recorded by Ortmann.)

RANGE.—Known only from the vicinity of the type-locality and from Lago Yojoa, Honduras.

HABITAT.—Unknown.

Subgenus *Capillicambarus* Hobbs

Capillicambarus Hobbs, 1972a:6. [Type-species by original designation, *Cambarus (Cambarus) hinei* Ortmann, 1905b: 401. Gender: masculine].

Procambarus (Capillicambarus) hinei (Ortmann)

FIGURE 187

Cambarus (Cambarus) hinei Ortmann, 1905b:401, fig. 1.
Procambarus (Ortmannicus) hinei.—Fowler, 1912:341 [by implication].—Creaser, 1934b:4 [by implication].

Procambarus hinei.—Hobbs, 1942a:342 [by implication].—Penn, 1953b:63, figs. 1–15.
Procambarus (Capillicambarus) hinei.—Hobbs, 1972a:6, figs. 1n, 2c, 6a–g.

TYPES.—Syntypes, OSM 443.1 (♂ I), 443.2 (♀), 444.1 (♀), and 444.2 (♀), USNM 98355 (♂ I, ♀).

TYPE-LOCALITY.—One-fourth mile from Gulf Beach, near Cameron, Cameron Parish, Louisiana.

RANGE.—Southern Louisiana and southeastern Texas.

HABITAT.—Pools and roadside ditches.

Procambarus (Capillicambarus) incilis Penn

FIGURE 188

Procambarus incilis Penn, 1962:222, figs. 1–11.
Procambarus (Capillicambarus) incilis.—Hobbs, 1972a:6.

TYPES.—Holotype, allotype, and morphotype, USNM 106794, 106795, 106796 (♂ I, ♀, ♂ II); paratypes, USNM, TU.

TYPE-LOCALITY.—7.5 miles east of Edna, Jackson County, Texas.

RANGE.—Southeastern Texas in Jackson, Matagorda, and Wharton counties.

HABITAT.—Roadside ditches.

Subgenus *Girardiella* Lyle

Girardiella Lyle, 1938:76. [Type-species by monotypy, *Cambarus Hagenianus* Faxon, 1884:141. Gender: feminine.]

Procambarus (Girardiella) gracilis (Bundy)

FIGURE 193

Cambarus gracilis Bundy, 1876:5.
Cambarus gracillis.—Bundy, 1882:182 [erroneous spelling].
Cambarus (Cambarus) gracilis.—Ortmann, 1905c:101.
Cambarus (Ortmannicus) gracilis.—Fowler, 1912:341 [by implication].
Cambarus (Girardiella) gracilis.—Lyle, 1938:76 [by implication].
Procambarus gracilis.—Hobbs, 1942a:342 [by implication].—Williams, 1954:826, figs. 10–18.
Procambarus (Girardiella) gracilis.—Hobbs, 1972a:7, fig. 1k.

TYPES.—Syntypes, Ill. St. Lab. Nat. Hist. (lost), MCZ 3794 (♂ I, ♀), MCZ 3454 (♂ I).

TYPE-LOCALITY.—Normal, McLean County, Illinois. Here restricted.

RANGE.—Texas, Oklahoma, Kansas, Arkansas, Missouri, Iowa, Illinois, and Wisconsin.

HABITAT.—Burrows (primary burrower).

Procambarus (Girardiella) hagenianus (Faxon)

FIGURE 192

Cambarus advena.—Hagen, 1870:86–87 [in part], figs. 90–92, 164. [The description is of *hagenianus*. The Georgia specimens mentioned are *P. pygmaeus* and *P. advena*.]
Cambarus Carolinus.—Hagen [not Erichson], 1870:31.
Cambarus Hagenianus Faxon, 1884:141.
Cambarus hagenianus.—Hay, 1902c:38.—Faxon, 1914:366, pl. 1; pl. 7: figs. 1a–c, 7.
Cambarus (Cambarus) hagenianus.—Ortmann, 1905c:101.
Cambarus (Ortmannicus) hagenianus.—Fowler, 1912:341 [by implication].
Cambarus (Girardiella) hagenianus hagenianus.—Lyle, 1938:76.
Procambarus hagenianus.—Hobbs, 1942a:342 [by implication].
Procambarus (Girardiella) hagenianus.—Hobbs, 1972a:7, figs. 2d, 7a–g.

TYPES.—Holotype, MCZ 232 (♂ I).

TYPE-LOCALITY.—Given as Charleston, South Carolina, but definitely based on mislabeled specimens.

RANGE.—Central and eastern Mississippi and western Alabama.

HABITAT.—Burrows (primary burrower).

Procambarus (Girardiella) simulans regiomontanus Villalobos

FIGURE 191

Procambarus simulans regiomontanus Villalobos, 1954a:289, pls. 1, 2.
Procambarus (Girardiella) simulans regiomontanus.—Hobbs, 1972a:7.

TYPES.—Holotype, allotype, and morphotype, IBM (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—Five km north of Monterrey, Nuevo León, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—Not recorded.

Procambarus (Girardiella) simulans simulans (Faxon)

FIGURE 190

Cambarus simulans Faxon, 1884:112.
Cambarus similans.—Ortmann, 1892:12 [erroneous spelling].
Cambarus gallinus Cockerell and Porter, 1900:434, fig. 1. [Syntypes, MCZ 7342 (3♂ II), USNM 23915 (♂ II, 2♀), 23916 (♂ I, ♀), 129197 (2♂ II, 2♀), ANSP 1456 (♂ I),

1455 (2 ♀). Type-locality, Gallinas River at Las Vegas, New Mexico.]

Cambarus baumgartneri Harris, 1901b: 115 [nomen nudum].

Cambarus (Cambarus) simulans.—Ortmann, 1905c:101.

Cambarus (Ortmannicus) simulans.—Fowler, 1912:341 [by implication].

Procambarus simulans.—Hobbs, 1942a:342 [by implication].

Procambarus simulans simulans.—Villalobos, 1954a:296.

Procambarus (Girardiella) simulans simulans.—Hobbs, 1972a:7.

TYPES.—Syntypes, MCZ 3646 (♂ I, 4 ♀), MCZ 3647 (23 ♂ II, 30 ♀, 4 ♂ juv., 5 ♀ juv.), USNM 4150 (♂ I, 3 ♂ II, 5 ♂ juv.), ZIAS 1/44975 (2 ♂, ♀).

TYPE-LOCALITY.—Dallas, Texas.

RANGE.—New Mexico, Texas, Louisiana, Oklahoma, Kansas, Arkansas, and Colorado.

HABITAT.—Lentic and lotic situations, and burrows (secondary burrower).

REMARKS.—The 3 ♂ II syntypes, MCZ 7342, could not be located.

Procambarus (Girardiella) tulanei Penn

FIGURE 189

Procambarus tulanei Penn, 1953a:163, figs. 1–12.

Procambarus (Girardiella) tulanei.—Hobbs, 1972a:7.

TYPES.—Holotype, allotype, and morphotype, USNM 93655, 93656, 79928 (♂ I, ♀, ♂ II); paratypes, USNM, TU, La. Polytechnic Inst.

TYPE-LOCALITY.—Tributary of Bayou D'Arbonne, 4 miles west of Dubach on State Route 288, Lincoln Parish, Louisiana.

RANGE.—Ouachita and Red drainage systems in Louisiana and Arkansas.

HABITAT.—Lentic and lotic situations, and burrows (secondary burrower).

Subgenus *Hagenides* Hobbs

Hagenides Hobbs, 1972a:7. [Type-species by original designation, *Astacus advena* LeConte, 1856:402. Gender: masculine.]

Procambarus (Hagenides) advena (LeConte)

FIGURE 194

Astacus advena LeConte, 1856:402.

Cambarus advena.—Hagen, 1870:87, pl. 3: fig. 164; pl. 7.—Faxon, 1884:140.

Cambarus Carolinus.—Hagen, 1870:87–88 [latter in part], pl. 1: figs. 51–54; pl. 3: fig. 165.

Cambarus (Cambarus) advena.—Ortmann, 1905c:101.

Cambarus (Ortmannicus) advena.—Fowler, 1912:341 [by implication].

Procambarus advena.—Hobbs, 1942a:340.

Procambarus (Hagenides) advena.—Hobbs, 1972a:7.

TYPES.—Syntypes, MCZ 3379 (♀), ANSP 321 (♀).

TYPE-LOCALITY.—"Georgia inferiore." Here restricted to 2.5 miles west of Riceboro, Liberty County, Georgia.

RANGE.—Lower coastal plain of Georgia, between Savannah and Altamaha rivers.

HABITAT.—Burrows (primary burrower).

REMARKS.—As pointed out by Faxon (1884:140), the descriptions of *P. advena* and *C. carolinus* were transposed in Hagen's monograph, and figures 51–54 and 165 are actually of *P. advena*.

Procambarus (Hagenides) geodytes Hobbs

FIGURE 195

Cambarus advena geodytes Hobbs, 1937:154 [nomen nudum].

Procambarus geodytes.—Hobbs, 1942b:80, figs. 61–65, 276–285.

Procambarus (Hagenides) geodytes.—Hobbs, 1972a:7.

TYPES.—Holotype and allotype, USNM 81279 (♂ I, ♀); "morphotype," USNM 81280 (♂ II); paratypes, MCZ, USNM, UF (now in USNM).

TYPE-LOCALITY.—Orange Springs in the northeastern part of Marion County, Florida.

RANGE.—Along the St. Johns River and its tributaries from Putnam County south to Orange County, Florida.

HABITAT.—Burrows in flatwoods and seepage areas (primary burrower).

Procambarus (Hagenides) pygmaeus Hobbs

FIGURE 196

Procambarus pygmaeus Hobbs, 1942b:83, figs. 66–70, 296–304.

Procambarus (Hagenides) pygmaeus.—Hobbs, 1972a:7.

TYPES.—Holotype, allotype, and "morphotype," USNM 81285 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—About 16 miles north of Fargo on State Route 89, Clinch County, Georgia.

RANGE.—Georgia south of the Savannah River and in Gulf, Liberty, Leon, and Wakulla counties, Florida.

HABITAT.—Lentic and lotic situations and burrows (secondary burrower).

Procambarus (Hagenides) rogersi campestris Hobbs

FIGURE 198

Procambarus rogersi campestris Hobbs, 1942b:90, figs. 81–85; 1945a:255, figs. 3, 4, 7, 16, 18, 21, 24.
Procambarus (Hagenides) rogersi campestris.—Hobbs, 1972a:7.

TYPES.—Holotype, allotype, and "morphotype," USNM 79384 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—About 12 miles south of Tallahassee, Leon County, Florida (Sec. 16–17, T. 2 S., R. 2 W.).

RANGE.—Leon and Wakulla counties, Florida.

HABITAT.—Burrows in flatwoods and seepage areas (primary burrower).

Procambarus (Hagenides) rogersi expletus Hobbs and Hart

FIGURE 199

Procambarus rogersi expletus Hobbs and Hart, 1959:179, figs. 27–39.
Procambarus (Hagenides) rogersi expletus.—Hobbs, 1972a:7.

TYPES.—Holotype, allotype, and morphotype, USNM 102125, 102127, 102126 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Seepage slope, 0.9 mile north of Clarksville, Calhoun County, Florida, on State Route 73.

RANGE.—Known only from the type-locality.

HABITAT.—Burrows in flatwoods and seepage areas (primary burrower).

Procambarus (Hagenides) rogersi ochlocknensis Hobbs

FIGURE 197

Procambarus rogersi ochlocknensis Hobbs, 1942b:89, figs. 76–80; 1945a:252, figs. 1, 10, 11, 13, 15, 19, 20, 26.
Procambarus (Hagenides) rogersi ochlocknensis.—Hobbs, 1972a:7.

TYPES.—Holotype, allotype, and "morphotype," USNM 79383 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—7.3 miles west of Quincy, on U.S. Highway 90, Gadsden County, Florida.

RANGE.—Gadsden and Liberty counties, Florida.

HABITAT.—Burrows in seepage areas (primary burrower).

Procambarus (Hagenides) rogersi rogersi (Hobbs)

FIGURE 200

Cambarus rogersi Hobbs, 1938a:62, figs. 1–11.
Procambarus rogersi.—Hobbs, 1942a:344.
Procambarus rogersi rogersi.—Hobbs, 1942b:89, figs. 71–75.
Procambarus (Hagenides) rogersi rogersi.—Hobbs, 1972a:7.

TYPES.—Holotype, allotype, and "morphotype," USNM 75120, 75121, 75589 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Flatwoods, 4 miles north of Blountstown on State Route 71, Calhoun County, Florida.

RANGE.—Eastern Calhoun County, Florida.

HABITAT.—Burrows in flatwoods and seepage areas (primary burrower).

Procambarus (Hagenides) truculentus Hobbs

FIGURE 201

Procambarus truculentus Hobbs, 1954:111, figs. 1–13.
Procambarus Truculentus.—Hobbs, 1954:111.
Procambarus (Hagenides) truculentus.—Hobbs, 1972a:7.

TYPES.—Holotype, allotype, and morphotype, USNM 95670, 95671, 95672 (♂ I, ♀, ♂ II); paratypes, MCZ, TU, USNM.

TYPE-LOCALITY.—Seepage area 11 miles north of Lyons, Emanuel County, Georgia.

RANGE.—Between the Altamaha and Savannah rivers in Georgia.

HABITAT.—Burrows in flatwoods and seepage areas (primary burrower).

Subgenus *Leconticambarus* Hobbs

Leconticambarus Hobbs, 1972a:7. [Type-species by original designation, *Cambarus barbatus* Faxon, 1890:621. Gender: masculine.]

Procambarus (Leconticambarus) alleni (Faxon)

FIGURE 202

Cambarus Alleni Faxon, 1884:110; 1885a:35, pl. 1: fig. 1; pl. 8: figs. 2, 2'.

Cambarus alleni.—Faxon, 1890:619.
Cambarus (*Cambarus*) *alleni*.—Ortmann, 1905c:102.
Cambarus (*Ortmannicus*) *alleni*.—Fowler, 1912:341 [by implication].—Creaser, 1934b:4 [by implication].
Procambarus alleni.—Hobbs, 1942a:342 [by implication]; 1942b:69, figs. 51–55.
Procambarus (*Leconticambarus*) *alleni*.—Hobbs, 1972a:8.

TYPE.—Holotype, MCZ 3531 (♂ I).

TYPE-LOCALITY.—St. Johns River, Hawkinsville (1 mile upstream from bridge at Crow's Bluff, between Eustis and Deland), Lake County, Florida.

RANGE.—East of St. Johns River and all of peninsular Florida south of Levy and Marion counties.

HABITAT.—Lentic and lotic situations and burrows.

Procambarus (*Leconticambarus*) *apalachicolae* Hobbs

FIGURE 206

Procambarus apalachicolae Hobbs, 1942b:55, figs. 26–30, 256–265.
Procambarus (*Leconticambarus*) *apalachicolae*.—Hobbs, 1972a:8.

TYPES.—Holotype and allotype, USNM 81272 (♂ I, ♀); "morphotype," USNM 81273 (♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Roadside ditch, 11.1 miles west of Beacon Hill on U.S. Highway 98, Bay County, Florida.

RANGE.—Coastal flatwoods in Bay and Gulf counties, Florida.

HABITAT.—Burrows (secondary burrower).

Procambarus (*Leconticambarus*) *barbatus* (Faxon)

FIGURE 204

Astacus penicillatus LeConte (not *Astacus penicillatus* Olivier, 1791), 1856:401.
Cambarus penicillatus.—Hagen, 1870:16, 53, figs. 93, 94 (not 95 and 96, which are *P. ancylus*), 149.
Cambarus barbatus Faxon, 1890:621 [in part].
Cambarus (*Cambarus*) *barbatus*.—Ortmann, 1905c:102.
Cambarus (*Ortmannicus*) *barbatus*.—Fowler, 1912:341 [by implication].
Procambarus barbatus.—Hobbs, 1942a:342 [by implication]; 1942b:39, figs. 1–5.
Procambarus (*Leconticambarus*) *barbatus*.—Hobbs, 1972a:8, figs. 1m, 2f, 9a–g.

TYPE.—Neotype of *A. penicillatus* LeConte, MCZ 279 (♂ I), here designated. Specimens from the Escambia River at Flomaton cited by Faxon (1890) and listed as paratypes by him (1914:414) are paratypes of *Procambarus escambiensis* Hobbs.

TYPE-LOCALITY.—"Habitat in fossis Georgiae inferioris" (LeConte, 1856:401). Here restricted to 2.5 miles west of Riceboro, Liberty County, Georgia, in pine flatwoods.

RANGE.—In the coastal plain, from north of the Altamaha River in Georgia to the Edisto River in South Carolina.

HABITAT.—Burrows (secondary burrower).

REMARKS.—The type of LeConte's *Astacus penicillatus* is no longer extant. Inasmuch as Hagen (1870) and Faxon (1884, 1885a, 1890, and 1914) confused other species with it, and, in the latter work, Faxon included members of two species in his type-series of *C. barbatus* (=*A. penicillatus*), his "Type" is here designated the neotype of LeConte's *A. penicillatus* to establish the identity of the latter's species.

Procambarus (*Leconticambarus*) *capillatus* Hobbs

FIGURE 211

Procambarus capillatus Hobbs, 1971b:83, fig. 1.
Procambarus (*Leconticambarus*) *capillatus*.—Hobbs, 1972a:8.

TYPES.—Holotype, allotype, and morphotype, USNM 131454, 131455, 131456 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Drainage ditch adjacent to Burnt Corn Creek (Escambia River drainage) on State Route 41 northwest of Brewton, Escambia County, Alabama.

RANGE.—Escambia River basin in Conecuh and Escambia counties, Alabama, and perhaps Escambia County, Florida.

HABITAT.—Temporary ponds, pools, and burrows (secondary burrower).

Procambarus (*Leconticambarus*) *econfinae* Hobbs

FIGURE 207

Procambarus econfinae Hobbs, 1942b:49, figs. 16–20, 236–245.
Procambarus (*Leconticambarus*) *econfinae*.—Hobbs, 1972a:8.

TYPES.—Holotype, allotype, and "morphotype," USNM 81276 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Flatwoods in the northern part of Panama City, Bay County, Florida.

RANGE.—Environs of Panama City, Bay County, Florida.

HABITAT.—Flatwoods, in ditches and temporary ponds (secondary burrower).

Procambarus (Leconticambarus) escambiensis Hobbs

FIGURE 208

Cambarus barbatus Faxon, 1890:621 [in part].—Faxon, 1914: 414 [in part].
Procambarus escambiensis Hobbs, 1942b:46, figs. 11–15, 226–235.
Procambarus (Leconticambarus) escambiensis.—Hobbs, 1972a: 8.

TYPES.—Holotype, allotype, USNM 81278 (♂ I, ♀), and "morphotype," USNM 81277 (♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—About 100 yards east of Perdido River on U.S. Highway 90, Escambia County, Florida.

RANGE.—Known from the type-locality and from the Escambia River floodplain at Flomaton, Escambia County, Alabama; reported from the latter locality as *Cambarus barbatus* by Faxon (1890) and listed as paratypes of *C. barbatus* [=*Procambarus barbatus*] by him (1914).

HABITAT.—Temporary bodies of water in flatwoods and floodplains (secondary burrower).

Procambarus (Leconticambarus) hubbelli (Hobbs)

FIGURE 213

Cambarus hubbelli Hobbs, 1938b:90 [nomen nudum; validated by Hobbs, 1940a:406, fig. 19.]
Procambarus hubbelli.—Hobbs, 1942a:342.
Procambarus (Leconticambarus) hubbelli.—Hobbs, 1972a:8.

TYPES.—Holotype and allotype, USNM 76593 (♂ I, ♀); "morphotype," USNM 79351 (♂ II); paratypes, MCZ, USNM, Chas. M.

TYPE-LOCALITY.—One mile east of Bonifay on U.S. Highway 90, Holmes County, Florida.

RANGE.—Choctawhatchee River drainage in Alabama and Florida.

HABITAT.—Temporary ponds, pools, and burrows (secondary burrower).

Procambarus (Leconticambarus) kilbyi (Hobbs)

FIGURE 212

Cambarus kilbyi Hobbs, 1940a:410, fig. 20.
Procambarus kilbyi.—Hobbs, 1942a:343.
Procambarus (Leconticambarus) kilbyi.—Hobbs, 1972a:8.

TYPES.—Holotype, allotype, and "morphotype," USNM 76594 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Seven miles northwest of Blountstown on State Route 71, Calhoun County, Florida.

RANGE.—Coastal flatwoods from Calhoun and Gulf counties east and south to Levy County, Florida.

HABITAT.—Temporary ponds, pools, and burrows (secondary burrower).

Procambarus (Leconticambarus) latipleurum Hobbs

FIGURE 205

Procambarus latipleurum Hobbs, 1942b:52, figs. 21–25, 246–255.
Procambarus (Leconticambarus) latipleurum.—Hobbs, 1972a:8.

TYPES.—Holotype, allotype, and "morphotype," USNM 81281 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM, UF (now in USNM).

TYPE-LOCALITY.—5.8 miles west of Wewahitchka on State Route 22, Gulf County, Florida.

RANGE.—Gulf County, Florida, north of the Wetappo Canal.

HABITAT.—Temporary ponds, pools, and burrows (secondary burrower).

Procambarus (Leconticambarus) milleri Hobbs

FIGURE 203

Procambarus milleri Hobbs, 1971c:115, figs. 1–11, 16.
Procambarus (Leconticambarus) milleri.—Hobbs, 1972a:8.

TYPES.—Holotype and morphotype, USNM 131257, 131258 (♂ I, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Well at Little Bird Nursery and Garden Store at 8427 Bird Road, Miami, Dade County, Florida (Sec. 15, T. 54 S., R. 40 E.).

RANGE.—Known only from the type-locality.
HABITAT.—Subterranean waters.

Procambarus (Leconticambarus) pubischelae Hobbs

FIGURE 209

Procambarus pubischelae Hobbs, 1942b:41, figs. 6–10, 216–225.
Procambarus pubischaelae.—Villalobos, 1955:38 [erroneous spelling].
Procambarus (Leconticambarus) pubischelae.—Hobbs, 1972a:8.

TYPES.—Holotype, allotype, and "morphotype," USNM 81284 (♂ I, ♀, ♂ II); paratypes, MCZ, ANSP, USNM.

TYPE-LOCALITY.—Cypress ponds and roadside ditch 9.4 miles north of Lake City on U.S. Highway 441, Columbia County, Florida.

RANGE.—From the Altamaha River in Georgia south to Alachua County, Florida.

HABITAT.—Burrows (secondary burrower).

Procambarus (Leconticambarus) rathbunae (Hobbs)

FIGURE 210

Cambarus rathbunae Hobbs, 1940a:414, fig. 21.
Procambarus rathbunae.—Hobbs, 1942a:344.
Procambarus (Leconticambarus) rathbunae.—Hobbs, 1972a:8.

TYPES.—Holotype, allotype, and "morphotype," USNM 76595 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Near the Yellow River at Milligan, Okaloosa County, Florida, at the intersection of U.S. Highway 90 and State Route 4.

RANGE.—Okaloosa and Holmes counties, Florida.

HABITAT.—Temporary bodies of water and burrows (secondary burrower).

Procambarus (Leconticambarus) shermani Hobbs

FIGURE 214

Procambarus shermani Hobbs, 1942b:61, figs. 36–40, 266–275.
Procambarus (Leconticambarus) shermani.—Hobbs, 1972a:8.

TYPES.—Holotype and "morphotype," USNM 81287 (♂ I, ♂ II); allotype, USNM 81288 (♀); paratypes, MCZ, USNM.

TYPE-LOCALITY.—About 12 miles southwest of Jay, Santa Rosa County, Florida, in the Escambia River swamp along McCaskill's Mill Creek.

RANGE.—Escambia River drainage in Florida, Pearl River County, Mississippi, and St. Tammany Parish, Louisiana.

HABITAT.—Streams and sloughs.

Subgenus *Lonnbergius* Hobbs

Lonnbergius Hobbs, 1972a:8. [Type-species by original designation, *Cambarus acherontis* Lönnberg, 1895:6. Gender: masculine.]

Procambarus (Lonnbergius) acherontis (Lönnberg)

FIGURE 215

Cambarus acherontis Lönnberg, 1895:6, figs. 1–5b.—Hobbs, 1940a:390, fig. 15a–k.
Cambarus (Cambarus) acherontis.—Ortmann, 1905c:102.
Cambarus (Ortmannicus) acherontis.—Fowler, 1912:341 [by implication].
Procambarus acherontis.—Hobbs, 1942a:342 [by implication].
Procambarus (Lonnbergius) acherontis.—Hobbs, 1972a:8, figs. 2g, 10a–g.

TYPE.—Holotype, ZIAS 1/4412 (1 specimen).

TYPE-LOCALITY.—Subterranean rivulet about 42 feet from surface, Lake Brantley, Seminole County, Florida.

RANGE.—Only one additional locality known: Palm Springs, near Sanlando Springs, Seminole County, Florida.

HABITAT.—Springs and underground streams.

REMARKS.—Hobbs (1940a:393), endeavoring to clarify the confusion engendered by Faxon as to the identity of the species (see *P. lucifugus lucifugus*) and believing that both of Lönnberg's types were lost, designated neotypes from the Palm Springs locality. Dr. Y. Starobogatov kindly has informed me that one of these specimens is still extant (see above); thus, the neotype designation should be rejected.

Subgenus *Mexicambarus* Hobbs

Mexicambarus Hobbs, 1972a:8. [Type-species by original designation, *Cambarus (Cambarus) bouvieri* Ortmann, 1909: 159. Gender: masculine.]

Procambarus (*Mexicambarus*) *bouvieri* (Ortmann)

FIGURE 216

Cambarus (*Cambarus*) *bouvieri* Ortmann, 1909:159, figs. 1, 2.
Cambarus (*Ortmannicus*) *bouvieri*.—Fowler, 1912:341 [by implication].
Procambarus bouvieri.—Hobbs, 1942a:342 [by implication].—Villalobos, 1946:224, pl. 2: figs. 1–12.
Procambarus (*Mexicambarus*) *bouvieri*.—Hobbs, 1972a:9, figs. 2h, 11a–g.

TYPES.—Syntypes, MHNP (2 ♂ I, ♀), CM 74.864 (♂ I).

TYPE-LOCALITY.—Uruapan, Michoacán, Mexico.

RANGE.—Two localities in the vicinity of Uruapan, Michoacán, Mexico.

HABITAT.—Streams.

Subgenus *Ortmannicus* Fowler

Ortmannicus Fowler, 1912:341. [Type-species by original designation, *Astacus Blandingii* Harlan, 1830:464. Gender: masculine. *Ortmannicus* is a replacement name for Ortmann's subgenus *Cambarus*, 1905c:97.]

Procambarus (*Ortmannicus*) *acutissimus* (Girard)

FIGURE 246

Cambarus acutissimus Girard, 1852:91.
Cambarus acutus [in part].—Many authors prior to 1942.
Cambarus blandingii acutus [in part].—Most authors prior to 1942.
Procambarus blandingii acutus [in part].—Most authors from 1942 to 1955.
Procambarus acutissimus.—Hobbs, 1942a:342 [by implication]; 1955a:98; 1962a:286, fig. 51.
Procambarus (*Ortmannicus*) *acutissimus*.—Hobbs, 1972a:9.

TYPES.—ANSP 309 (2 ♂ II).

TYPE-LOCALITY.—Affluent of Mobile River, Kemper County, Mississippi.

RANGE.—Tombigbee, Alabama, and Choctawhatchee drainages in east-central Mississippi and west-central Alabama.

HABITAT.—Sluggish streams, ponds, and roadside ditches.

Procambarus (*Ortmannicus*) *acutus acutus* (Girard)

FIGURE 240

Cambarus blandingii [in part].—Most authors from 1852 to 1962.
Cambarus acutus Girard, 1852:91.
Cambarus blandingii blandingii [in part].—Most authors from 1852 to 1942.
Cambarus acutus var. A.—Hagen, 1870:36.
Cambarus acutus var. B.—Hagen, 1870:36.
Cambarus stygius Bundy, 1876:3. [Type not extant. Type-locality, Lake Michigan at Racine, Racine County, Wisconsin.]
Cambarus Blandingii var. *acuta*.—Faxon, 1884:136; 1885a:20, pl. 7: figs. 2, 2′, 2″, 2a, 2a′.
Cambarus blandingii acutus.—Faxon, 1890:619.
Camborus blandingii acutus.—Williamson, 1899:47 [erroneous spelling].
Cambarus blandingi acutus.—Ortmann, 1905c:105.
Cambarus (*Cambarus*) *blandingi acutus*.—Ortmann, 1905c:126 [by implication].
Cambarus (*Ortmannicus*) *blandingii acutus*.—Fowler, 1912:341 [by implication].
Cambarus (*Cambarus*) *blandingii acutus*.—Fleming, 1938:301.
Procambarus blandingii acutus.—Hobbs, 1942a:343 [by implication].
Procambarus blandingii blandingii [in part].—Most authors from 1942 to 1962.
Ortmannicus blandingii acutus.—Rhoades, 1944a:114.
Cambarus blandingi acutis.—Roberts, 1944:364 [erroneous spelling].
Procambarus acutus acutus.—Hobbs, 1967a:130.
Procambarus (*Ortmannicus*) *acutus acutus*.—Hobbs, 1972a:9.

TYPES.—Lost in Chicago fire, 1871 (Faxon, 1914:413).

TYPE-LOCALITY.—From an affluent of Mobile River in Kemper County, Mississippi.

RANGE.—Coastal plain and piedmont from Maine to Georgia, from Florida panhandle to Texas, and from Minnesota to Ohio; intergrades with *cuevachicae* in southwestern Texas and northern Mexico.

HABITAT.—Sluggish to moderately flowing streams and most lentic situations.

Procambarus (*Ortmannicus*) *acutus cuevachicae* (Hobbs)

FIGURE 241

Cambarus blandingii cuevachicae Hobbs, 1941a:1, fig. 1.
Procambarus blandingii cuevachicae.—Hobbs, 1942a:342.—Villalobos, 1955:70, pl. 13: figs. 1–7; pl. 14: figs. 1–6.
Procambarus acutus cuevachicae.—Hobbs, 1966b:70.
Procambarus (*Ortmannicus*) *acutus cuevachicae*.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and morphotype, USNM 80030 (♂ I, ♀, ♂ II); paratypes, USNM, PM.

TYPE-LOCALITY.—La Cueva Chica, a limestone cave about 1 mile northeast of Pujal, San Luis Potosí, Mexico.

RANGE.—Four localities in the states of San Luis Potosí and Puebla, Mexico.

HABITAT.—Subterranean and lentic situations.

Procambarus (Ortmannicus) ancylus Hobbs

FIGURE 233

Cambarus penicillatus.—Hagen, 1870:54 [in part], figs. 95, 96.
Procambarus ancylus Hobbs, 1958a:164, figs. 13–24.
Procambarus (Ortmannicus) ancylus.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and morphotype, USNM 115050 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Summerville, Dorchester County, South Carolina.

RANGE.—Bladen, Brunswick, and Columbus counties, North Carolina, south to Lexington, Richland, and Colleton counties, South Carolina.

HABITAT.—Lentic and lotic situations and burrows.

Procambarus (Ortmannicus) angustatus (LeConte)

FIGURE 226

Astacus angustatus LeConte, 1856:401.
Cambarus angustatus.—Hagen, 1870:50, figs. 65–67, 146.
Cambarus (Cambarus) angustatus.—Ortmann, 1905c:102.
Cambarus (Ortmannicus) angustatus.—Fowler, 1912:341 [by implication.]
Procambarus angustatus.—Hobbs, 1942a:342 [by implication].
Procambarus (Ortmannicus) angustatus.—Hobbs, 1972a:9.

TYPE.—Holotype, ANSP 444 (♂ I).

TYPE-LOCALITY.—"Georgia inferiore, in aquae purae rivulos qui inter colliculos arenosos (Sandhills) currunt."

RANGE.—Known from the type-specimens only. Repeated searches for this species in Georgia have been unsuccessful.

HABITAT.—Streams.

Procambarus (Ortmannicus) bivittatus Hobbs

FIGURE 255

Procambarus bivittatus Hobbs, 1942b:96, figs. 96–100, 305–314.
Procambarus (Ortmannicus) bivittatus.—Hobbs, 1972a:10.

TYPES.—Holotype, USNM 81274 (♂ I); allotype and "morphotype," USNM 81275 (♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Sloughs along Escambia River on State Route 62, Escambia County, Florida.

RANGE.—Escambia River drainage in Escambia and Santa Rosa counties, Florida, to the Pearl River drainage in St. Tammany and Washington parishes, Louisiana.

HABITAT.—Streams and sloughs.

Procambarus (Ortmannicus) blandingii (Harlan)

FIGURE 239

Astacus Blandingii Harlan, 1830:464.
Astacus (Cambarus) Blandingii.—Erichson, 1846:98.
Cambarus Blandingii.—Girard, 1852:91.
Cambarus Blandingii var. *Blandingii.*—Faxon, 1884:136 [by implication].
Cambarus blandingii blandingii.—Faxon, 1890:619 [by implication].
Cambarus (Cambarus) blandingi.—Ortmann, 1905c:102.
Cambarus (Cambarus) blandingi blandingi.—Ortmann, 1905c: 126 [by implication].
Cambarus blandingi-typicus.—Ortmann, 1905c:105.
Cambarus (Ortmannicus) blandingii.—Fowler, 1912:341.
Procambarus blandingii blandingii.—Hobbs, 1942a:342 [by implication].
Procambarus blandingii.—Hobbs, 1967a:130.
Procambarus (Ortmannicus) blandingii.—Hobbs, 1972a:9, figs. 2i, 12a–g.

TYPE.—Holotype, ANSP 4177 (♂ I).

TYPE-LOCALITY.—Camden, Kershaw County, South Carolina.

RANGE.—From the Santee River to the Pee Dee River system in South Carolina and southern North Carolina.

HABITAT.—Lentic and lotic situations and burrows.

Procambarus (Ortmannicus) caballeroi Villalobos

FIGURE 257

Procambarus caballeroi Villalobos, 1944b:175, pls. 1, 2.
Procambarus (Ortmannicus) caballeroi.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and morphotype, IBM 50040 (004) (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—"Riachuelos del Sur de Villa Juárez," Puebla, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—Streams.

Procambarus (Ortmannicus) chacei Hobbs

FIGURE 219

Procambarus chacei Hobbs, 1958b:5, pl. 2: figs. 14–26.
Procambarus sp. A.—Hobbs, 1958c:72, 76, 77, 79, 83–86, 90.
Procambarus (Ortmannicus) chacei.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and morphotype, USNM 101289, 101290, 101291 (♂ I, ♀, ♂ II); paratypes, MCZ, ANSP, IBM, TU, USNM.

TYPE-LOCALITY.—Cedar Creek, 3 miles east of Lykes, Richland County, South Carolina, on U.S. Highway 76.

RANGE.—From the Wateree River in South Carolina south to the Canoochee River in Georgia.

HABITAT.—Streams.

Procambarus (Ortmannicus) enoplosternum Hobbs

FIGURE 218

Procambarus enoplosternum Hobbs, 1947a:5, figs. 2, 5, 10, 12, 14, 18, 20, 23–25, 32.
Procambarus (Ortmannicus) enoplosternum.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and "morphotype," USNM 82263 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM, TU.

TYPE-LOCALITY.—Rocky Creek, 6 miles south of Lyons on U.S. Highway 1, Toombs County, Georgia.

RANGE.—Lower Oconee and Ohoopee drainages in Georgia.

HABITAT.—Streams.

REMARKS.—Hobbs (1947a:14) erred in his explanation of the illustrations of this species: figure 14 (not 13) represents the basipodites and ischiopodites of the fourth and third pereiopods of *P. enoplosternum*.

Procambarus (Ortmannicus) epicyrtus Hobbs

FIGURE 220

Procambarus epicyrtus Hobbs, 1958b:1, pl. 1: figs. 1–13.
Procambarus (Ortmannicus) epicyrtus.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and morphotype, USNM 101286, 101287, 101288 (♂ I, ♀, ♂ II); paratypes, MCZ, ANSP, IBM, TU, USNM.

TYPE-LOCALITY.—South Ogeechee Creek, 6.8 miles south of Sylvania on U.S. Highway 306, Screven County, Georgia.

RANGE.—Tributaries of the Ogeechee and Oconee rivers in Georgia.

HABITAT.—Streams.

Procambarus (Ortmannicus) evermanni (Faxon)

FIGURE 237

Cambarus evermanni Faxon, 1890:620.
Cambarus (Cambarus) evermanni.—Ortmann, 1905c:102.
Cambarus (Ortmannicus) evermanni.—Fowler, 1912:341 [by implication].
Procambarus evermanni.—Hobbs, 1942a:342 [by implication]; 1942b:107, figs. 111–115.
Procambarus (Ortmannicus) evermanni.—Hobbs, 1972a:10.

TYPE.—Holotype, MCZ 3834 (♂ I).

TYPE-LOCALITY.—Escambia River at Flomaton, Escambia County, Alabama.

RANGE.—In addition to the type-locality, known from Santa Rosa and Escambia counties, Florida, to Jackson County, Mississippi.

HABITAT.—Sluggish streams. Specimen from Mississippi dug from simple burrows in drying creek bed.

Procambarus (Ortmannicus) fallax (Hagen)

FIGURE 235

Cambarus fallax Hagen, 1870:45, figs. 103–105.
Cambarus (Cambarus) fallax.—Ortmann, 1905c:102.
Cambarus (Ortmannicus) fallax.—Fowler, 1912:341 [by implication].—Creaser, 1934b:4 [by implication].
Procambarus fallax.—Hobbs, 1942a:342 [by implication]; 1942b:111, figs. 116–120.
Procambarus (Ortmannicus) fallax.—Hobbs, 1972a:9.

TYPES.—Syntypes, MCZ 3526 (♂ I, ♂ II), BSNH (♂ II, ♀), USNM 63294 (♂ II, ♀).

TYPE-LOCALITY.—Florida. Here restricted to St. Johns River at Welaka, Putnam County, Florida.

RANGE.—Tributaries of the Satilla River, Georgia, southward through peninsular Florida.

HABITAT.—Lentic and lotic situations and burrows.

Procambarus (Ortmannicus) gonopodocristatus Villalobos

FIGURE 260

Procambarus gonopodocristatus Villalobos, 1958:279, pls. 1–3.
Procambarus (Ortmannicus) gonopodocristatus.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, IBM (♂ I, ♀, ♂ II); paratypes, USNM, AMNH.

TYPE-LOCALITY.—Paso Largo, 16 km northeast of Martínez de la Torre, Veracruz, Mexico.

RANGE.—Only one other locality known—"María de la Torre, km. 406 de la carretera Martínez de la Torre, Nautla," Veracruz, Mexico.

HABITAT.—Lentic situations.

Procambarus (Ortmannicus) hayi (Faxon)

FIGURE 244

Cambarus hayi Faxon, 1884:108.
Cambarus (Cambarus) hayi.—Ortmann, 1905c:102.
Cambarus (Ortmannicus) hayi.—Fowler, 1912:341 [by implication].—Creaser, 1934b:4 [by implication].
Procambarus hayi.—Hobbs, 1942a:342 [by implication].
Procambarus (Ortmannicus) hayi.—Hobbs, 1972a:9.

TYPES.—Syntypes, MCZ 3533 (♂ I, 2 ♂ II, ♀, ♂ juv.), USNM 19751 (♂ II), 19752 (♂ II, ♀), 21850 (2 ♂ I, ♀).

TYPE-LOCALITY.—Macon, Noxubee County, Mississippi.

RANGE.—Tributaries of the Tombigbee and Tallahatchie rivers in Alabama and Mississippi, and Hatchie drainage in Tennessee.

HABITAT.—Sluggish streams and lentic situations.

Procambarus (Ortmannicus) hirsutus Hobbs

FIGURE 224

Procambarus hirsutus Hobbs, 1958a:160, figs. 1–12.
Procambarus sp. B.—Hobbs, 1958c:72, 76, 77, 79, 84, 86, 90.
Procambarus (Ortmannicus) hirsutus.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and morphotype, USNM 101148, 101150, 101149 (♂ I, ♀, ♂ II); paratypes, TU, Chas. M., USNM.

TYPE-LOCALITY.—Salkehatchie River, 1.9 miles south of Barnwell, Barnwell County, South Carolina, on State Route 3.

RANGE.—Edisto, Salkehatchie, and Savannah drainage systems in South Carolina.

HABITAT.—Streams.

Procambarus (Ortmannicus) horsti Hobbs and Means

FIGURE 230

Procambarus horsti Hobbs and Means, 1972:301, fig. 2.

TYPES.—Holotype, allotype, and morphotype, USNM 132043, 132044, 132045 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Big Blue Springs (tributary to the Wacissa River), 2.2 miles south of the crossroads in the town of Wacissa, Jefferson County, Florida (SE¼NW¼ sec. 12, T. 2 S., R. 3 E.).

RANGE.—Known only from the type-locality.

HABITAT.—Subterranean waters.

Procambarus (Ortmannicus) hybus Hobbs and Walton

FIGURE 249

Procambarus hybus Hobbs and Walton, 1957:39, figs. 1–12.
Procambarus (Ortmannicus) hybus.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 99581, 99582, 99583 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Roadside ditch 1.7 miles north of Boligee, Greene County, Alabama.

RANGE.—Tombigbee drainage in Alabama and Mississippi.

HABITAT.—Temporary ponds, pools, and burrows (secondary burrower).

Procambarus (Ortmannicus) jaculus Hobbs and Walton

FIGURE 248

Procambarus jaculus Hobbs and Walton, 1957:48, figs. 24–34.—Walls and Black, 1967:60.
Procambarus (Ortmannicus) jaculus.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 99584, 99585, 99586 (♂ I, ♀, ♂ II); paratype, USNM.

TYPE-LOCALITY.—Roadside ditch 1 mile west of Scott-Rankin county line on U.S. Highway 80, Rankin County, Mississippi.

RANGE.—Hinds, Rankin, and Scott counties, Mississippi, and Avoyelles Parish, Louisiana.

HABITAT.—Temporary lentic situations and burrows (secondary burrower).

Procambarus (Ortmannicus) lecontei (Hagen)

FIGURE 243

Cambarus LeContei Hagen, 1870:47, figs. 15–18, 145.
Cambarus Lecontei.—Faxon, 1884:110.
Cambarus lecontei.—Hay, 1899b:959.
Cambarus (Cambarus) lecontei.—Ortmann, 1905c:102.
Cambarus (Ortmannicus) lecontei.—Fowler, 1912:341 [by implication].—Creaser, 1934b:4 [by implication].
Procambarus lecontei.—Hobbs, 1942a:342 [by implication]; 1952a:210, fig. 81.
Procambarus (Ortmannicus) lecontei.—Hobbs, 1972a:9.

TYPES.—Syntypes, MCZ 217 (♂ I, 7 ♀, 2 ♂ II), USNM 4958 (♂ I), AMS (lost), MHNP (♂ I, ♀), Würzburg Mus.

TYPE-LOCALITY.—Mobile County, Alabama.

RANGE.—Mobile County, Alabama, and Stone County, Mississippi.

HABITAT.—Streams.

Procambarus (Ortmannicus) leonensis Hobbs

FIGURE 236

Procambarus leonensis Hobbs, 1942b:114, figs. 121–125; 1943a:49, figs. 1, 6, 7, 10, 12–14, 16, 17, 22, 26, 29, 31.
Procambarus (Ortmannicus) leonensis.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and "morphotype," USNM 81091 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM, ANSP.

TYPE-LOCALITY.—Sinkhole pond, 3 miles southwest of Tallahassee on State Route 20, Leon County, Florida. (Now beneath runway at airport.)

RANGE.—Between the Apalachicola and Suwannee rivers, Florida.

HABITAT.—Lentic and lotic situations, and burrows.

Procambarus (Ortmannicus) lepidodactylus Hobbs

FIGURE 222

Procambarus lepidodactylus Hobbs, 1947b:25, figs. 1–12.
Procambarus (Ortmannicus) lepidodactylus.—Hobbs, 1972a:9.

TYPES.—Holotype and allotype, USNM 84198 (♂ I, ♀); morphotype, USNM 84199 (♂ II); paratypes, USNM.

TYPE-LOCALITY.—Juniper Creek, 1 mile southwest of Patrick on U.S. Highway 1, Chesterfield County, South Carolina.

RANGE.—Santee and Pee Dee drainage systems in eastern South Carolina and Columbus County, North Carolina.

HABITAT.—Streams.

Procambarus (Ortmannicus) lewisi Hobbs and Walton

FIGURE 254

Procambarus lewisi Hobbs and Walton, 1959:39, figs. 1–12.
Procambarus (Ortmannicus) lewisi.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 102467, 102468, 102469 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Roadside ditch 18.8 miles east of Montgomery on U.S. Highway 80, Macon County, Alabama.

RANGE.—Barbour, Lowndes, Macon, and Montgomery counties, Alabama.

HABITAT.—Sluggish streams and roadside ditches.

Procambarus (Ortmannicus) litosternum Hobbs

FIGURE 221

Procambarus litosternum Hobbs, 1947a:9, figs. 3, 4, 9, 11, 13, 16, 19, 21, 26, 29, 30.
Procambarus (Ortmannicus) litosternum.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and "morphotype," USNM 82261 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Stream 5 miles northeast of Swainsboro on U.S. Highway 25, Emanuel County, Georgia.

RANGE.—Tributaries of the Canoochee, Ogeechee, and Newport rivers in Bulloch, Jenkins, Emanuel, and Liberty counties, Georgia.

HABITAT.—Streams.

REMARKS.—Hobbs (1947a:14) erred in his explanation of the illustrations of this species: figure 13 (not 15) represents the lateral view of the first pleopod of male, form I, of *P. litosternum*.

Procambarus (Ortmannicus) lophotus Hobbs and Walton

FIGURE 245

Procambarus lophotus Hobbs and Walton, 1960:123, figs. 1–11.
Procambarus (Ortmannicus) lophotus.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and morphotype, USNM 104404, 104405, 104406, (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Roadside ditch 3.4 miles northeast of Haynesville on State Route 111, Lowndes County, Alabama.

RANGE.—Alabama drainage system from Clarke County, Alabama, to Gordon and Catoosa counties, Georgia, and in the Tennessee drainage in Polk County, Tennessee, and northwestern Georgia.

HABITAT.—Lentic and lotic situations and burrows (tertiary burrower).

Procambarus (Ortmannicus) lucifugus alachua (Hobbs)

FIGURE 227

Cambarus lucifugus alachua Hobbs, 1940a:402, fig. 18*a–l*.
Procambarus lucifugus alachua.—Hobbs, 1942a:343.
Procambarus (Ortmannicus) lucifugus alachua.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and "morphotype," USNM 76592 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—A small cave, Hog Sink, about 10 miles west of Gainesville, Alachua County, Florida (Sec. 24, T. 10 S., R. 18 E.).

RANGE.—Southwestern Alachua and western Gilchrist counties, Florida.

HABITAT.—Subterranean waters.

Procambarus (Ortmannicus) lucifugus lucifugus (Hobbs)

FIGURE 228

Cambarus acherontis Faxon [not Lönnberg], 1898:645, pl. 62: figs. 1–5.
Cambarus lucifugus lucifugus Hobbs, 1940a:398, figs. 17, 18m,n.
Procambarus lucifugus lucifugus.—Hobbs, 1942a:343.
Procambarus (Ortmannicus) lucifugus lucifugus.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and "morphotype," USNM 77916, 77917, 77918 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Gum Cave, about 7 miles southwest of Floral City, Citrus County, Florida.

RANGE.—Citrus and Hernando counties northward to Marion County, Florida, where it intergrades with *P. lucifugus alachua*.

HABITAT.—Subterranean waters.

Procambarus (Ortmannicus) lunzi (Hobbs)

FIGURE 234

Cambarus lunzi Hobbs, 1940b:3, figs. 1–10.
Procambarus lunzi.—Hobbs, 1942a:343.
Procambarus (Ortmannicus) lunzi.—Hobbs, 1972a:9.

TYPES.—Holotype and allotype, USNM 79301 (♂ I, ♀).

TYPE-LOCALITY.—1.4 miles southwest of Early Branch on State Route 28, Hampton County, South Carolina.

RANGE.—Hampton and Beaufort counties, South Carolina, southward to McIntosh County, Georgia.

HABITAT.—Lentic situations and burrows (secondary or tertiary burrower).

Procambarus (Ortmannicus) mancus Hobbs and Walton

FIGURE 251

Procambarus mancus Hobbs and Walton, 1957:44, figs. 13–23.
Procambarus (Ortmannicus) mancus.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 99578, 99579, 99580 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Roadside ditch, 5 miles south of Meridian, Lauderdale County, Mississippi.

RANGE.—Known only from Lauderdale and Newton counties, Mississippi.

HABITAT.—Burrows (secondary burrower).

Procambarus (Ortmannicus) orcinus Hobbs and Means

FIGURE 231

Procambarus orcinus Hobbs and Means, 1972:394, fig. 1.

TYPES.—Holotype, allotype, and morphotype,

USNM 132031, 132032, 132033 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Gopher Sink, 3.1 miles southwest of Florida Road 61 and 0.2 mile east of Florida Road 369 (SW¼NW¼NE¼, sec. 16, T. 2 S., R. 1 W.), Leon County, Florida.

RANGE.—Known from four localities in Leon and Wakulla counties, Florida.

HABITAT.—Subterranean waters.

Procambarus (Ortmannicus) pallidus (Hobbs)

FIGURE 229

Cambarus acherontis.—Hobbs [not Lönnberg], 1937:154.
Cambarus acherontis pallidus Hobbs, 1938b:90 [nomen nudum].
Cambarus pallidus Hobbs, 1940a:394, fig. 16.
Procambarus pallidus.—Hobbs, 1942a:343.
procambarus pallidus.—Padgett, 1970:19 [lapsus calami].
Procambarus (Ortmannicus) pallidus.—Hobbs, 1972a:10.

TYPES.—Holotype and allotype, USNM 76591 (♂ I, ♀); "morphotype," USNM 79350 (♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Warren's Cave, 11 miles northwest of Gainesville, Alachua County, Florida (sec. 13, T. 9 S., R. 18 E.).

RANGE.—Subterranean waters in the northwestern part of Alachua County to Suwannee County, Florida.

HABITAT.—Subterranean waters.

Procambarus (Ortmannicus) pearsei pearsei (Creaser)

FIGURE 253

Cambarus (Ortmannicus) pearsei Creaser, 1934b:1, figs. 1–3.
Procambarus pearsei.—Hobbs, 1942a:343.
Procambarus pearsei pearsei.—Hobbs and Walton, 1958:7.
Procambarus (Ortmannicus) pearsei pearsei.—Hobbs, 1972a:10.

TYPES.—Holotype, USNM 98336 (♂ I); allotype, USNM 98337 (♀); paratypes, USNM.

TYPE-LOCALITY.—Pond and ditch on State Route 22, south of Fayetteville, Cumberland County, North Carolina.

RANGE.—Cumberland County, North Carolina, south to Horry County, South Carolina, intergrading with *P. pearsei plumimanus* in Johnston and Pitt counties, North Carolina.

HABITAT.—Lentic situations and burrows (secondary burrower).

Procambarus (Ortmannicus) pearsei plumimanus Hobbs and Walton

FIGURE 252

Procambarus pearsei plumimanus Hobbs and Walton, 1958:8, figs. 1–13.
Procambarus (Ortmannicus) pearsei plumimanus.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 100940, 100941, 100942 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Roadside ditch 2.2 miles southeast of Havelock on U.S. Highway 70, Craven County, North Carolina.

RANGE.—Carteret, Craven, and Duplin counties, North Carolina.

HABITAT.—Temporary ponds, pools, and burrows (secondary burrower).

Procambarus (Ortmannicus) pictus (Hobbs)

FIGURE 217

Cambarus pictus Hobbs, 1940a:419, fig. 22.
Procambarus pictus.—Hobbs, 1942a:344.
Procambarus (Ortmannicus) pictus.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and "morphotype," USNM 76596 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—A small, swift swamp stream, about 2 miles southwest of Green Cove Springs, Clay County, Florida.

RANGE.—Known from several small tributaries of Black Creek in Clay County, Florida.

HABITAT.—Streams.

Procambarus (Ortmannicus) planirostris Penn

FIGURE 250

Procambarus planirostris Penn, 1953c:71, figs. 1–12.
Procambarus (Ortmannicus) planirostris.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 95674, 95675, 95676 (♂ I, ♀, ♂ II); paratypes, ANSP, TU, USNM.

TYPE-LOCALITY.—Flatwoods, 1 mile south of

Walker on State Route 336, Livingston Parish, Louisiana.

RANGE.—"Florida" parishes of southeastern Louisiana, and Perry, Pearl River, and Winston counties, Mississippi.

HABITAT.—Temporary ponds, pools, and burrows (secondary burrower).

Procambarus (Ortmannicus) pubescens (Faxon)

FIGURE 223

Cambarus pubescens Faxon, 1884:109.
Cambarus (Cambarus) pubescens.—Ortmann, 1905c:101.
Cambarus (Ortmannicus) pubescens.—Fowler, 1912:341 [by implication].
Procambarus pubescens.—Hobbs, 1942a:342 [by implication]; 1947a:1, figs. 1, 6–8, 15, 17, 22, 27, 28, 31.
Procambarus (Ortmannicus) pubescens.—Hobbs, 1972a:9.

TYPES.—Syntypes, USNM 3181 (♂ II, ♀).

TYPE-LOCALITY.—McBean Creek, south of Augusta, Richmond County, Georgia.

RANGE.—In the Oconee, Ogeechee, and Savannah drainage systems in Georgia and South Carolina.

HABITAT.—Streams.

REMARKS.—Hobbs (1947a:14) erred in his explanations of the illustrations of this species: figure 15 (not figure 14) represents the basipodites and ischiopodites of the fourth and third pereiopods of *P. pubescens.*

Procambarus (Ortmannicus) pycnogonopodus Hobbs

FIGURE 238

Procambarus pycnogonopodus Hobbs, 1942b:117, figs. 126–130; 1943a:53, figs. 3, 4, 8, 9, 11, 15, 19–21, 24, 25, 27, 28, 30, 32.
Procambarus (Ortmannicus) pycnogonopodus.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and "morphotype," USNM 81092 (♂ I, ♀, ♂ II); paratypes, MCZ, ANSP, USNM.

TYPE-LOCALITY.—A roadside excavation and adjoining intermittent stream in flatwoods 5.8 miles west of Wewahitchka on State Route 22, Gulf County, Florida.

RANGE.—From the Apalachicola River westward to the Choctawhatchee River, Florida.

HABITAT.—Lentic and lotic situations, and burrows.

Procambarus (Ortmannicus) seminolae Hobbs

FIGURE 232

Procambarus seminolae Hobbs, 1942b:142, figs. 166–170, 335–346.
Procambarus (Ortmannicus) seminolae.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and "morphotype," USNM 81286 (♂ I, ♀, ♂ II); paratypes, MCZ, ANSP, USNM, UF (now in USNM).

TYPE-LOCALITY.—Roadside excavation about 9 miles northeast of Gainesville on State Route 24, Alachua County, Florida.

RANGE.—From the Altamaha River drainage in Georgia to Marion County, Florida.

HABITAT.—Lentic and lotic situations, and burrows (secondary or tertiary burrower).

Procambarus (Ortmannicus) texanus Hobbs

FIGURE 242

Procambarus texanus Hobbs, 1971b:87, fig. 2.
Procambarus (Ortmannicus) texanus.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and morphotype, USNM 131457, 131458, 131459 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Fish hatchery near Smithville, Bastrop County, Texas.

RANGE.—Known only from the type-locality.

HABITAT.—Ponds.

Procambarus (Ortmannicus) toltecae Hobbs

FIGURE 259

Procambarus toltecae Hobbs, 1943b:198, figs. 1–14.
Procambarus (Ortmannicus) toltecae.—Hobbs, 1972a:10.

TYPES.—Holotype and allotype, USNM 81301 (♂ I, ♀); paratypes, USNM.

TYPE-LOCALITY.—Puente de Xilitla (not Palitla as previously recorded), small stream 8 km north of Tomazunchale, San Luis Potosí, Mexico.

RANGE.—Southern Tamaulipas and southeastern San Luis Potosí.

HABITAT.—Streams.

Procambarus (Ortmannicus) verrucosus Hobbs

FIGURE 247

Procambarus verrucosus Hobbs, 1952a:212, fig. 82.
Procambarus (Ortmannicus) verrucosus.—Hobbs, 1972a:9.

TYPES.—Holotype, allotype, and morphotype, USNM 90743 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Tributary of Calebea Creek, 3.9 miles south of Tuskegee, Macon County, Alabama, on U.S. Highway 29.

RANGE.—Tributaries of the Tallapoosa and Chattahoochee rivers in southeastern Alabama.

HABITAT.—Streams.

Procambarus (Ortmannicus) viaeviridis (Faxon)

FIGURE 256

Cambarus viae-viridis Faxon, 1914:370, pl. 5.
Cambarus (Ortmannicus) viae viridis.—Creaser, 1934b:4 [by implication].
Procambarus viae-viridis.—Hobbs, 1942a:342 [by implication].
Procambarus viaeviridis.—Penn, 1959:5.
Procambarus (Ortmannicus) viaeviridis.—Hobbs, 1972a:9.

TYPES.—Syntypes, MCZ 7336 (2 ♂ I, 2 ♂ II, 6 ♀).

TYPE-LOCALITY.—St. Francis River, Greenway, Clay County, Arkansas.

RANGE.—Green and Clay counties, Arkansas, to Tuscaloosa County, Alabama.

HABITAT.—Sluggish streams and lentic situations.

Procambarus (Ortmannicus) villalobosi Hobbs

FIGURE 258

Procambarus villalobosi Hobbs, 1969a:41, pl. 1: figs. 1–11.
Procambarus (Ortmannicus) villalobosi.—Hobbs, 1972a:10.

TYPES.—Holotype and allotype, USNM 118644 and 118645 (♂ I, ♀).

TYPE-LOCALITY.—Cueva del Agua, 75 km east of Valles, San Luis Potosí, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—Streams.

Procambarus (Ortmannicus) youngi Hobbs

FIGURE 225

Procambarus youngi Hobbs, 1942b:131, figs. 146–150, 325–334.
Procambarus (Ortmannicus) youngi.—Hobbs, 1972a:9.

TYPES.—Holotype and allotype, USNM 81289 (♂ I, ♀); "morphotype," USNM 81290 (♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Guard House Branch, about 1 mile west of Wewahitchka on State Route 22, Gulf County, Florida.

RANGE.—Known from the type-locality; Wetappo Creek, 6.4 miles east of Bay County line on State Route 22; and St. Marks River in Leon and Wakulla counties, Florida.

HABITAT.—Streams.

Subgenus *Paracambarus* Ortmann

Paracambarus Ortmann, 1906a:1. [Type-species by original designation, *Cambarus (Paracambarus) paradoxus* Ortmann, 1906a:3. Gender: masculine.]

Procambarus (Paracambarus) ortmannii (Villalobos)

FIGURE 261

Paracambarus ortmannii Villalobos, 1949:331, pl. 1: figs. 1–7; pl. 2: figs. 1–7.
Paracambarus ortmanni.—Villalobos, 1953:346.
Procambarus (Paracambarus) ortmanni.—Hobbs, 1972a:10.
Procambarus (Paracambarus) ortmannii [original genitive].

TYPES.—Holotype, allotype, and morphotype, IBM 2-1149-la (OF6) (♂ I, ♀, ♂ II); paratype, IBM.

TYPE-LOCALITY.—"Los Estajos, 6 km NE de Zihuateutla, Pue. en un pequeño arroyito que corre por el lado derecho del camino que va al rancho El Mirador," Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—Stream.

Procambarus (Paracambarus) paradoxus (Ortmann)

FIGURE 262

Cambarus (Paracambarus) paradoxus Ortmann, 1906a:3, fig. 1.
Paracambarus paradoxus.—Hobbs, 1942a:344.—Villalobos, 1947a:233, pl. 1; pl. 3: figs. 1–4.
Procambarus Paradoxus.—Creaser, 1962:7 [lapsus calami].
Procambarus (Paracambarus) paradoxus.—Hobbs, 1972a:10, figs. 2j, 13a–g.

TYPES.—Syntypes, ANSP 5358 (3 specimens), MHNP (25+ specimens), CM 74.677, MCZ 6955 (♂ I, ♂ II, ♀).

TYPE-LOCALITY.—Tetela de Ocampo y La Cañada, 35 km northeast of Zacapoaxtla, Estado de Puebla, Mexico.

RANGE.—Known only from the area of the type-locality.

HABITAT.—Streams.

Subgenus *Pennides* Hobbs

Pennides Hobbs, 1972a:10. [Type-species by original designation, *Procambarus natchitochae* Penn, 1953d:5. Gender: masculine.]

Procambarus (Pennides) ablusus Penn

FIGURE 265

Procambarus ablusus Penn, 1963:121, figs. 1–10.
Procambarus (Pennides) ablusus.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 108200, 108202, 108201 (♂ I, ♀, ♂ II); paratypes, TU.

TYPE-LOCALITY.—Hatchie River, 12.1 miles east of Ripley on State Route 4, Tippah County, Mississippi.

RANGE.—Hatchie River system in Hardeman County, Tennessee, and Alcorn and Tippah counties, Mississippi.

HABITAT.—Streams.

Procambarus (Pennides) dupratzi Penn

FIGURE 270

Procambarus dupratzi Penn, 1953d:1, figs. 1–7, 10–14.
Procambarus (Pennides) dupratzi.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 93652, 93653, 93654 (♂ I, ♀, ♂ II); paratypes, USNM, AMNH, ANSP, MCZ, CM, TU.

TYPE-LOCALITY.—Attoyac Bayou, 5.6 miles southwest of Timpson on U.S. Highway 59, Shelby County, Texas.

RANGE.—Drainage systems of the Trinity, Red, Neches, Sabine, and Calcasieu rivers in Texas, Arkansas, and Louisiana.

HABITAT.—Streams.

Procambarus (Pennides) echinatus Hobbs

FIGURE 269

Procambarus echinatus Hobbs, 1956a:117, figs. 1–17.
Procambarus (Pennides) echinatus.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 99180, 99181, 99182 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Salkehatchie River, 1.9 miles south of Barnwell on State Route 3, Barnwell County, South Carolina.

RANGE.—Salkehatchie and Edisto drainage systems in South Carolina.

HABITAT.—Streams.

Procambarus (Pennides) elegans Hobbs

FIGURE 266

Procambarus elegans Hobbs, 1969c:329, figs. 1–11, 24, 25.
Procambarus (Pennides) elegans.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 129892, 129893, 115838 (♂ I, ♀, ♂ II); paratype, USNM.

TYPE-LOCALITY.—Spillway from Corney Lake, an impounded tributary of the Ouachita River, Claiborne Parish, Louisiana.

RANGE.—Ouachita drainage system in Claiborne and Union parishes, Louisiana.

HABITAT.—Streams.

Procambarus (Pennides) gibbus Hobbs

FIGURE 275

Procambarus gibbus Hobbs, 1969c:337, figs. 12–23.
Procambarus (Pennides) gibbus.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 129804, 129803, 129805 (♂ I, ♀, ♂ II); paratypes, USNM.

TYPE-LOCALITY.—Tributary to Muckalee Creek (Flint River drainage), 3.2 miles north of Americus on U.S. Highway 19, Sumter County, Georgia.

RANGE.—Flint River drainage system in Crawford, Lee, Schley, and Sumter counties, Georgia.

HABITAT.—Streams.

Procambarus (Pennides) lagniappe Black

FIGURE 273

Procambarus lagniappe Black, 1968:5, figs. 1–12.
Procambarus (Pennides) lagniappe.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 119088, 119089, 119090 (♂ I, ♀, ♂ II); paratypes, TU, J. B. Black.

TYPE-LOCALITY.—Pawticfaw Creek (tributary to Sucarnoochee Creek, tributary to Tombigbee River), 6.0 miles south of De Kalb, Kemper County, Mississippi, on State Route 39.

RANGE.—Tributaries of the Tombigbee River in Kemper County, Mississippi.

HABITAT.—Streams.

Procambarus (Pennides) lylei Fitzpatrick and Hobbs

FIGURE 268

Procambarus lylei Fitzpatrick and Hobbs, 1971:95, figs. 1–14.
Procambarus (Pennides) lylei.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 131533, 131534, 131535 (♂ I, ♀, ♂ II); paratypes, J. F. Fitzpatrick, Jr.

TYPE-LOCALITY.—Shutispear Creek, 2.7 miles south of State Route 8 on State Route 9, Calhoun County, Mississippi.

RANGE.—Known from only two localities in the Yalobusha River drainage in Calhoun County, Mississippi.

HABITAT.—Streams.

Procambarus (Pennides) natchitochae Penn

FIGURE 264

Procambarus natchitochae Penn, 1953d:5, figs. 8, 9, 15–19.
Procambarus (Pennides) natchitochae.—Hobbs, 1972a:10, figs. 2k, 14a–g.

TYPES.—Holotype, allotype, and morphotype, USNM 93649, 93650, 93651, (♂ I, ♀, ♂ II); paratypes, USNM, AMNH, ANSP, TU.

TYPE-LOCALITY.—Tributary of Spring Creek at Melder, on State Route 85, Rapides Parish, Louisiana.

RANGE.—Tributaries of Bayou Teche, Red, and Calcasieu rivers in Louisiana, Arkansas, and Texas.

HABITAT.—Streams.

Procambarus (Pennides) ouachitae Penn

FIGURE 276

Procambarus ouachitae Penn, 1956:109, figs. 1–17.
Procambarus quachitae.—Penn, 1956:113 [erroneous spelling].
Procambarus ouichitae.—Hobbs, 1968b:K26 [erroneous spelling].
Procambarus (Pennides) ouachitae.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 99222, 99223, 99224 (♂ I, ♀, ♂ II); paratypes, USNM, ANSP, AMNH, CM.

TYPE-LOCALITY.—Tributary of the South Fork of the Saline River, 2.4 miles north of U.S. Highway 70 on a local road 6.5 miles northeast of Hot Spring (7.7 miles south-southwest of Owensville), Garland County, Arkansas.

RANGE.—Ouachita and Arkansas river systems in southwestern Arkansas.

HABITAT.—Streams.

Procambarus (Pennides) penni Hobbs

FIGURE 272

Procambarus penni Hobbs, 1951b:273, figs. 1–11.
Procambarus (Pennides) penni.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 91662, 91663, 91664 (♂ I, ♀, ♂ II); paratypes, TU, USNM.

TYPE-LOCALITY.—Talisheek Creek, at Talisheek, St. Tammany Parish, Louisiana.

RANGE.—Pearl and Pascagoula drainage systems in eastern Louisiana and south-central Mississippi.

HABITAT.—Streams.

Procambarus (Pennides) raneyi Hobbs

FIGURE 277

Procambarus raneyi Hobbs, 1953b:412, figs. 1–13.
Procambarus (Pennides) raneyi.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 95124, 95125, 95126 (♂ I, ♀, ♂ II); paratypes, MCZ, TU, USNM.

TYPE-LOCALITY.—South fork of the Broad River, 1 mile south of Carlton on the Oglethorpe-Madison county line, Georgia.

RANGE.—Savannah River drainage in Georgia and South Carolina and headwaters of the Ocmulgee River in De Kalb County, Georgia.

HABITAT.—Streams.

Procambarus (Pennides) spiculifer (LeConte)

FIGURE 274

Astacus spiculifer LeConte, 1856:401.
Cambarus spiculifer.—Hagen, 1870:48, figs. 59–62, 147.
Cambarus (Cambarus) spiculifer.—Ortmann, 1905c:101.
Cambarus (Ortmannicus) spiculifer.—Fowler, 1912:341 [by implication].—Creaser, 1934b:4 [by implication].
Procambarus spiculifer.—Hobbs, 1942a:342 [by implication]; 1942b:119, figs. 131–135.
Procambarus (Pennides) spiculifer.—Hobbs, 1972a:10.

TYPES.—Syntypes, ANSP 316 (♂ II), MCZ 172 (2 ♂ I, 4 ♀, 2 ♂ juv., 3 ♀ juv.), MCZ 3376 (♂ I), USNM 4962 (specimens decayed), MHNP (♂ I, ♂).

TYPE-LOCALITY.—Athens, Clarke County, Georgia.

RANGE.—Western Alabama eastward to the Altamaha River, Georgia.

HABITAT.—Lotic situations.

Procambarus (Pennides) suttkusi Hobbs

FIGURE 263

Procambarus suttkusi Hobbs, 1953a:173, pl. 9.
Procambarus suttkuzi.—Hobbs, 1968b:K11 [erroneous spelling].
Procambarus (Pennides) suttkusi.—Hobbs, 1972a:10.

TYPES.—Holotype, allotype, and morphotype, USNM 93730, 93731, 93732 (♂ I, ♀, ♂ II); paratypes, USNM, TU.

TYPE-LOCALITY.—Tributary of Claybank Creek, 2 miles west of Ozark, Dale County, Alabama.

RANGE.—Choctawhatchee drainage system in Alabama and northern Florida.

HABITAT.—Streams.

Procambarus (Pennides) versutus (Hagen)

FIGURE 267

Cambarus versutus Hagen, 1870:51, figs. 55–58, 150.
Cambarus (Cambarus) versutus.—Ortmann, 1905c:101.
Cambarus (Ortmannicus) versutus.—Fowler, 1912:341 [by implication].—Creaser, 1934b:4 [by implication].
Procambarus versutus.—Hobbs, 1942a:342 [by implication]; 1942b:126, figs. 136–140.
Procambarus (Pennides) versutus.—Hobbs, 1972a:10.

TYPES.—Syntypes, MCZ 190 (3 ♂ II, ♀), USNM 4963 (♂ I), MHNP (2 specimens), AMS (lost).

TYPE-LOCALITY.—Spring Hill, Mobile County, Alabama.

RANGE.—From western Alabama to the Apalachicola River in Florida.

HABITAT.—Streams.

Procambarus (Pennides) vioscai Penn

FIGURE 271

Procambarus vioscai Penn, 1946:27, fig. 1.
Procambarus vioscae.—Williams, 1954:819 [erroneous spelling].
Procambarus (Pennides) vioscai.—Hobbs, 1972a:10.

TYPES.—Holotype, USNM 79925 (♂ I); allotype, USNM 79931 (♀); paratypes, USNM, Alabama Mus. Nat. Hist., TU.

TYPE-LOCALITY.—Big Creek at Fishville, about 3 miles east of Pollock, Grant Parish, Louisiana.

RANGE.—Tributaries of the Red River in Arkansas and Louisiana eastward to the Pascagoula River in Mississippi.

HABITAT.—Streams.

Subgenus *Procambarus* Ortmann

Procambarus Ortmann, 1905d:437. [Type-species by subsequent designation (Fowler, 1912:340), *Cambarus Digueti* Bouvier, 1897:225. Gender: masculine.]

REMARKS.—Hobbs (1942a:341; 1972a:11) erred in citing himself as having designated the type-species of *Procambarus*. See above.

Procambarus (Procambarus) digueti (Bouvier)

FIGURE 278

Cambarus Digueti Bouvier, 1897:225.
Cambarus carinatus Faxon, 1898:648, pl. 63. [Type, USNM 17699 (♂ I). Type-locality, Guadalajara, Mexico.]
Cambarus (Cambarus) digueti.—Ortmann, 1905c:98, 101.
Cambarus (Procambarus) digueti.—Ortmann, 1905d:438.
Cambarus digniti.—Metcalf, 1929:11 [erroneous spelling].
Procambarus digueti.—Hobbs, 1942a:342 [by implication].—Villalobos, 1946:220, pl. 1.
Procambarus (Procambarus) digueti.—Hobbs, 1972a:11, figs. 2*l*, 3*a*, 15*a–g*.

TYPES.—Syntypes, USNM 30579 (2 ♂ I, ♀), MHNP (8 ♂, 6 ♀), CM 74.483.

TYPE-LOCALITY.—Affluents of Río Santiago, Jalisco, Mexico.

RANGE.—Pacific slope in states of Jalisco and Michoacán, Mexico.

HABITAT.—Streams.

Subgenus *Remoticambarus* Hobbs

Remoticambarus Hobbs, 1972a:11. [Type-species by original designation, *Procambarus pecki* Hobbs, 1967b:2. Gender: masculine.]

Procambarus (Remoticambarus) pecki Hobbs

FIGURE 279

Procambarus pecki Hobbs, 1967b:2, figs. 1–12.
Procambarus (Remoticambarus) pecki.—Hobbs, 1972a:11, figs. 2m, 16a–g.

TYPES.—Holotype, allotype, and morphotype, USNM 117684, 117685, 117686 (♂ I, ♀, ♂ II); paratypes, MCZ, TU, USNM.

TYPE-LOCALITY.—McKinney Pit Cave, about 2.5 miles west of Tuscumbia, Colbert County, Alabama (Sec. 10, T. 4 S., R. 12 W.).

RANGE.—Tennessee drainage system in Colbert, Lauderdale, and Morgan counties, Alabama.

HABITAT.—Subterranean streams and pools.

Subgenus *Scapulicambarus* Hobbs

Scapulicambarus Hobbs, 1972a:11. [Type-species by original designation, *Cambarus clarkii paeninsulanus* Faxon, 1914: 369. Gender: masculine.]

Procambarus (Scapulicambarus) clarkii (Girard)

FIGURE 283

Cambarus Clarkii Girard, 1852:91.—Hagen, 1870:39, figs. 7–10, 99, 100, 133, 134, 142, pl. 4.
Cambarus clarkii.—Faxon, 1898:644.
Cambarus (Cambarus) clarki.—Ortmann, 1905c:102.
Cambarus (Ortmannicus) clarkii.—Fowler, 1912:341 [by implication].
Cambarus clarkii clarkii.—Faxon, 1914:369 [by implication].
Procambarus clarkii.—Hobbs, 1942a:342 [by implication]; 1962b:273, figs. 1–9.
Procambarus clarki.—Penn and Hobbs, 1958:466, figs. 2, 21, 36, 49, 65.
Procambarus clarcii.—Unestam, 1969:203 [erroneous spelling].
Procambarus (Scapulicambarus) clarkii.—Hobbs, 1972a:12.

TYPES.—Destroyed in Chicago fire, 1871 (Faxon, 1914:414).

TYPE-LOCALITY.—Between San Antonio and El Paso del Norte, Texas.

RANGE.—Northern Mexico to Escambia County, Florida, and north to southern Illinois.

HABITAT.—Lentic and lotic situations and burrows.

Procambarus (Scapulicambarus) howellae Hobbs

FIGURE 281

Procambarus howellae Hobbs, 1952b:167, figs. 1, 4, 5, 8–14.
Procambarus (Scapulicambarus) howellae.—Hobbs, 1972a:12.

TYPES.—Holotype and allotype, USNM 93158 (♂ I, ♀); morphotype, USNM 93159 (♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Drainage ditch on campus of Wesleyan College, Rivoli, Bibb County, Georgia.

RANGE.—Lower piedmont and upper coastal plain of Georgia between the Ocmulgee and Ogeechee rivers.

HABITAT.—Lotic and lentic situations.

Procambarus (Scapulicambarus) okaloosae Hobbs

FIGURE 282

Procambarus okaloosae Hobbs, 1942b:100, figs. 101–105, 315–324.
Procambarus (Scapulicambarus) okaloosae.—Hobbs, 1972a;12.

TYPES.—Holotype, USNM 81282 (♂ I); allotype and "morphotype," USNM 81283 (♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Roadside ditch at intersection of U.S. Highway 90 and State Route 4, Milligan, Okaloosa County, Florida.

RANGE.—Perdido, Escambia, and Yellow drainage systems in Alabama and Florida.

HABITAT.—Lentic and lotic situations.

Procambarus (Scapulicambarus) paeninsulanus (Faxon)

FIGURE 280

Cambarus clarkii paeninsulanus Faxon, 1914:369.
Cambarus clarkipaenensulanus.—Hobbs, 1937:154 [erroneous spelling].
Procambarus clarkii paeninsulanus.—Hobbs, 1942a:342 [by implication].

Procambarus paeninsulanus.—Hobbs, 1942b:104, figs. 106–110.
Cambarus paeninsulanus.—Hobbs, 1972a:12 [erroneous combination].
Procambarus (Scapulicambarus) paeninsulanus.—Hobbs, 1972a:12, figs. 1e,f, 2n, 3b, 17a–g.

TYPES.—Holotype, MCZ 3530 (♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Three miles below Horse Landing, St. Johns River, Putnam County, Florida.

RANGE.—South Georgia, and Florida east of the Choctawhatchee drainage south to Hillsborough County.

HABITAT.—Lentic and lotic situations, and burrows (tertiary).

Procambarus (Scapulicambarus) troglodytes (LeConte)

FIGURE 284

Astacus troglodytes LeConte, 1856:400.
Astacus fossarum LeConte, 1856:401. [Syntypes, MCZ 3377 (♂I dry), ANSP 314 (♀). Type-locality, ditches, lower Georgia.]
Astacus maniculatus LeConte, 1856:401. [Types not extant. Type-locality, ditches, lower Georgia.]
Cambarus troglodytes.—Hagen, 1870:41, figs. 11–14, 141.
Cambarus troglodytus.—Hagen, 1870:33 [erroneous spelling].
Cambarus (Cambarus) troglodytes.—Ortmann, 1905c:102.
Cambarus (Ortmannicus) troglodytes.—Fowler, 1912:341 [by implication].—Creaser, 1934b:4 [by implication].
Procambarus troglodytes.—Hobbs, 1942a:342 [by implication].
Procambarus (Scapulicambarus) troglodytes.—Hobbs, 1972a:12.

TYPES.—Syntypes, MCZ 3375 (♂I dry), ANSP 4175 (fragments).

TYPE-LOCALITY.—Rice fields in Georgia.

RANGE.—Between the Altamaha and Pee Dee rivers, in Georgia and South Carolina.

HABITAT.—Lentic and lotic situations, and burrows (tertiary burrower).

Subgenus *Tenuicambarus* Hobbs

Tenuicambarus Hobbs, 1972a:12. [Type-species by original designation, *Procambarus tenuis* Hobbs, 1950b:194. Gender: masculine.]

Procambarus (Tenuicambarus) tenuis Hobbs

FIGURE 285

Procambarus tenuis Hobbs, 1950b:194, figs. 1–12.
Procambarus (Tenuicambarus) tenuis.—Hobbs, 1972a:12, figs. 2o, 3d, 18a–g.

TYPES.—Holotype, allotype, and morphotype, USNM 90390 (♂I, ♀, ♂II); paratypes, USNM.

TYPE-LOCALITY.—Six miles east of Page and just west of Oklahoma state line, Le Flore County, Oklahoma.

RANGE.—Le Flore, Pushmataha, and Pittsburg counties, Oklahoma, and Montgomery and Polk counties, Arkansas.

HABITAT.—Springs and clear, cold streams.

Subgenus *Villalobosus* Hobbs

Villalobosus Hobbs, 1972a:12. [Type-species by original designation, *Paracambarus riojae* [sic] Villalobos, 1944a:161. Gender: masculine.]

Procambarus (Villalobosus) contrerasi (Creaser)

FIGURE 289

Cambarus (Cambarus) contrerasi Creaser, 1931a:1, figs. 1–6.
Cambarus contrerasi.—Creaser, 1931a:1.
Procambarus contrerasi.—Hobbs, 1942a:342.—Villalobos, 1950:373, pls. 2, 3.
Procambarus (Villalobosus) contrerasi.—Hobbs, 1972a:12.

TYPES.—Holotype, USNM 98353 (♂I); paratype, USNM.

TYPE-LOCALITY.—Tributary of the Río Cazones near Agua Fría, 12 miles south of Miahuapan, State of Puebla, Mexico.

RANGE.—Tributaries of the Río Cazones and the Río Tecolutla in the vicinity of Zihuateutla and Agua Fría, Puebla, Mexico.

HABITAT.—Streams.

Procambarus (Villalobosus) erichsoni Villalobos

FIGURE 288

Procambarus erichsoni Villalobos, 1950:384, pls. 5–7.
Procambarus (Villalobosus) erichsoni.—Hobbs, 1972a:12.

TYPES.—Holotype, allotype, and morphotype, IBM 52048 (048) (♂I, ♀, ♂II); paratypes, IBM, USNM.

TYPE-LOCALITY.—"Arroyos Puendo, Mamay y Bojoy, Tenango de Doria, Hidalgo," Mexico.

RANGE.—Tributaries of the Río Pantepec (to

Río Tuxpan) in the vicinity of Tenango de Doria, Hidalgo, Mexico.

HABITAT.—Streams.

Procambarus (Villalobosus) hoffmanni (Villalobos)

FIGURE 287

Paracambarus hoffmanni Villalobos, 1944a:169, pl. 2.
Procambarus hoffmanni.—Villalobos, 1950:411.
Procambarus Hoffmanni.—Hobbs, 1962a:279 [lapsus calami].
Procambarus (Villalobosus) hoffmanni.—Hobbs, 1972a:12.

TYPES.—Holotype, allotype, and "morphotype," IBM 100043 (013) (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—"Vertedor de Demasía de la Presa de Necaxa, Necaxa," Puebla, Mexico. (Villalobos, 1955:107.)

RANGE.—Tributaries of the Río Tecolutla and Río Nautla in Puebla and Veracruz, Mexico.

HABITAT.—Streams.

Procambarus (Villalobosus) hortonhobbsi Villalobos

FIGURE 290

Procambarus hortonhobbsi Villalobos, 1950:402, pls. 10, 11.
Procambarus (Villalobosus) hortonhobbsi.—Hobbs, 1972a:12.

TYPES.—Holotype, allotype, and morphotype, IBM 21249 (085) (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—El Coyular, 7 km northeast of La Unión, Municipio de Zihuateutla, Puebla, Mexico.

RANGE.—Known only from the type-locality.

HABITAT.—Streams.

Procambarus (Villalobosus) riojai (Villalobos)

FIGURE 286

Paracambarus riojae Villalobos, 1944a:161, pl. 1.
Procambarus riojae.—Villalobos, 1950:401.
Procambarus riojai.—Hobbs, 1971d:3.
Procambarus (Villalobosus) riojai.—Hobbs, 1972a:12, figs. 2p, 3c, 19a–g.

TYPES.—Holotype, allotype, and "morphotype," IBM 50045 (027) (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—"Huauchinango, Estado de Puebla, riachuelos tributarios del río Necaxa," Mexico.

RANGE.—Headwater tributaries of the Río Cazones and Río Tecolutla in Hidalgo and Puebla, Mexico.

HABITAT.—Streams.

Procambarus (Villalobosus) teziutlanensis (Villalobos)

FIGURE 292

Paracambarus teziutlanensis Villalobos, 1947a:240, pl. 2; pl. 3: figs. 5–9.
Procambarus teziutlanensis.—Villalobos, 1950:372.
Procambarus tziutlanensis.—Hobbs, 1971d:12 [erroneous spelling].
Procambarus (Villalobosus) teziutlanensis.—Hobbs, 1972a:12.

TYPES.—Holotype, allotype, and morphotype, IBM 121245 (029) (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—"Chignautla, 5 km al Oriente de Teziutlán, Estado de Puebla," Mexico.

RANGE.—Headwater tributaries of the Río Nautla in Puebla and Veracruz, Mexico.

HABITAT.—Streams.

Procambarus (Villalobosus) tlapacoyanensis (Villalobos)

FIGURE 293

Paracambarus tlapacoyanensis Villalobos, 1947b:537, pls. 1, 2.
Procambarus tlapacoyanensis.—Villalobos, 1950:372.
Procambarus (Villalobosus) tlapacoyanensis.—Hobbs, 1972a:12.

TYPES.—Holotype, allotype, and morphotype, IBM 51947 (031) (♂ I, ♀, ♂ II); paratypes, IBM, USNM.

TYPE-LOCALITY.—Cañada de Tomata, Tlapacoyan, Veracruz, Mexico.

RANGE.—Tributaries of the Río Nautla in the vicinity of Tlapacoyan, Veracruz, Mexico.

HABITAT.—Streams.

Procambarus (Villalobosus) zihuateutlensis Villalobos

FIGURE 291

Procambarus zihuateutlensis Villalobos, 1950:394, pls. 8, 9.
Procambarus (Villalobosus) zihuateutlensis.—Hobbs, 1972a:12.

TYPES.—Holotype, allotype, and morphotype, IBM 21149 (080) (♂ I, ♀, ♂ II); paratypes, IBM.

TYPE-LOCALITY.—Arroyo de Tlatentiloyan, Los Estajos, Municipio de Zihuateutla, Puebla, Mexico.

RANGE.—Headwater tributaries of the Río Tecolutla in the vicinity of Zihuateutla, Puebla, Mexico.

HABITAT.—Streams.

Genus *Troglocambarus* Hobbs

Troglocambarus Hobbs, 1942a:345. [Type-species by original designation, *Troglocambarus maclanei* Hobbs, 1942a:345. Gender: masculine.]

Troglocambarus maclanei Hobbs

FIGURE 294

Troglocambarus maclanei Hobbs, 1942a:345, pls. 1, 2; 1971c: 122, figs. 17a–g, 19a.

TYPES.—Holotype, allotype, and "morphotype," USNM 79385, 79386, 79387 (♂ I, ♀, ♂ II); paratypes, MCZ, USNM.

TYPE-LOCALITY.—Squirrel Chimney, a small cave about 11 miles northwest of Gainesville, Alachua County, Florida (Sec. 21, T. 9 S., R. 18 E.).

RANGE.—Citrus and Hernando to Alachua counties, Florida.

HABITAT.—Subterranean waters.

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1907. Notes on the Crayfish of Wells County, Indiana, with Description of New Species. *31st Annual Report of the Department of Geology and Natural Resources, Indiana,* 1906:749–763, plate 35.

FIGURES 1–294

EXPLANATION OF ILLUSTRATIONS

All of the illustrations except Figure 14*d*, which was redrawn from Villalobos (1952:527), were made from camera lucida drawings sketched during the preparation of this manuscript. The lettering utilized in Figure 1 also applies to Figures 2 through 7; that in Figure 8, to Figures 9 through 169; and that in Figure 170, to Figures 171 through 294.

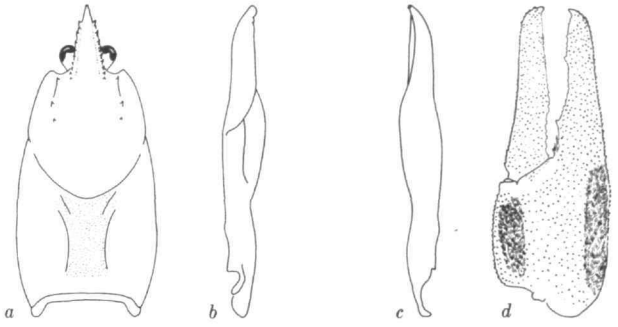
FIGURES 1–7.—*a*, dorsal view of carapace of male; *b*, mesial view of first pleopod of male; *c*, lateral view of same; *d*, dorsal view of chela of male.

FIGURES 8–88 and 92–169.—*a*, dorsal view of carapace of male, form I; *b*, mesial view of first pleopod of male, form I; *c*, lateral view of same; *d*, lateral view of first pleopod of male, form II; *e*, annulus ventralis; *f*, dorsal view of chela of male, form I.

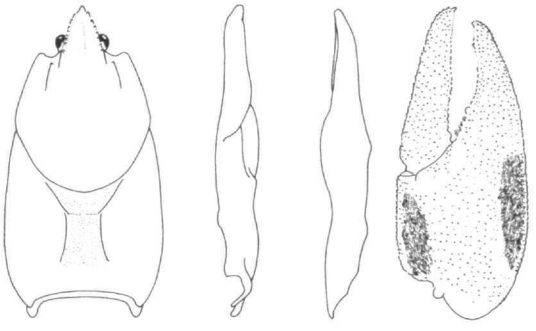
FIGURES 89–91.—Same as in Figure 8 except *c* and *d* are caudal views of first pleopods of first- and second-form males, respectively.

FIGURES 170–196 and 200–294.—*a*, dorsal view of carapace of male, form I; *b*, lateral view of first pleopod of male, form I; *c*, lateral view of tip of same; *d*, mesial view of tip of same; *e*, lateral view of first pleopod of male, form II; *f*, annulus ventralis; *g*, dorsal view of chela of male, form I.

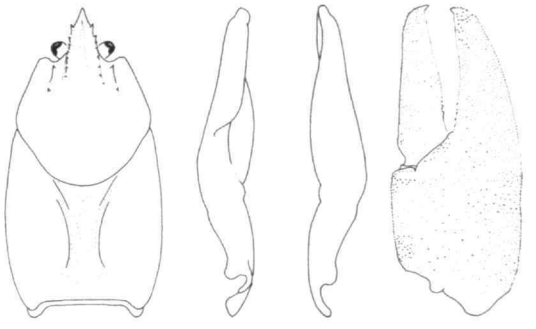
FIGURES 197–199.—Same as in Figure 170 except *c* is caudal view of tip of first pleopod of male, form I.



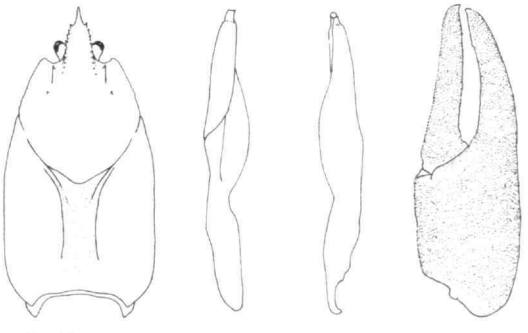
1. *Pacifastacus connectens*



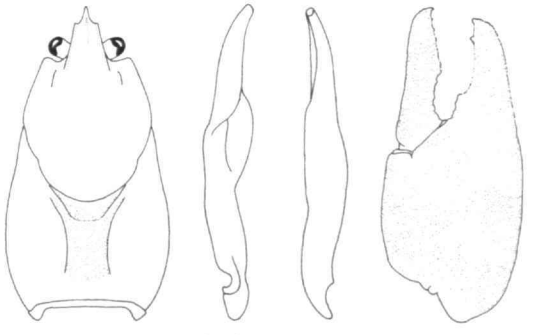
2. *Pacifastacus gambelii*



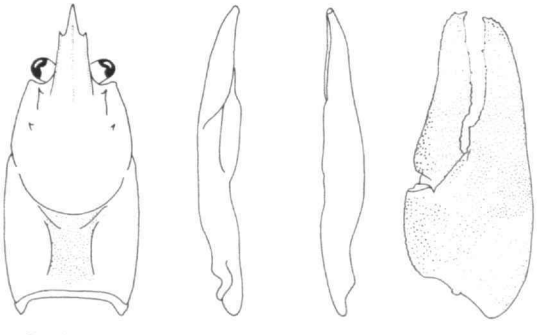
3. *Pacifastacus fortis*



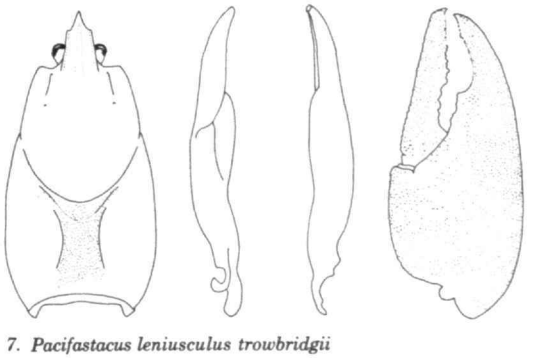
4. *Pacifastacus nigrescens*



5. *Pacifastacus leniusculus leniusculus*

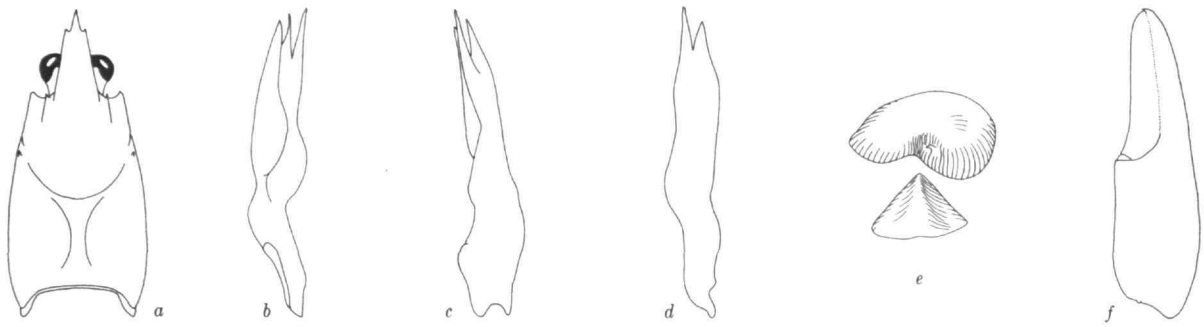


6. *Pacifastacus leniusculus klamathensis*

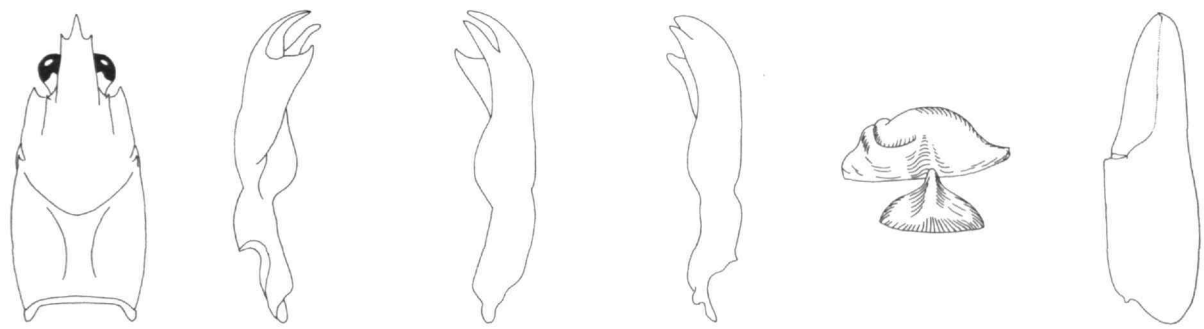


7. *Pacifastacus leniusculus trowbridgii*

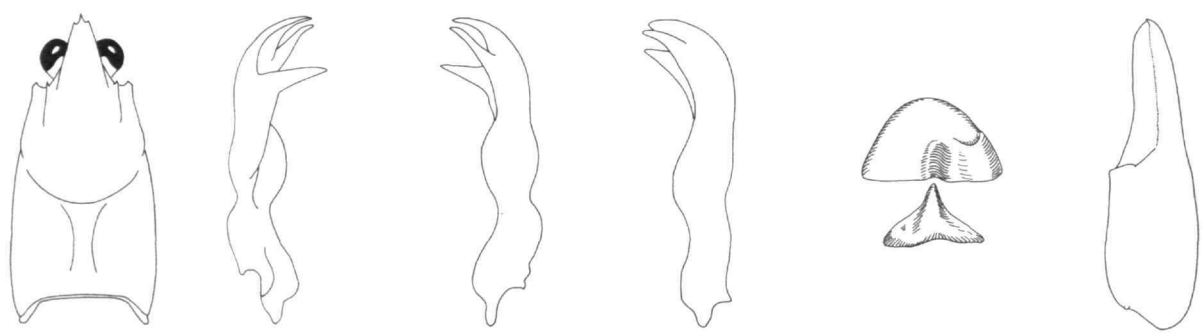
FIGURES 1–7



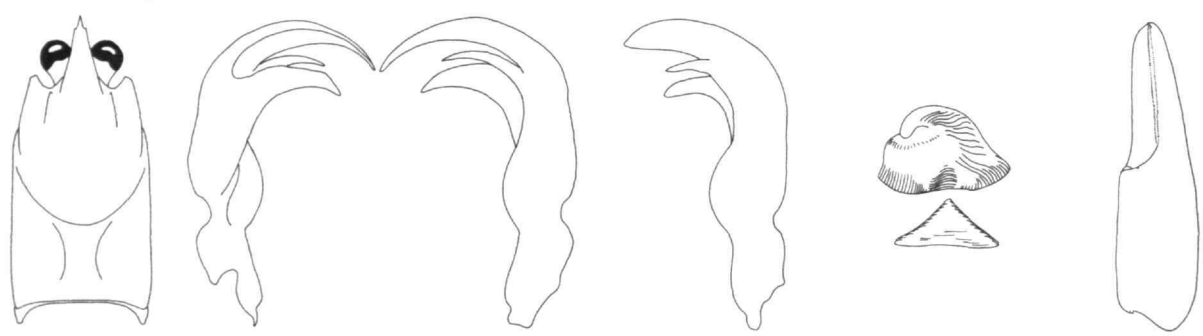
8. Cambarellus shufeldtii



9. Cambarellus schmitti

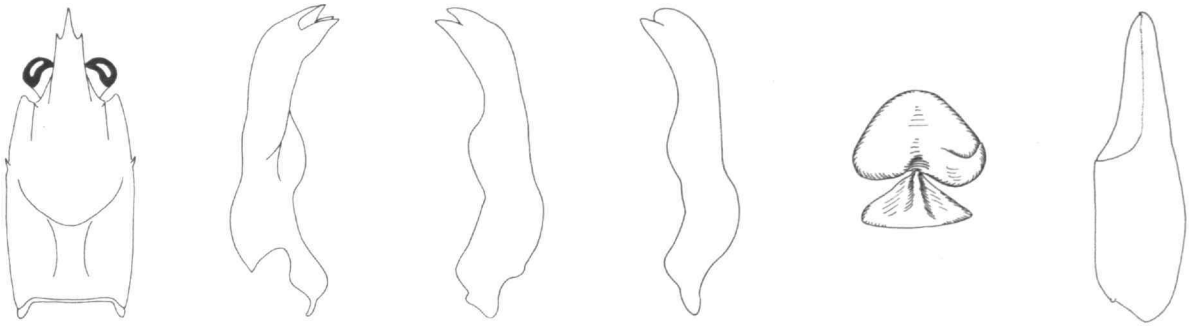


10. Cambarellus puer

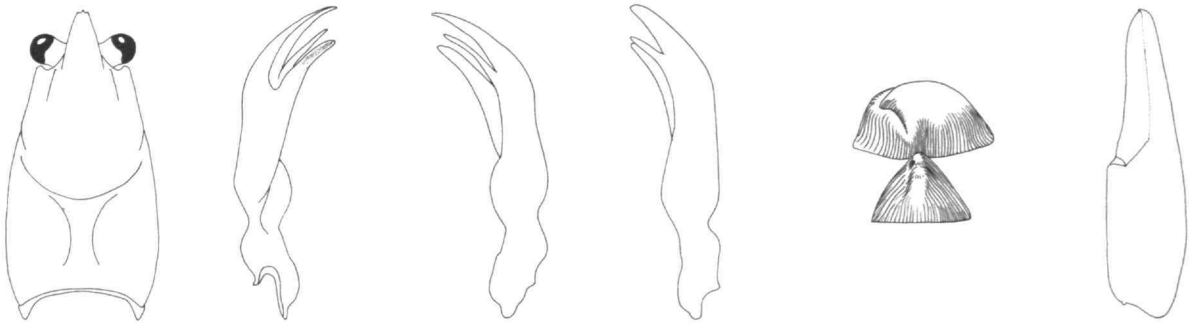


11. Cambarellus ninae

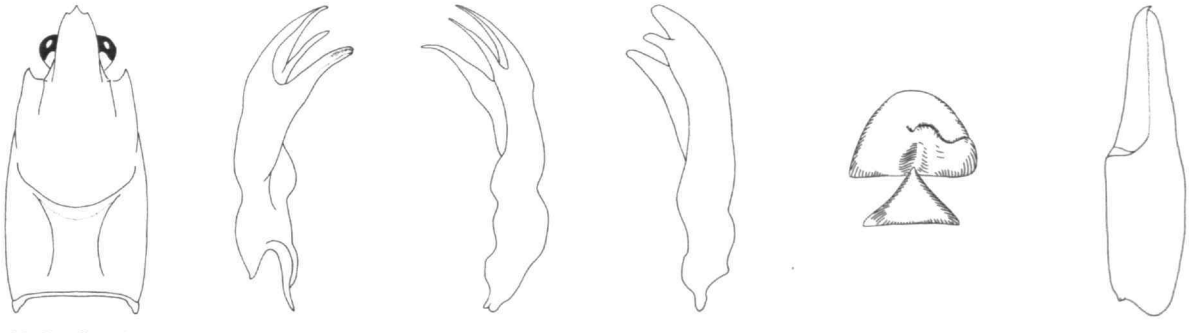
FIGURES 8–11



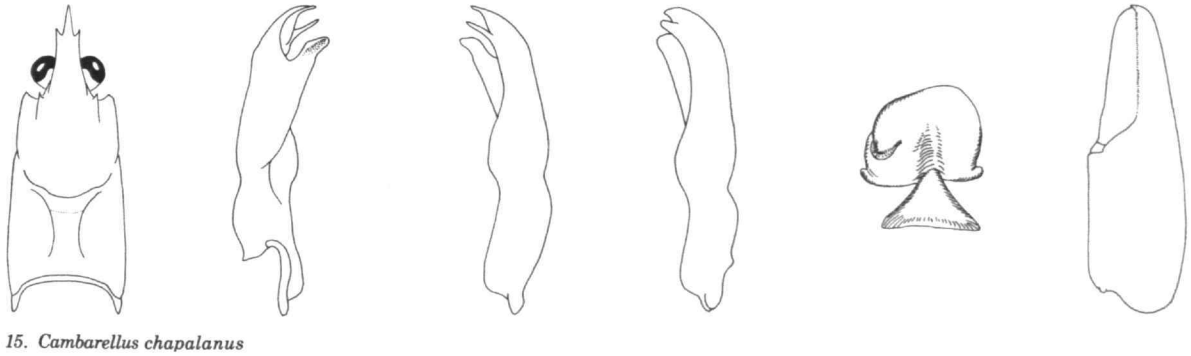
12. Cambarellus diminutus



13. Cambarellus occidentalis

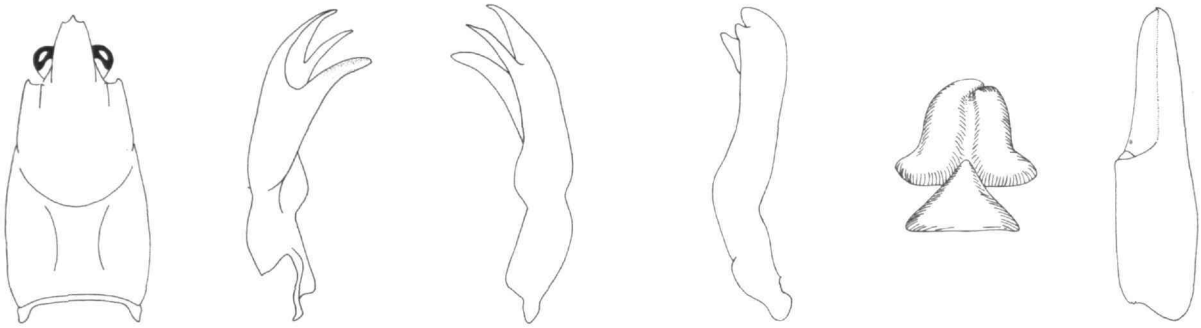


14. Cambarellus alvarezi

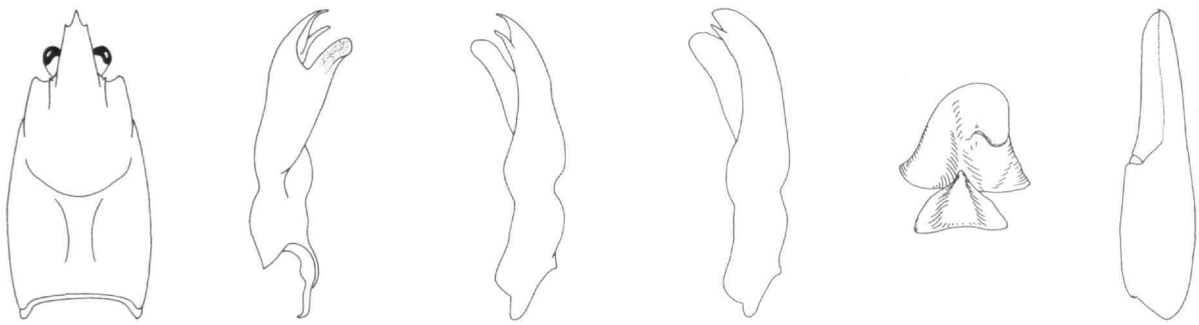


15. Cambarellus chapalanus

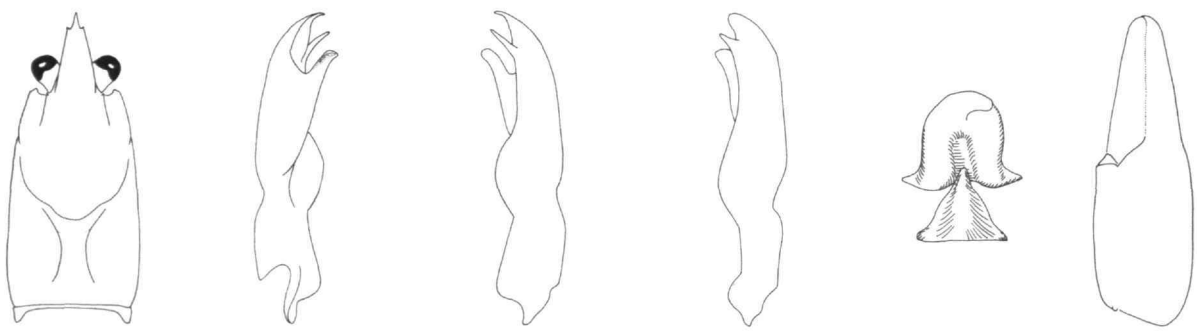
FIGURES 12–15



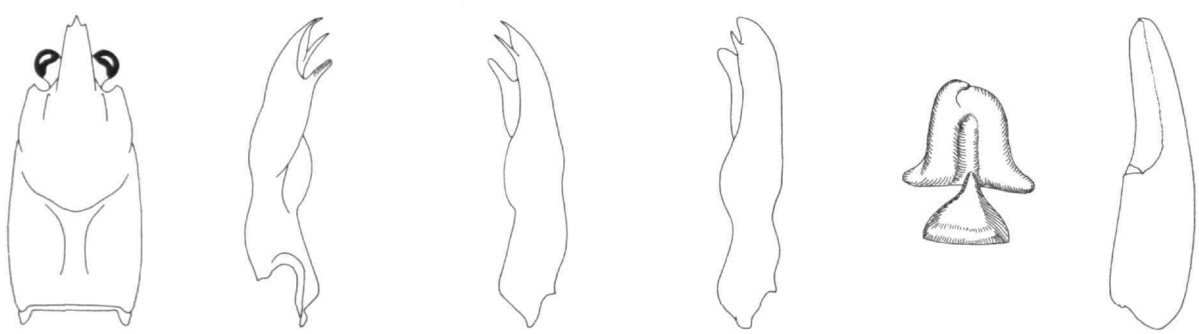
16. Cambarellus areolatus



17. Cambarellus montezumae

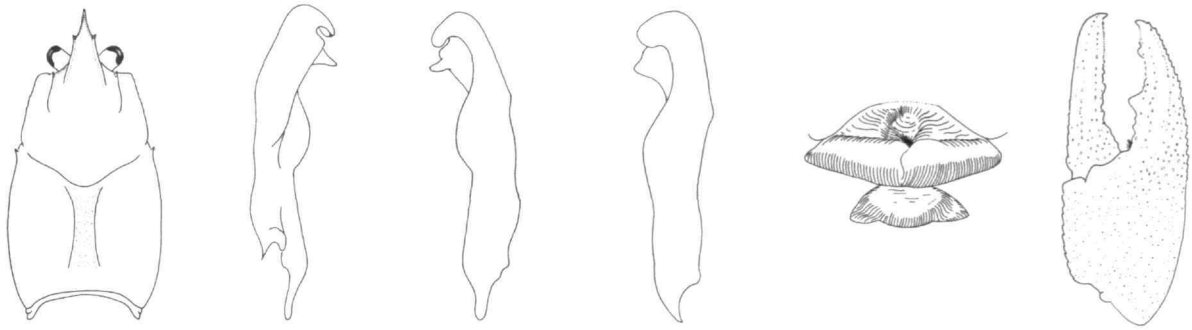


18. Cambarellus patzcuarensis

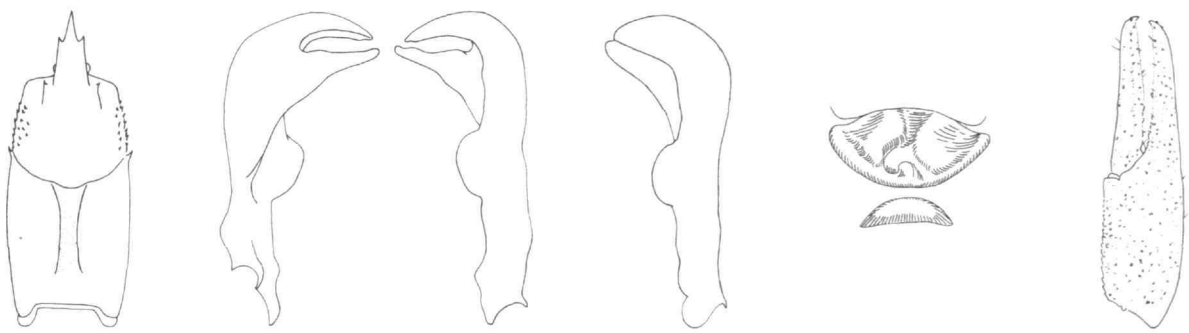


19. Cambarellus zempoalensis

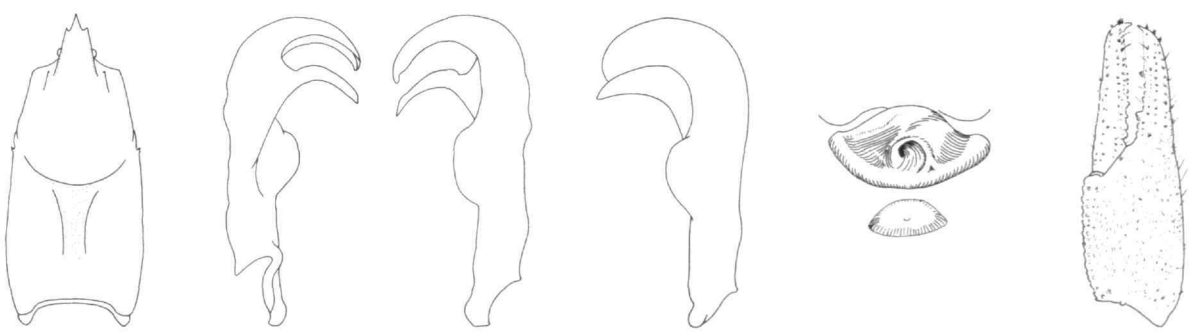
FIGURES 16–19



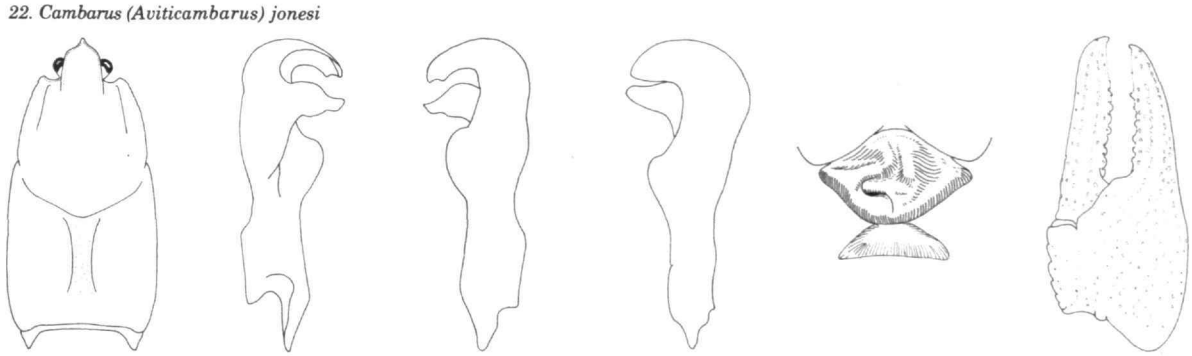
20. Barbicambarus cornutus



21. Cambarus (Aviticambarus) hamulatus

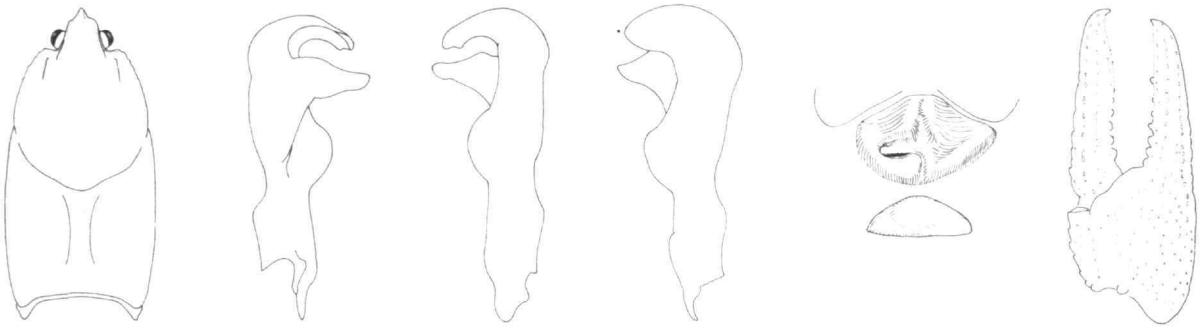


22. Cambarus (Aviticambarus) jonesi

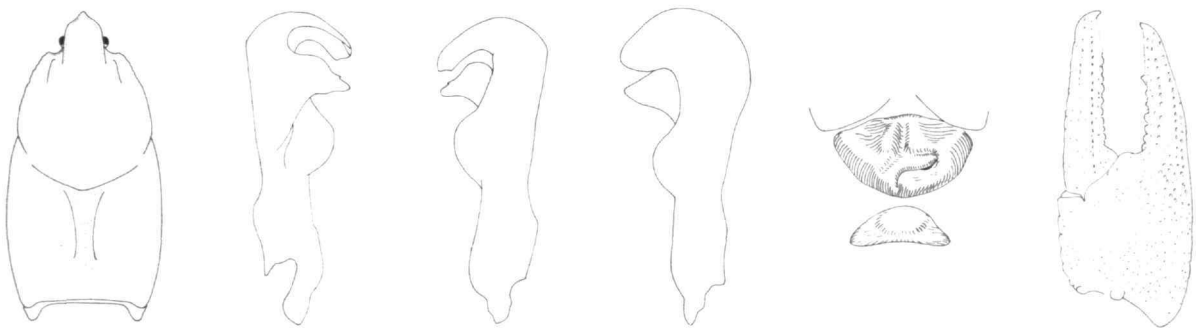


23. Cambarus (Cambarus) bartonii bartonii

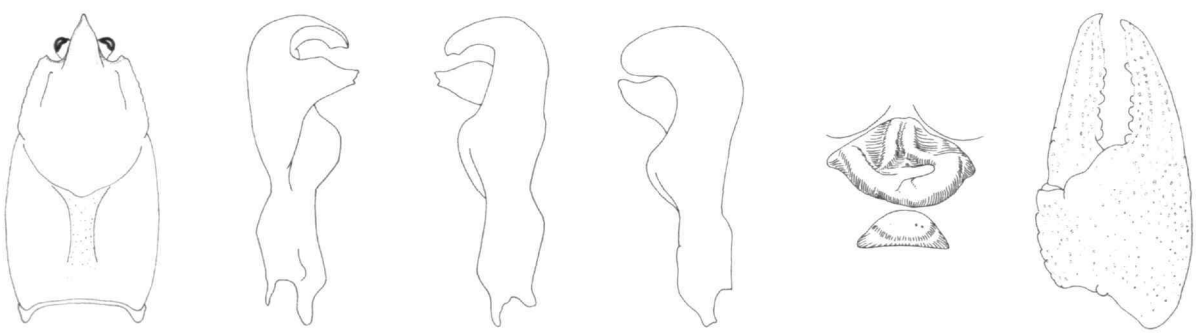
FIGURES 20–23



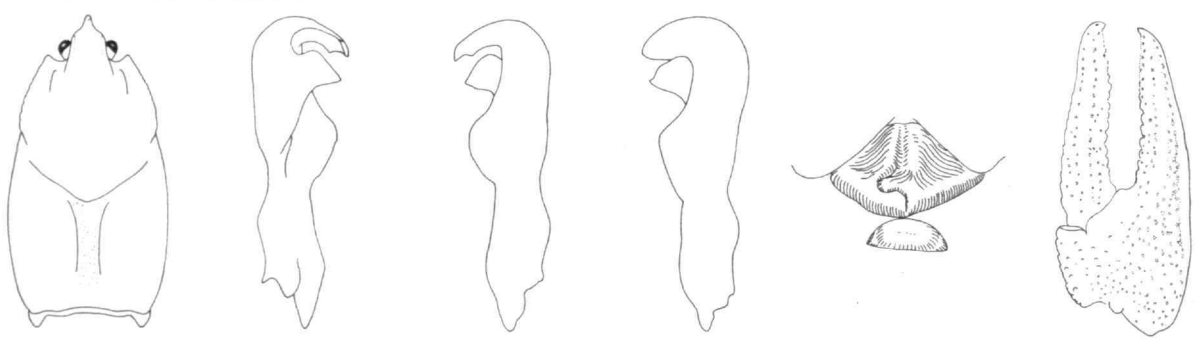
24. Cambarus (Cambarus) bartonii carinirostris



25. Cambarus (Cambarus) bartonii cavatus

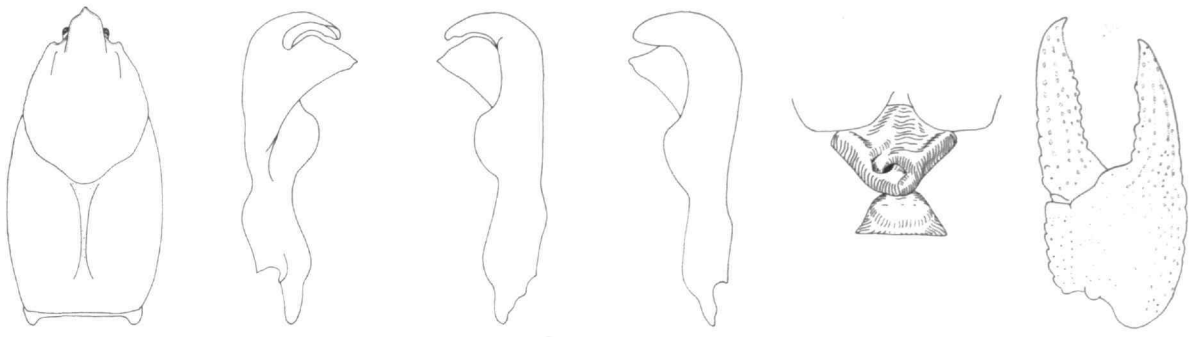


26. Cambarus (Cambarus) howardi

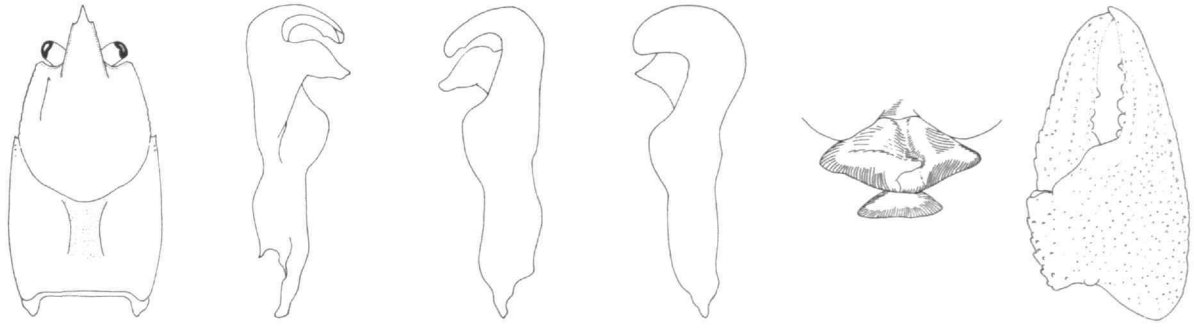


27. Cambarus (Cambarus) sciotensis

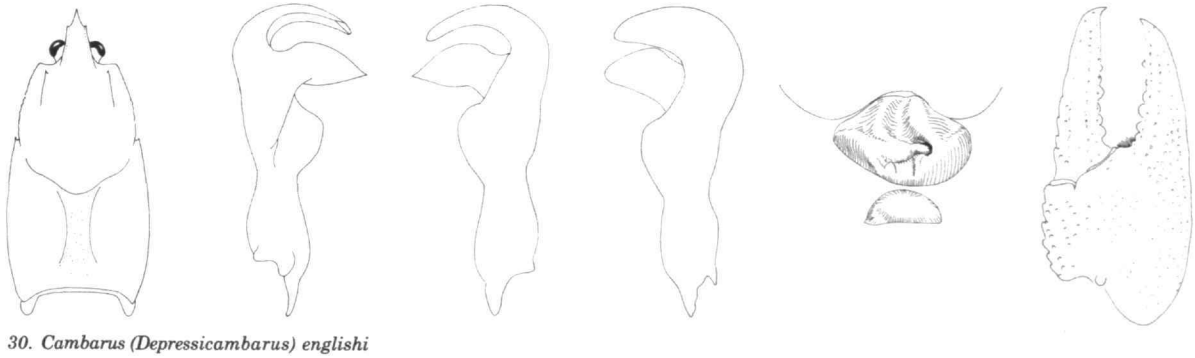
FIGURES 24–27



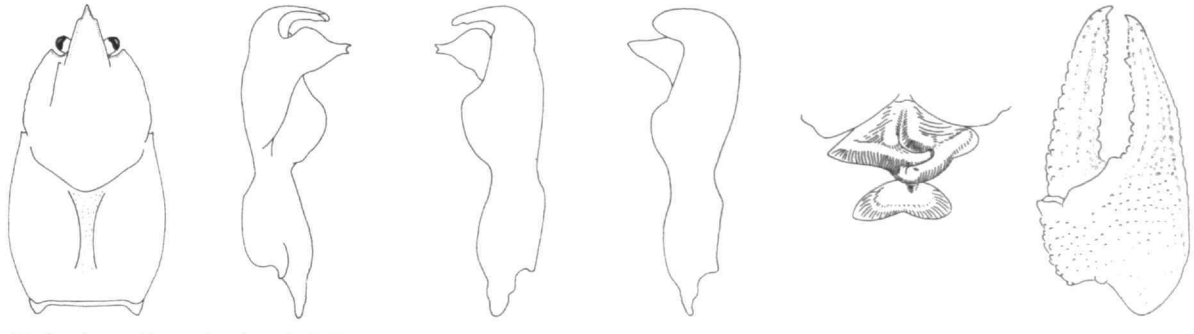
28. Cambarus (Cambarus) ortmanni



29. Cambarus (Depressicambarus) halli

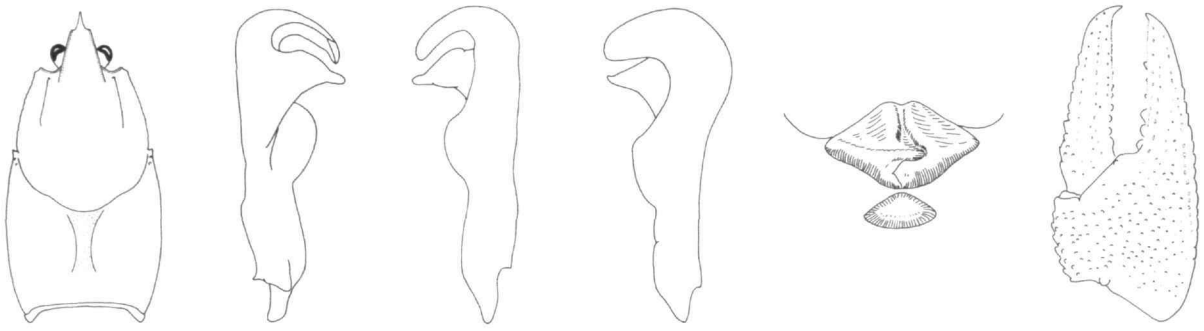


30. Cambarus (Depressicambarus) englishi

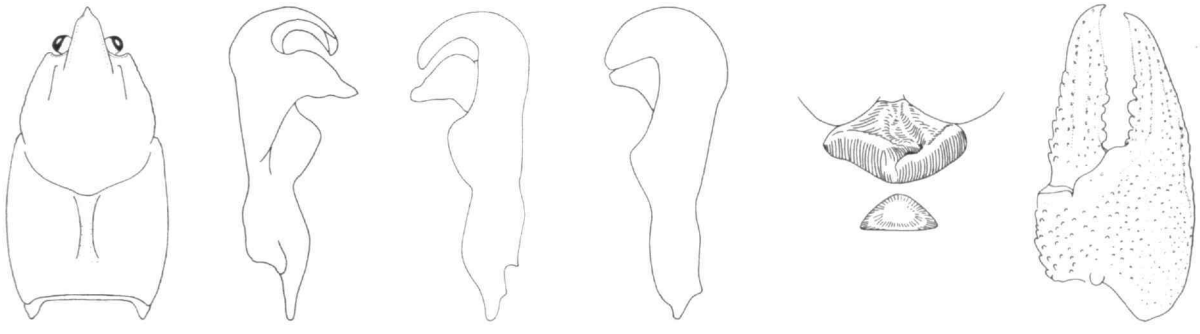


31. Cambarus (Depressicambarus) obstipus

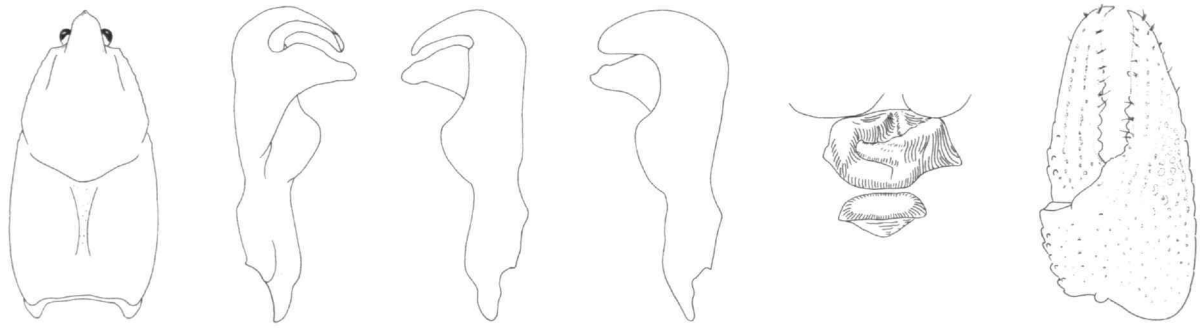
FIGURES 28–31



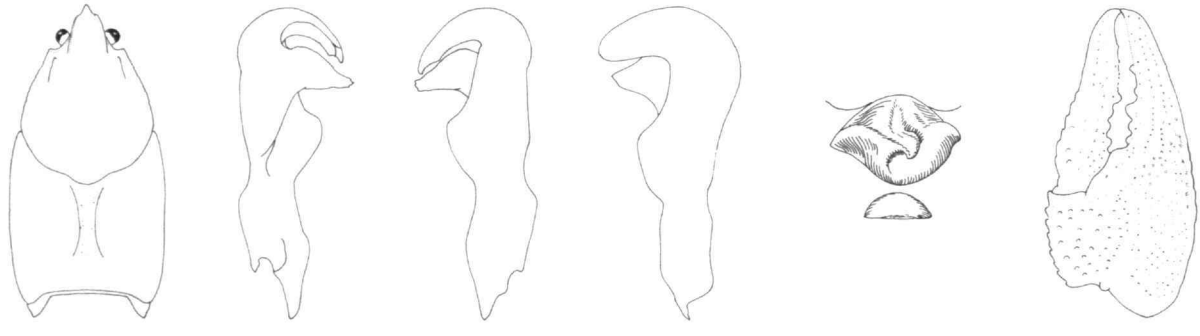
32. Cambarus (Depressicambarus) jordani



33. Cambarus (Depressicambarus) latimanus

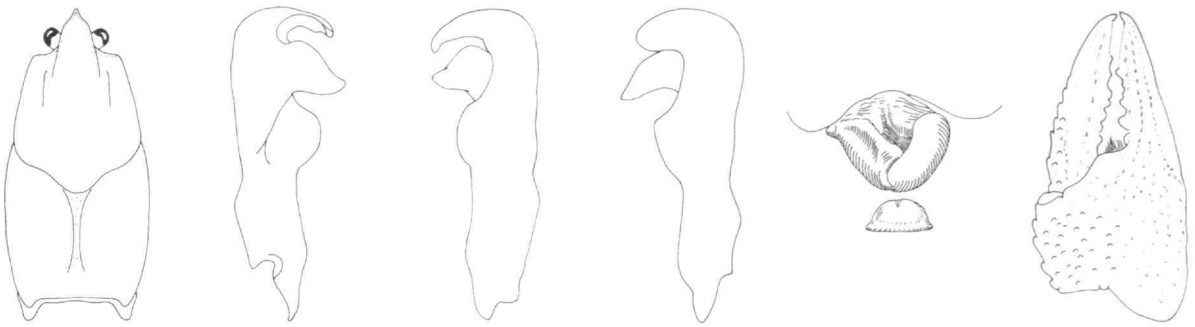


34. Cambarus (Depressicambarus) floridanus

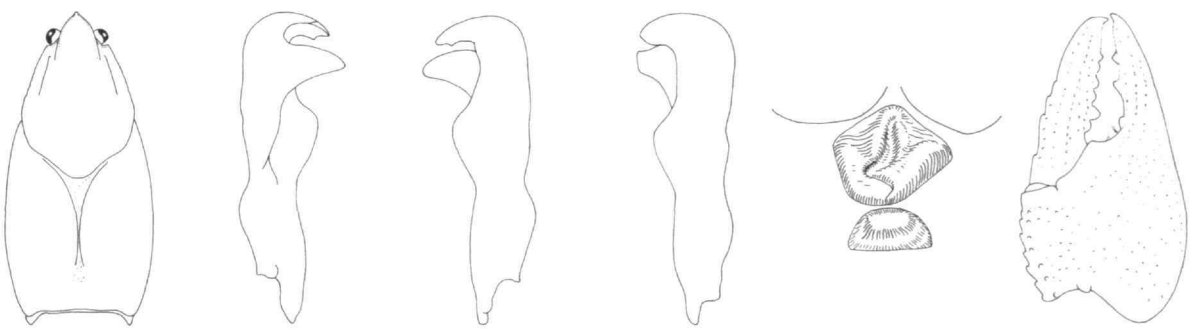


35. Cambarus (Depressicambarus) sphenoides

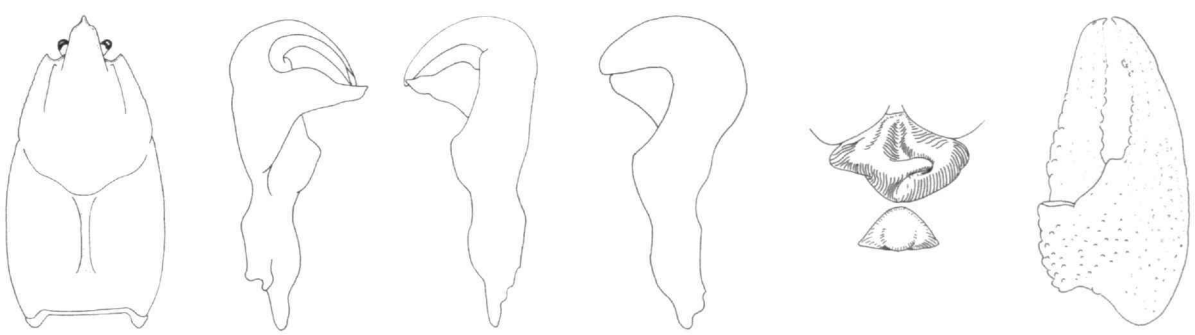
FIGURES 32–35



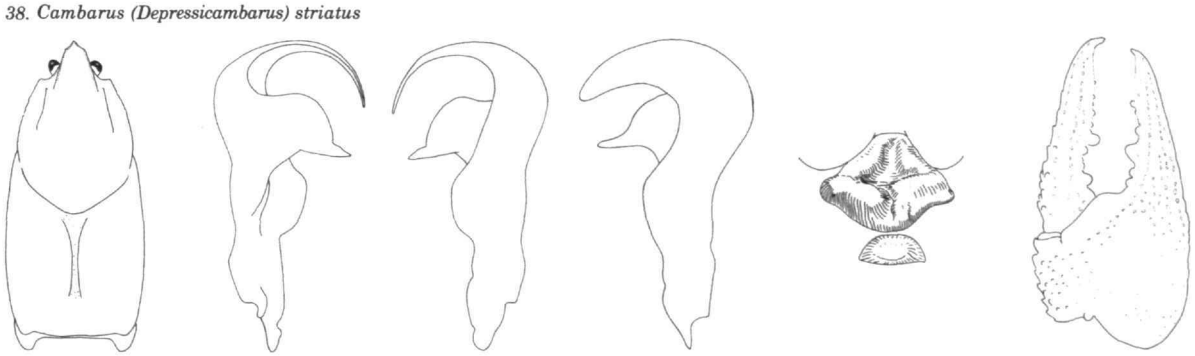
36. Cambarus (Depressicambarus) catagius



37. Cambarus (Depressicambarus) cymatilis

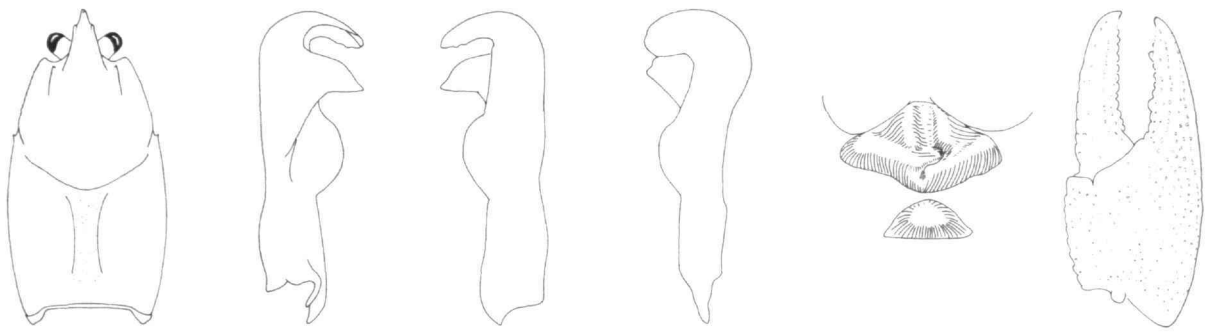


38. Cambarus (Depressicambarus) striatus

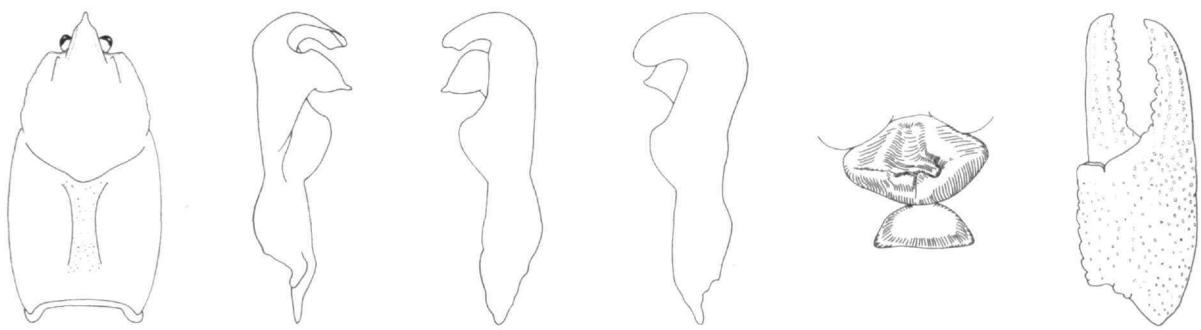


39. Cambarus (Depressicambarus) reduncus

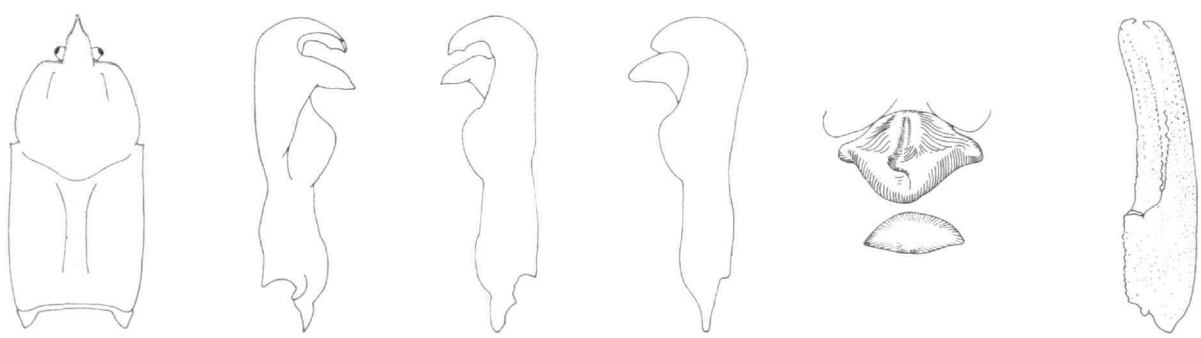
FIGURES 36–39



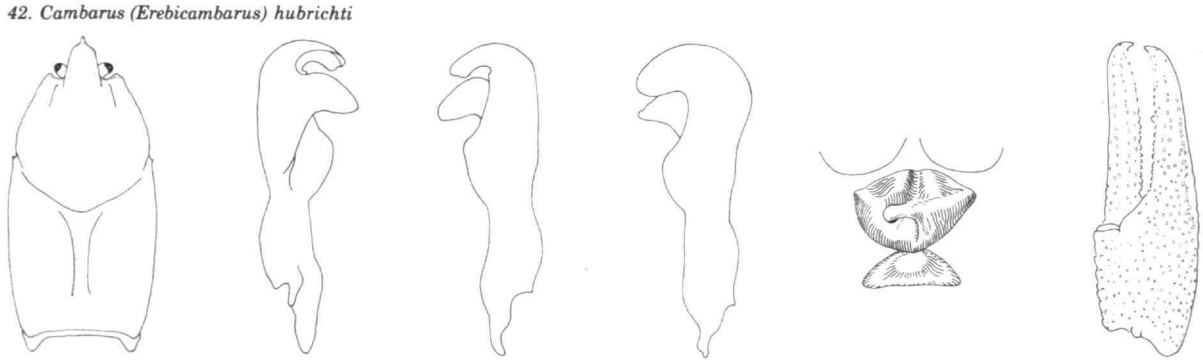
40. Cambarus (Erebicambarus) hubbsi



41. Cambarus (Erebicambarus) rusticiformis

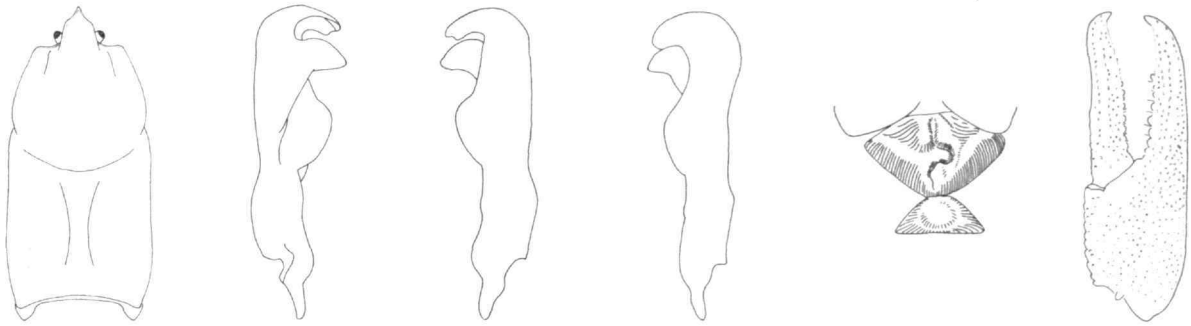


42. Cambarus (Erebicambarus) hubrichti

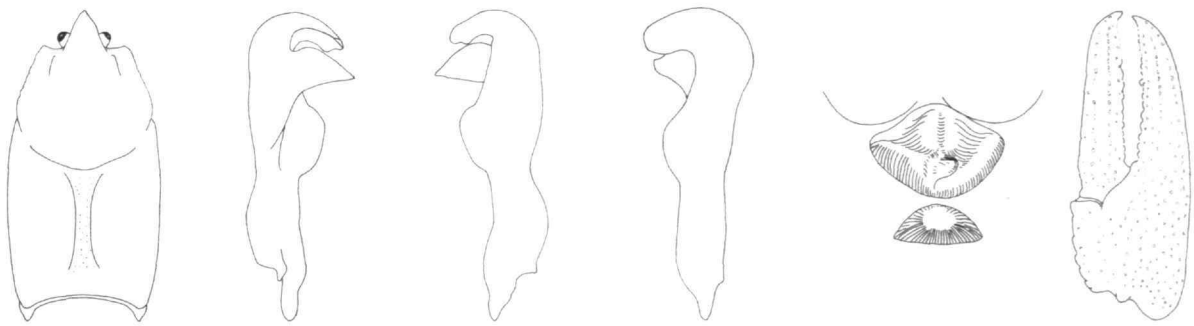


43. Cambarus (Erebicambarus) tenebrosus

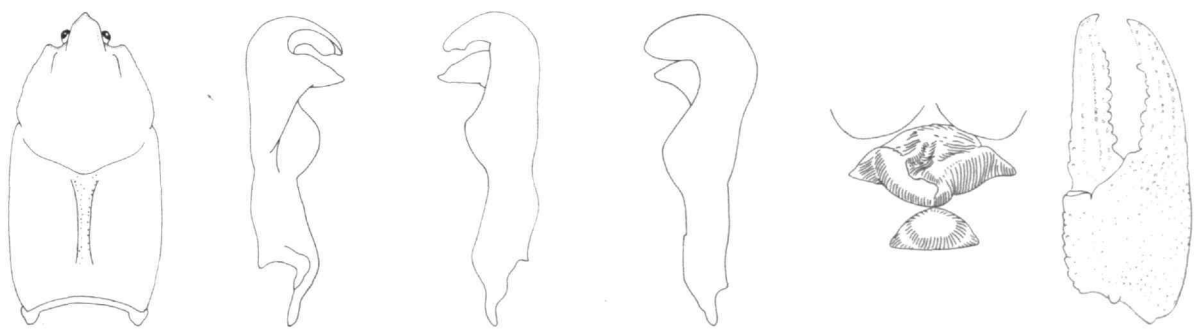
FIGURES 40–43



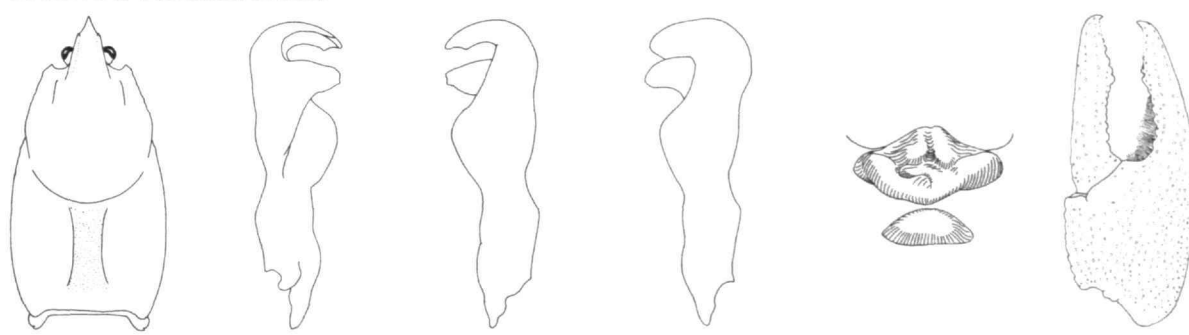
44. Cambarus (Erebicambarus) cahni



45. Cambarus (Erebicambarus) ornatus

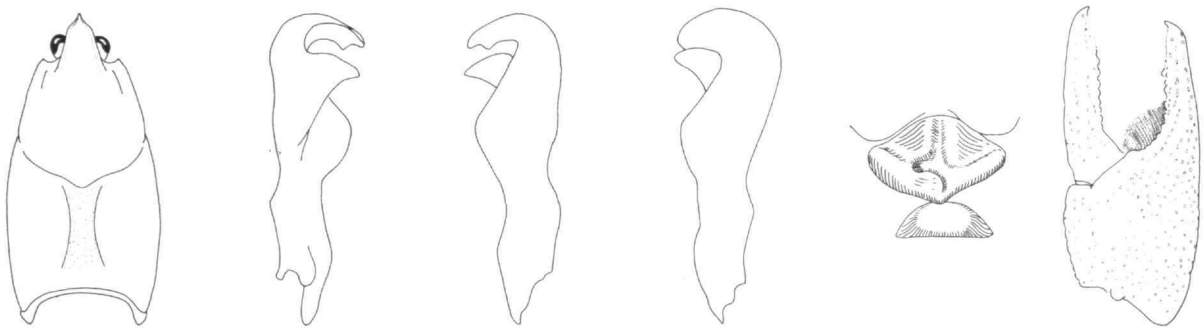


46. Cambarus (Erebicambarus) laevis

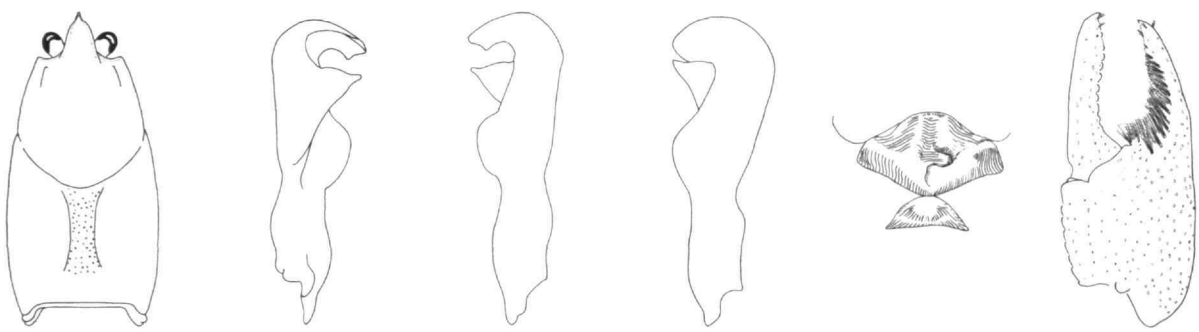


47. Cambarus (Hiaticambarus) girardianus

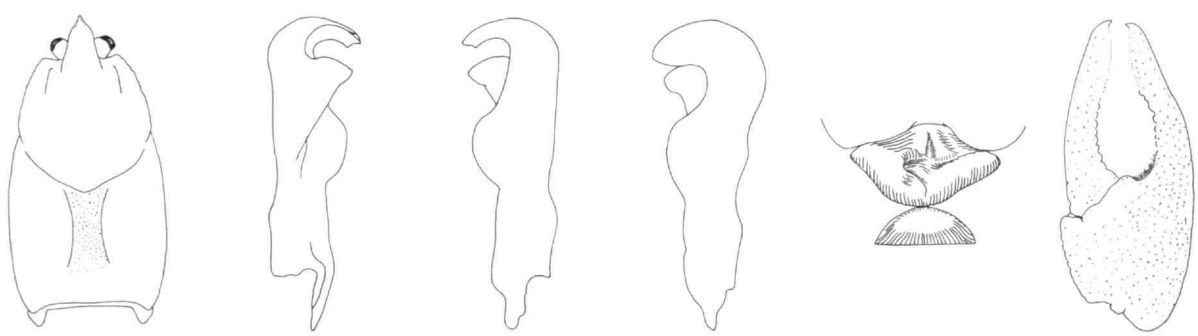
FIGURES 44–47



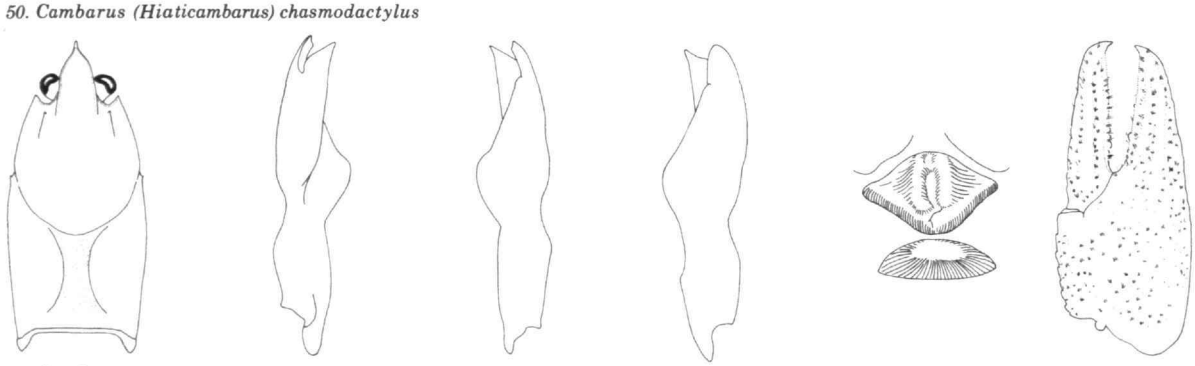
48. Cambarus (Hiaticambarus) longirostris



49. Cambarus (Hiaticambarus) longulus

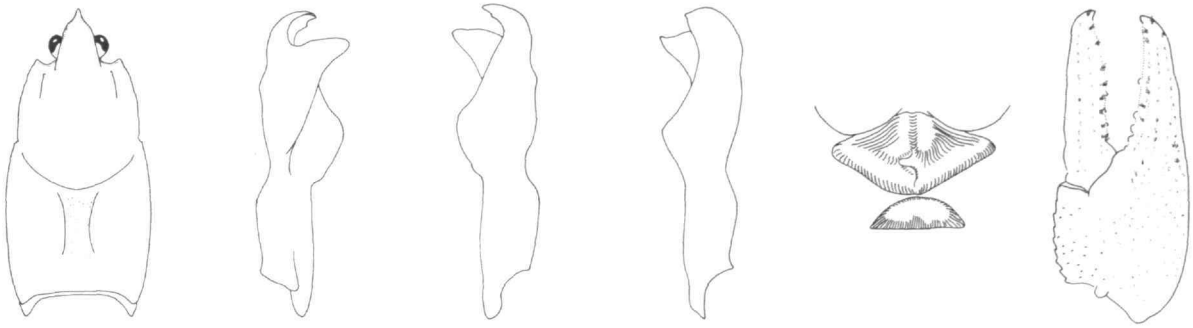


50. Cambarus (Hiaticambarus) chasmodactylus

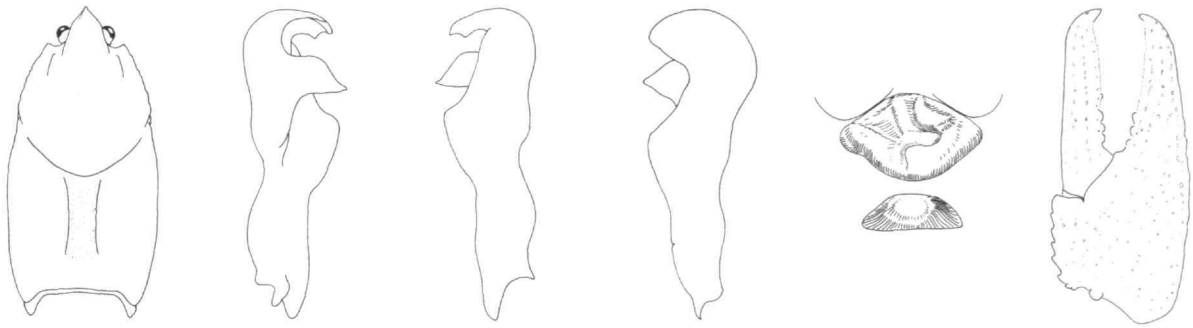


51. Cambarus (Jugicambarus) bouchardi

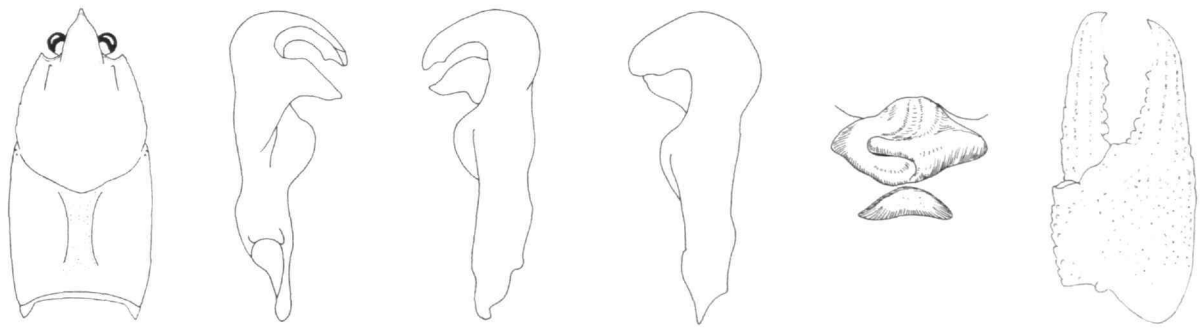
FIGURES 48–51



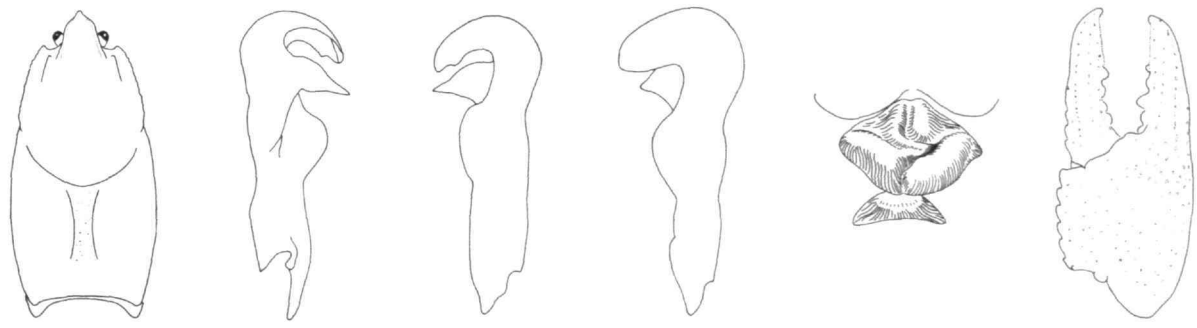
52. Cambarus (Jugicambarus) obeyensis



53. Cambarus (Jugicambarus) distans

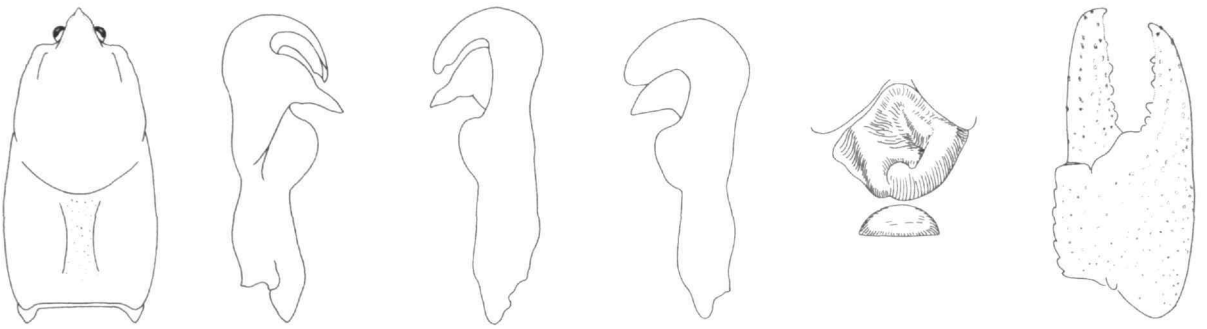


54. Cambarus (Jugicambarus) unestami

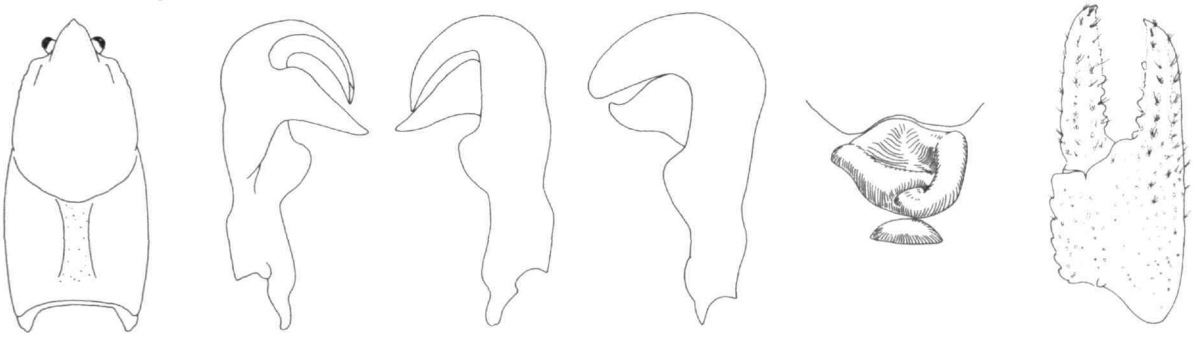


55. Cambarus (Jugicambarus) parvoculus

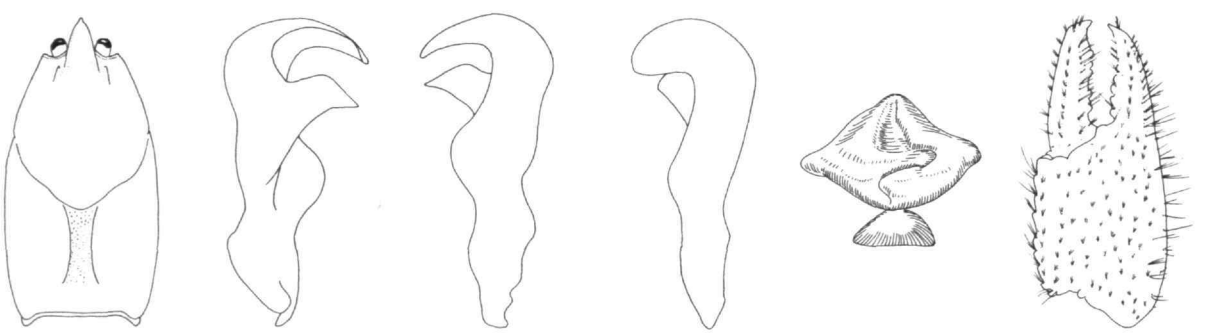
FIGURES 52–55



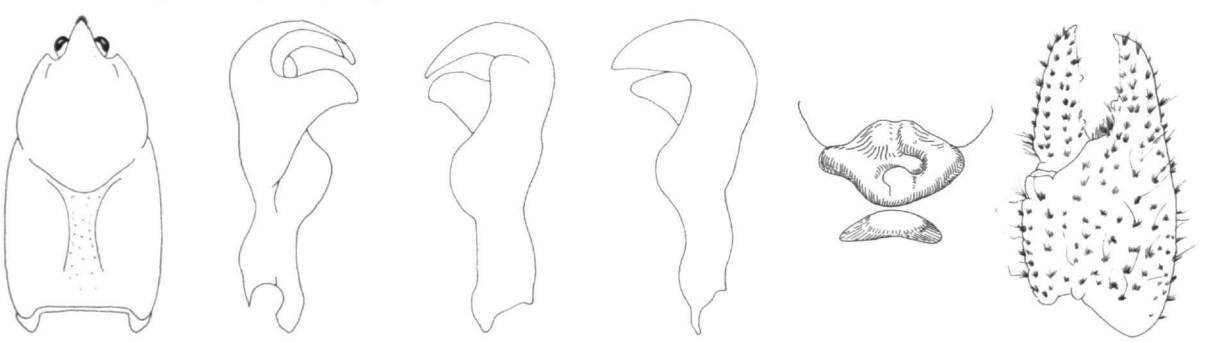
56. Cambarus (Jugicambarus) conasaugaensis



57. Cambarus (Jugicambarus) asperimanus

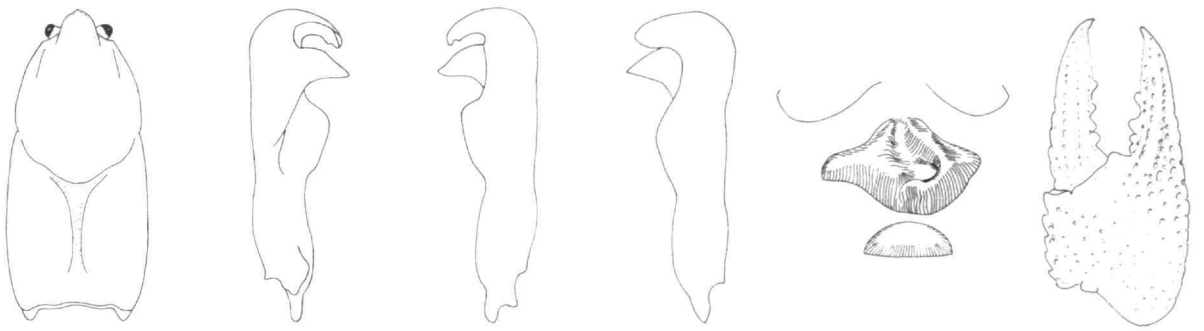


58. Cambarus (Jugicambarus) brachydactylus

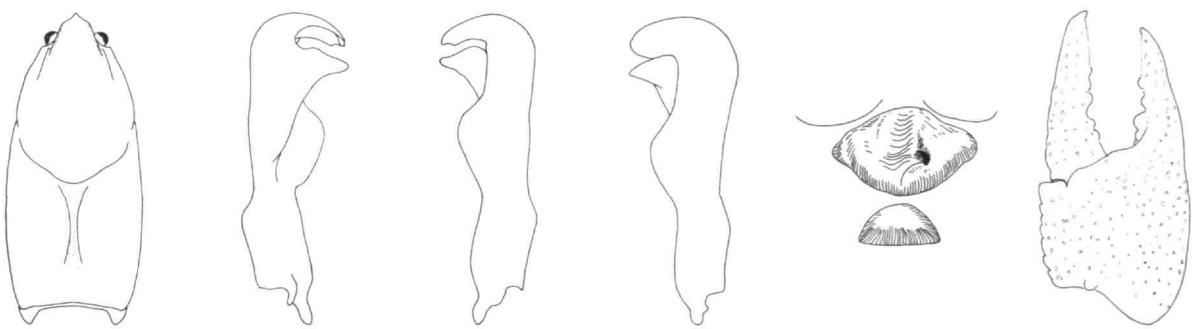


59. Cambarus (Jugicambarus) friaufi

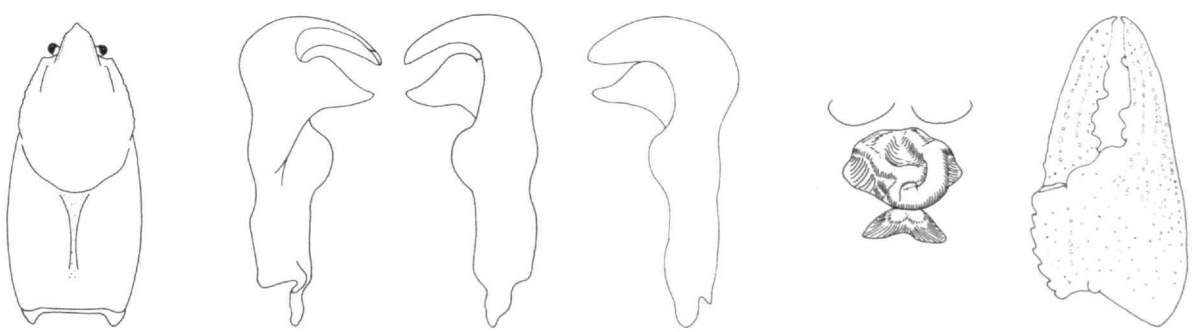
FIGURES 56–59



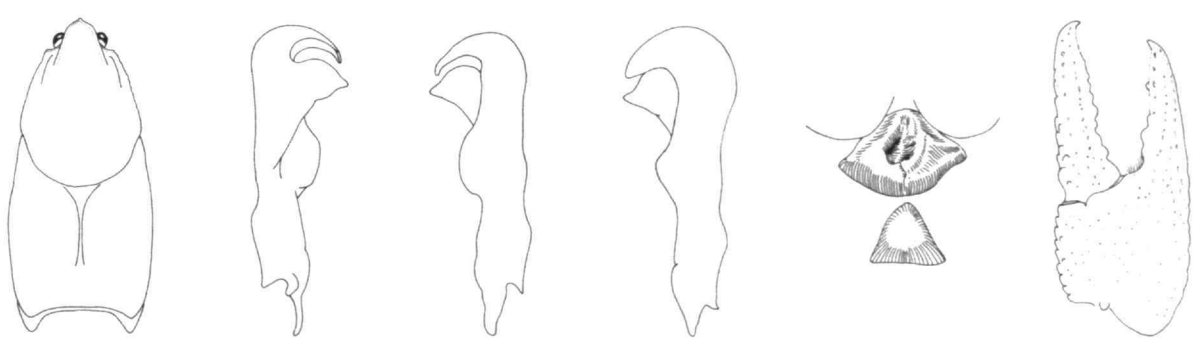
60. Cambarus (Jugicambarus) dubius



61. Cambarus (Jugicambarus) monongalensis

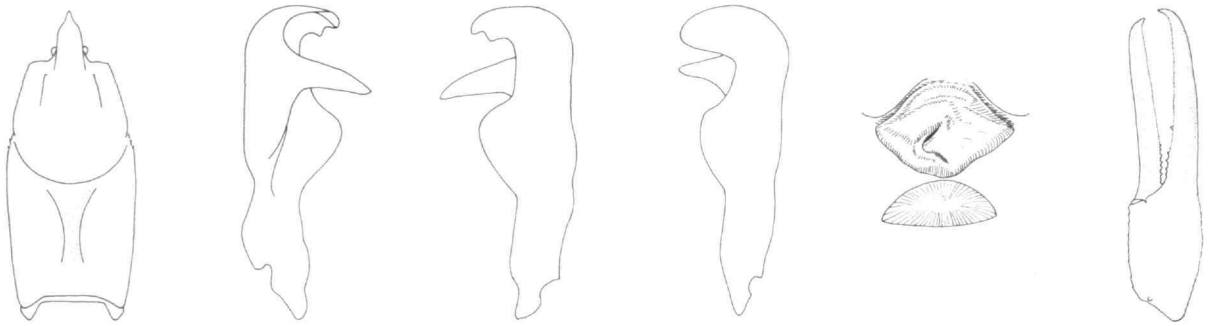


62. Cambarus (Jugicambarus) carolinus

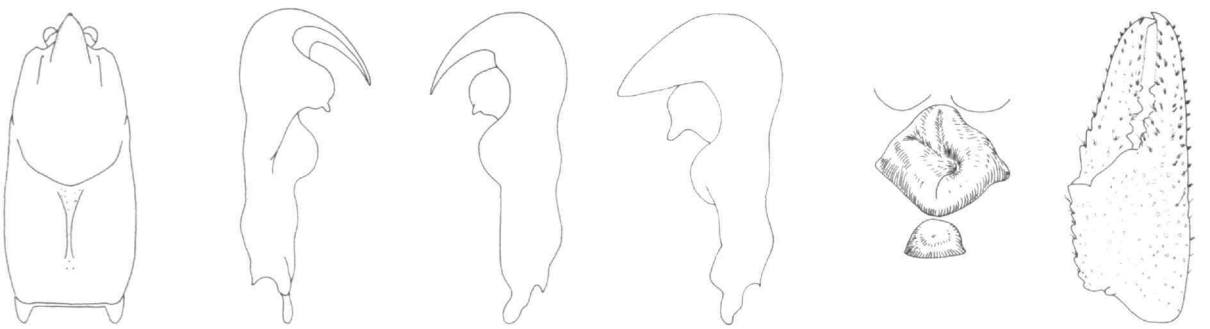


63. Cambarus (Jugicambarus) gentryi

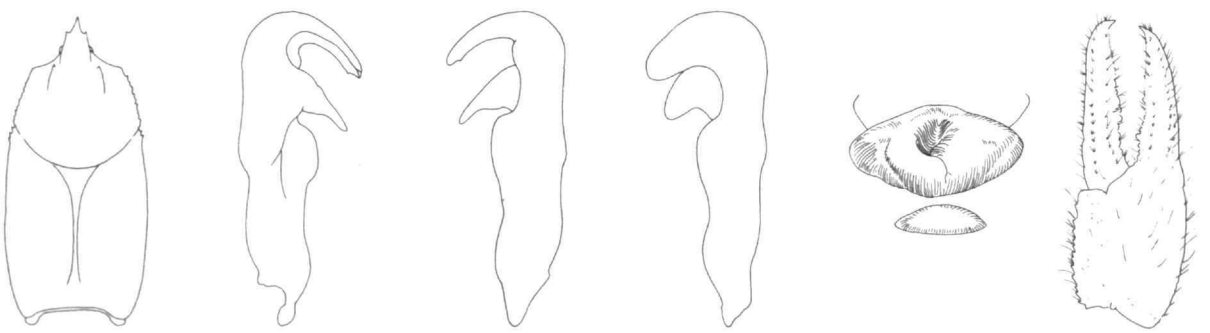
FIGURES 60–63



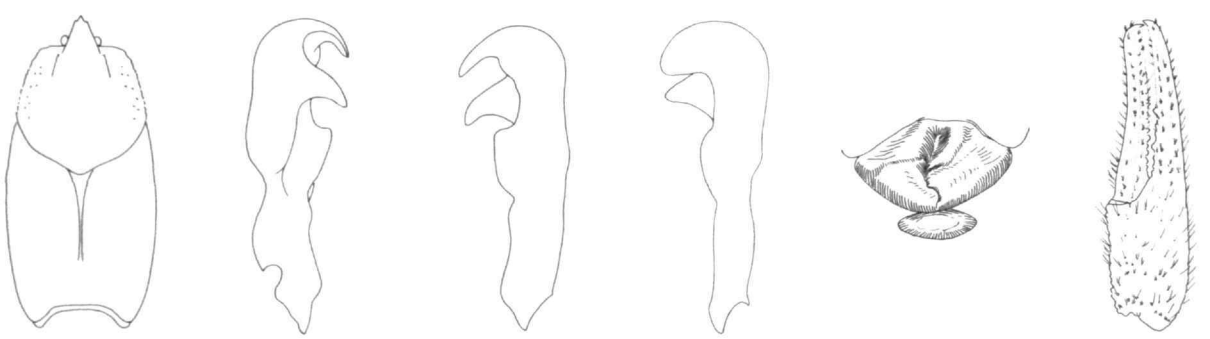
64. Cambarus (Jugicambarus) crytodytes



65. Cambarus (Jugicambarus) causeyi

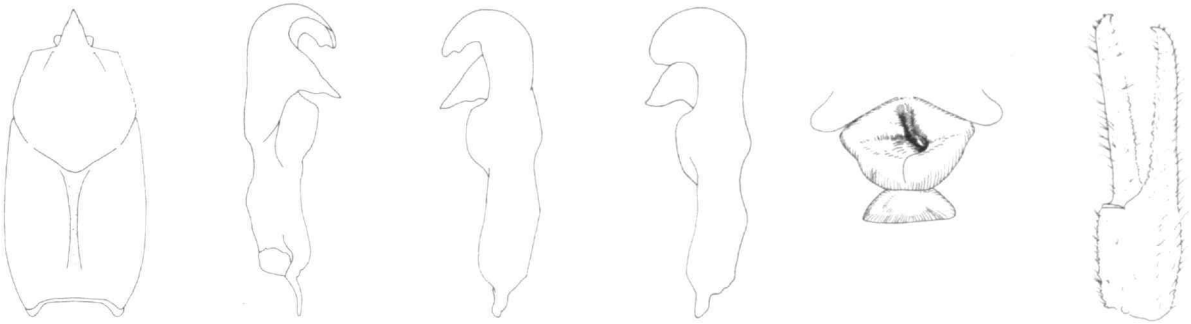


66. Cambarus (Jugicambarus) setosus

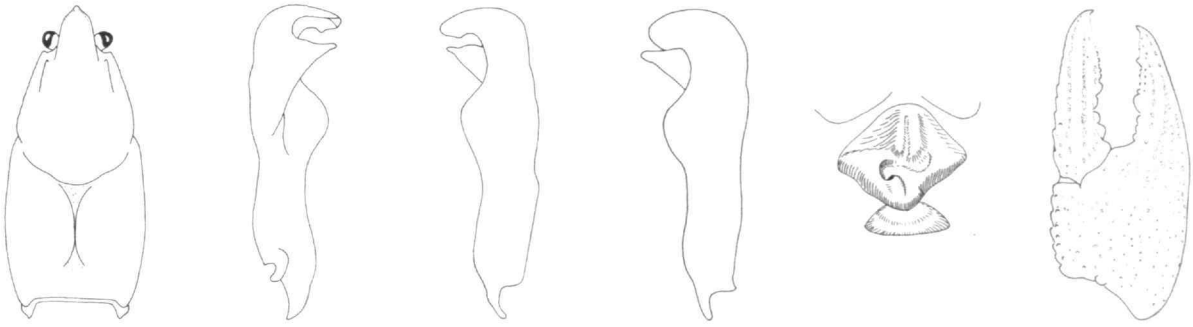


67. Cambarus (Jugicambarus) zophonastes

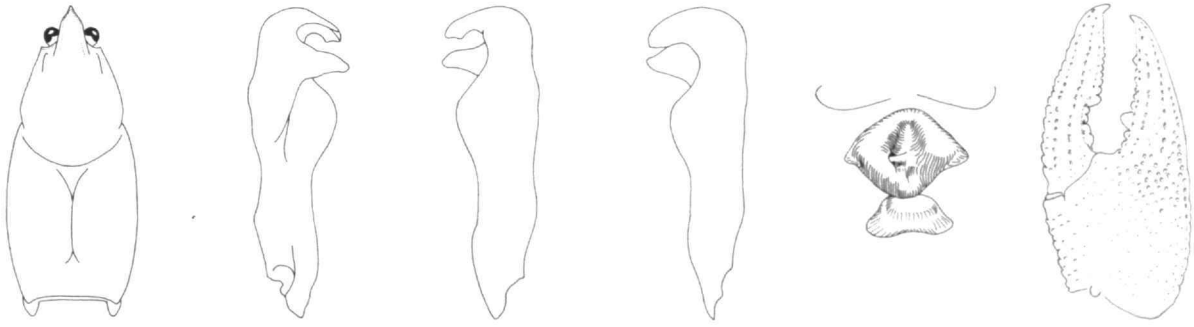
FIGURES 64–67



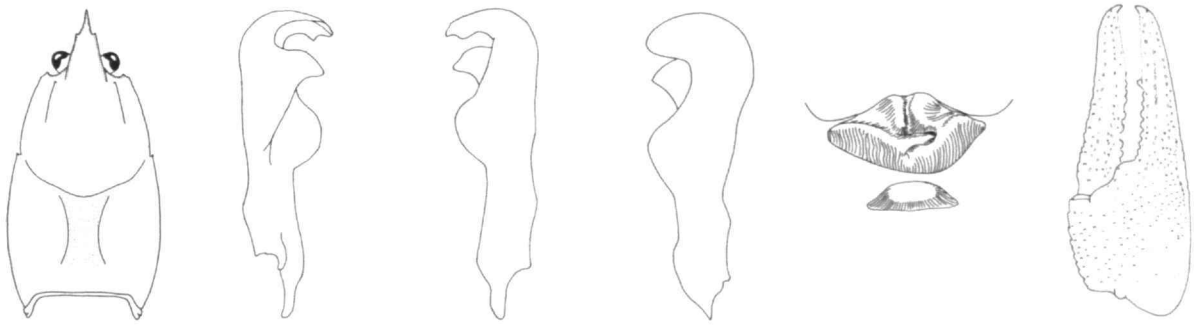
68. *Cambarus (Jugicambarus) tartarus*



69. *Cambarus (Lacunicambarus) diogenes diogenes*

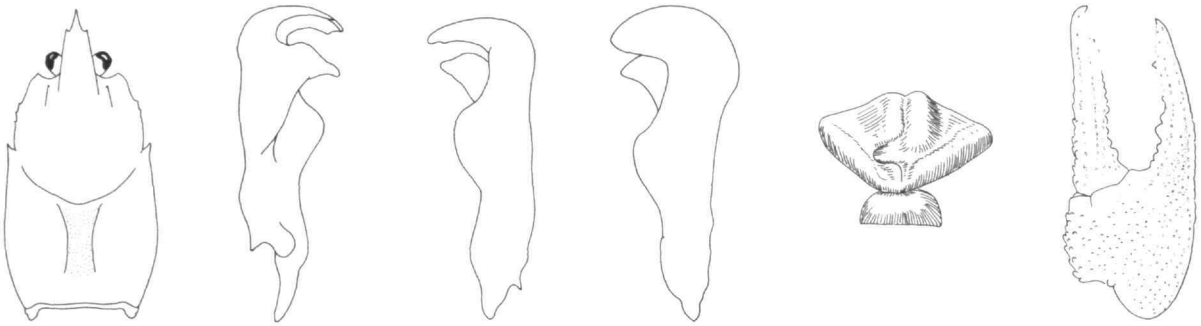


70. *Cambarus (Lacunicambarus) diogenes ludovicianus*

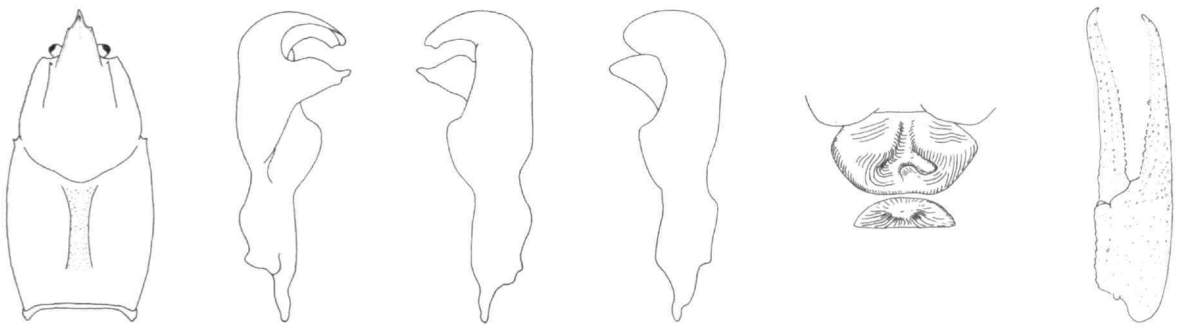


71. *Cambarus (Puncticambarus) extraneus*

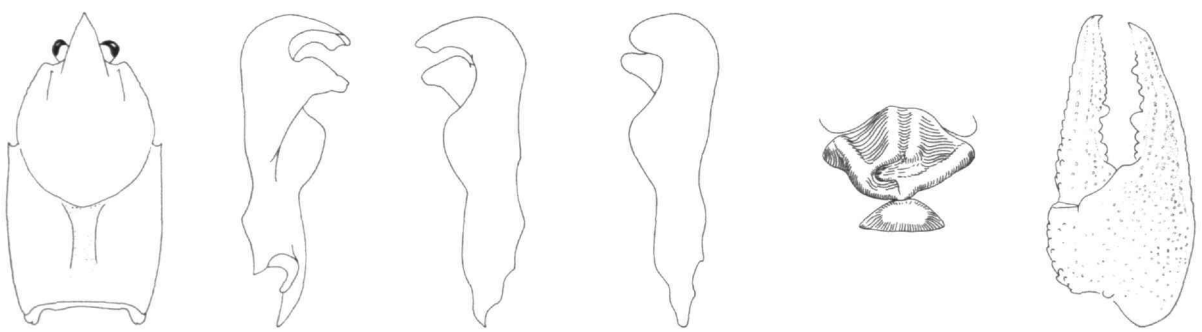
FIGURES 68–71



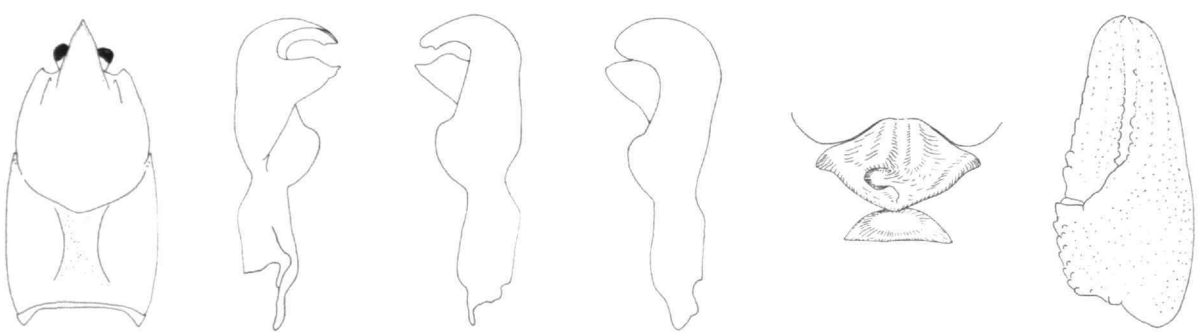
72. Cambarus (Puncticambarus) spicatus



73. Cambarus (Puncticambarus) nerterius

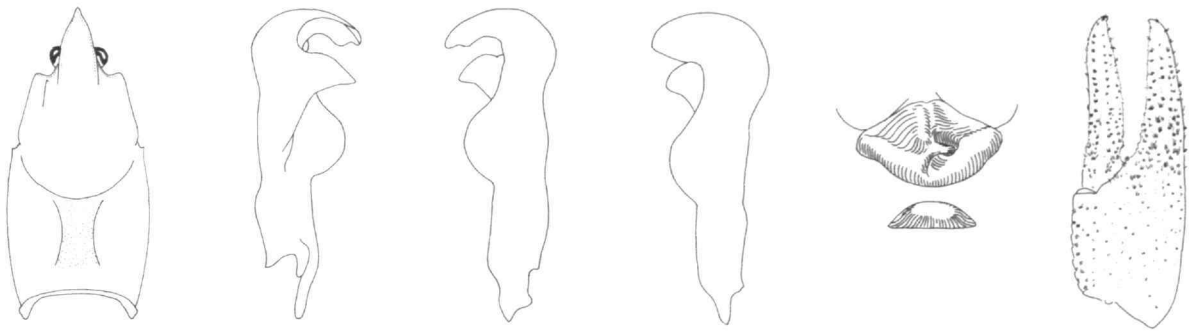


74. Cambarus (Puncticambarus) acuminatus

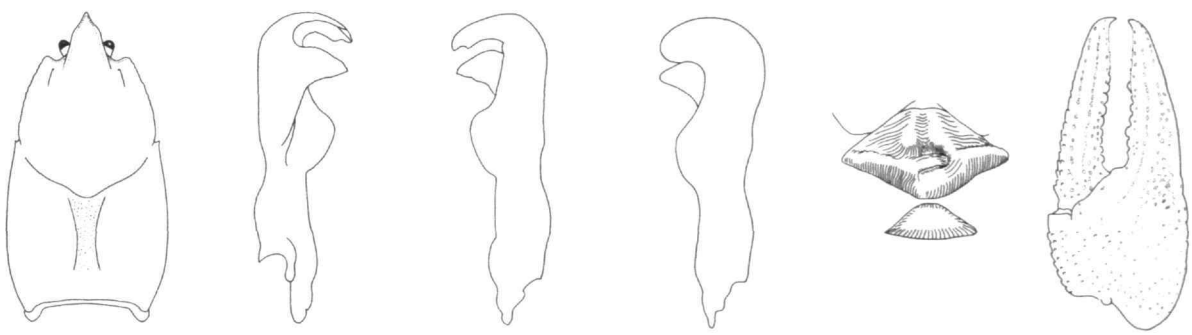


75. Cambarus (Puncticambarus) chaugaensis

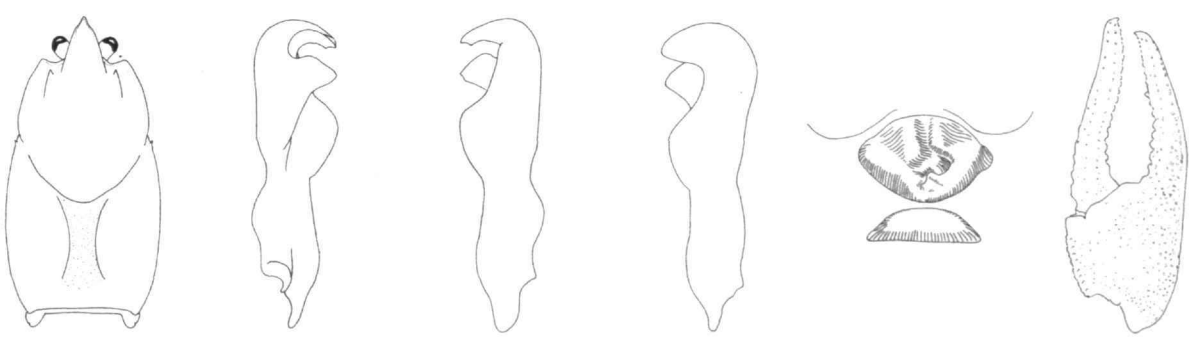
FIGURES 72–75



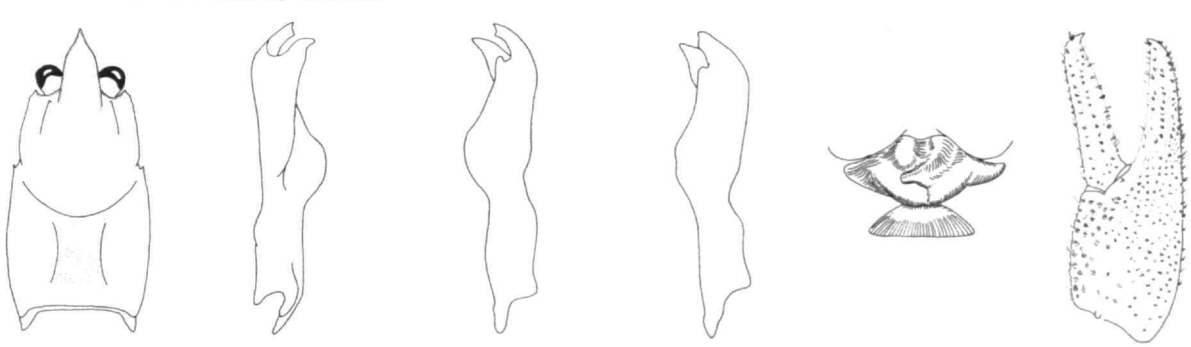
76. Cambarus (Puncticambarus) reburrus



77. Cambarus (Puncticambarus) robustus

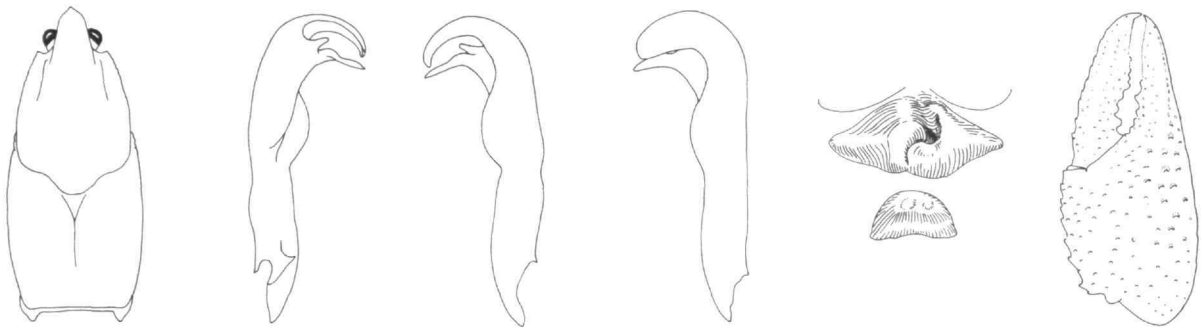


78. Cambarus (Puncticambarus) veteranus

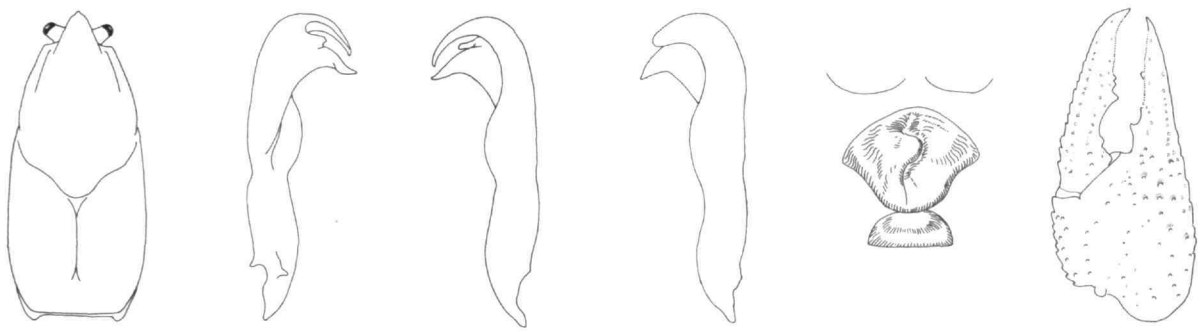


79. Cambarus (Veticambarus) pristinus

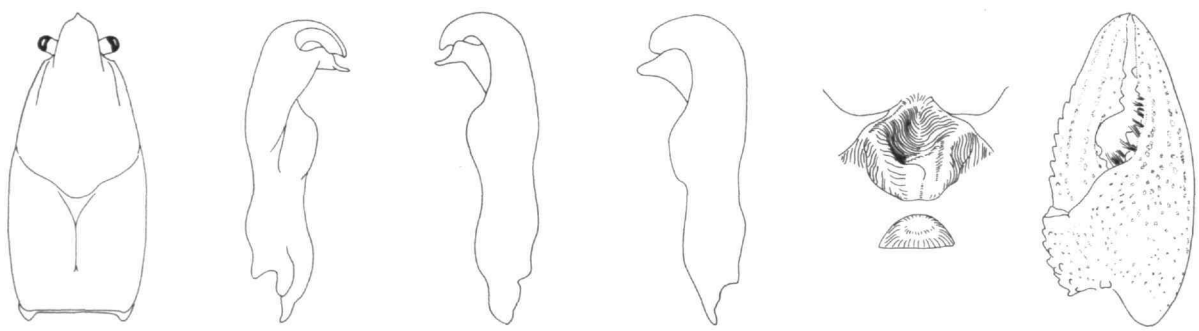
FIGURES 76–79



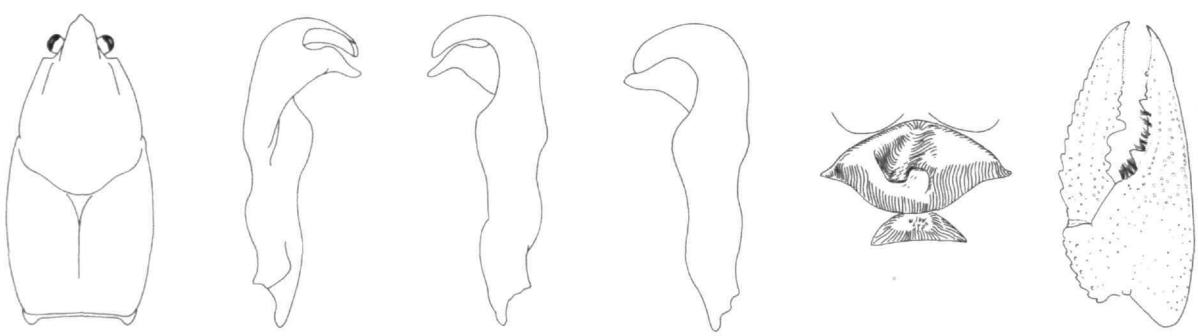
80. Fallicambarus macneesei



81. Fallicambarus strawni

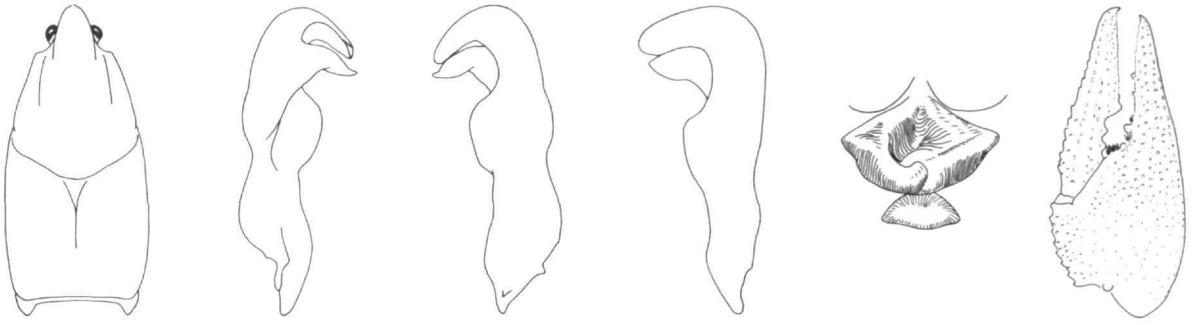


82. Fallicambarus fodiens

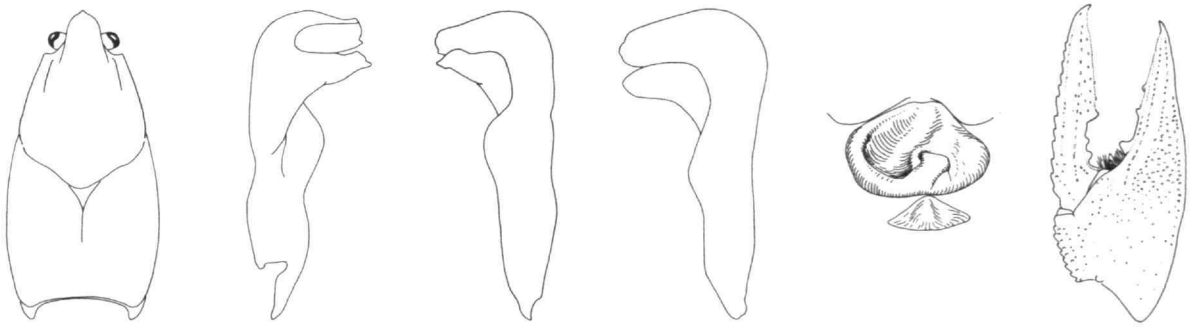


83. Fallicambarus hedgpethi

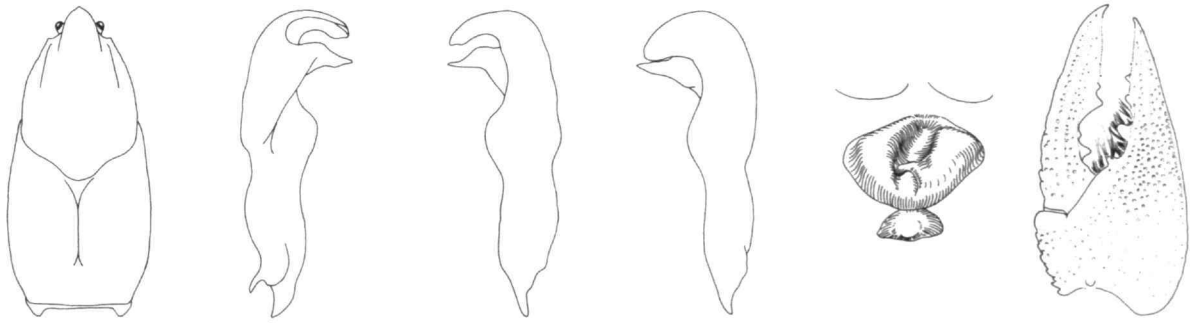
FIGURES 80–83



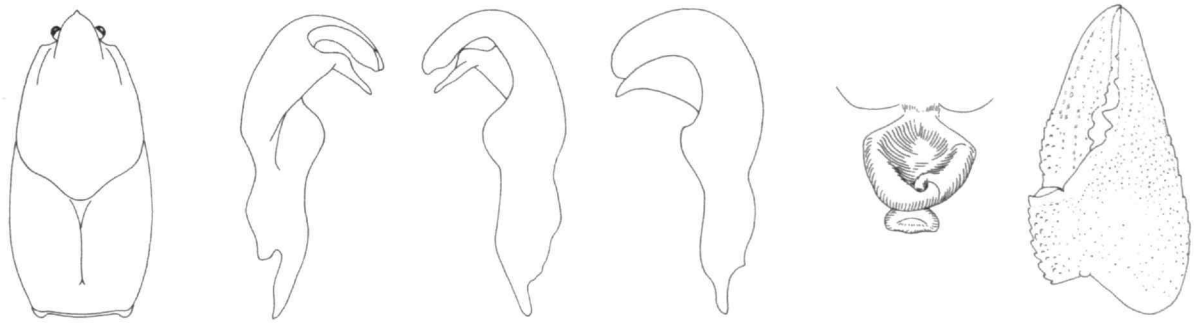
84. Fallicambarus uhleri



85. Fallicambarus hortoni

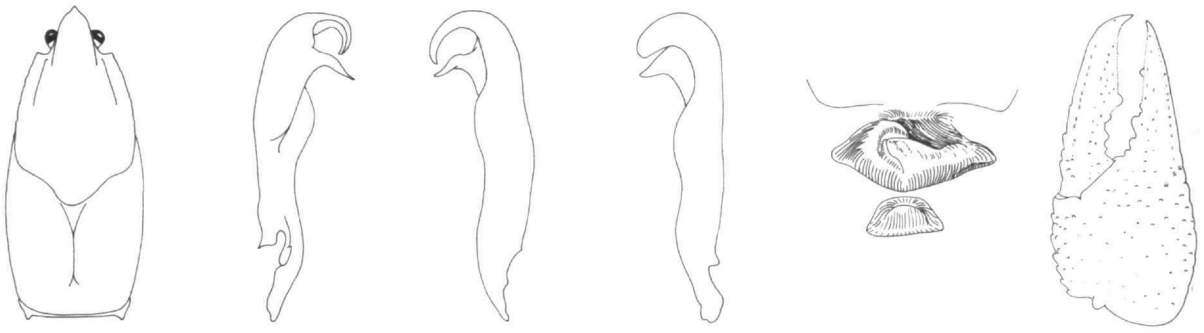


86. Fallicambarus oryktes

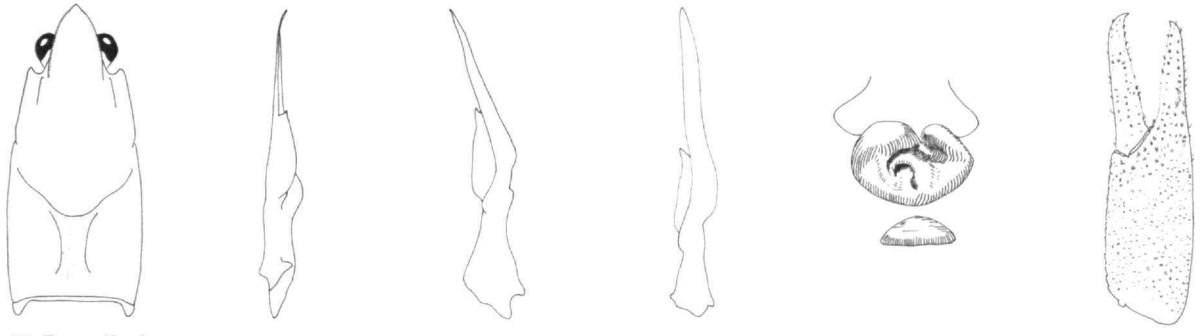


87. Fallicambarus byersi

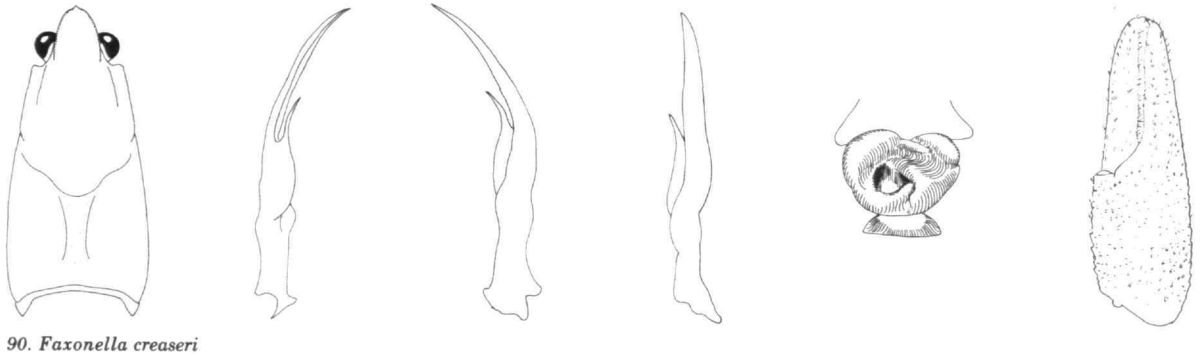
FIGURES 84–87



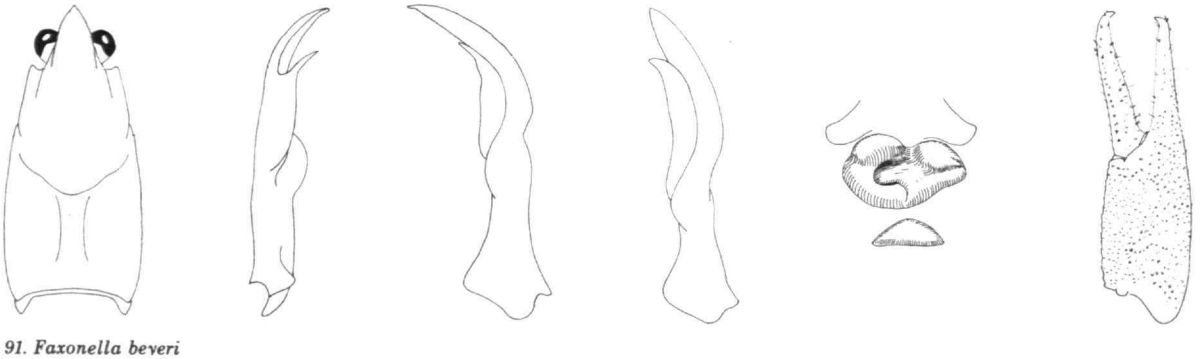
88. Fallicambarus dissitus



89. Faxonella clypeata

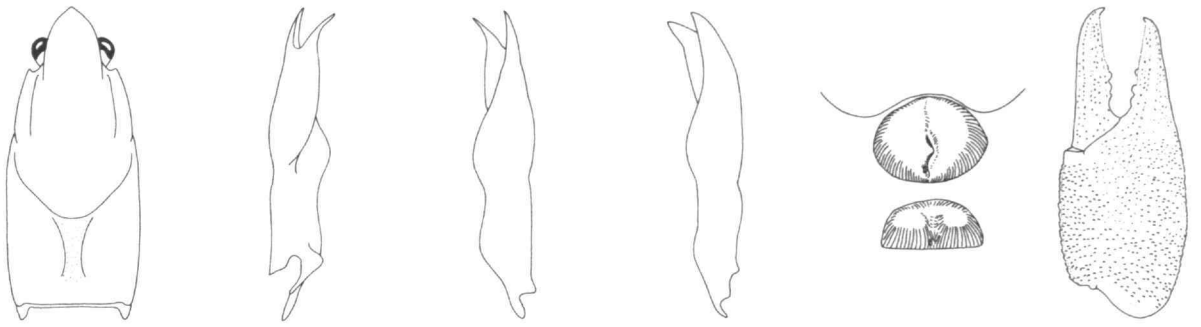


90. Faxonella creaseri

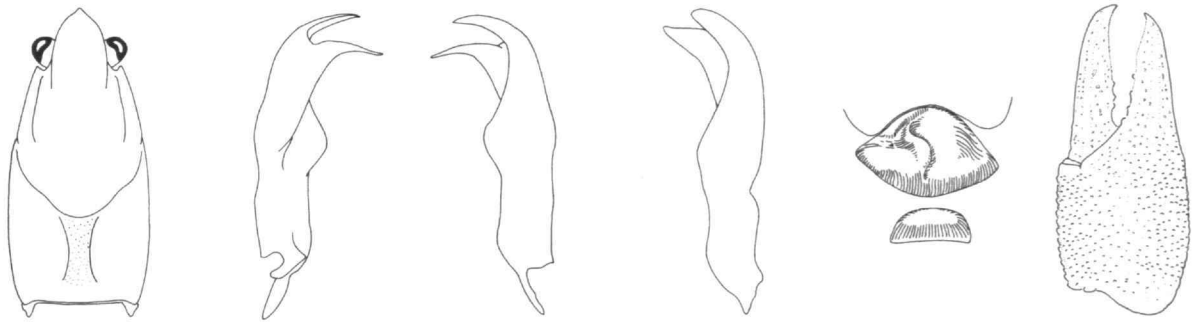


91. Faxonella beveri

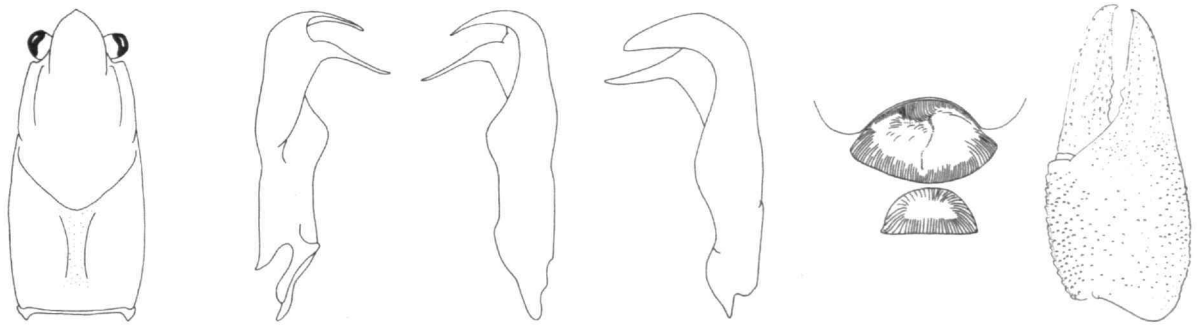
FIGURES 88–91



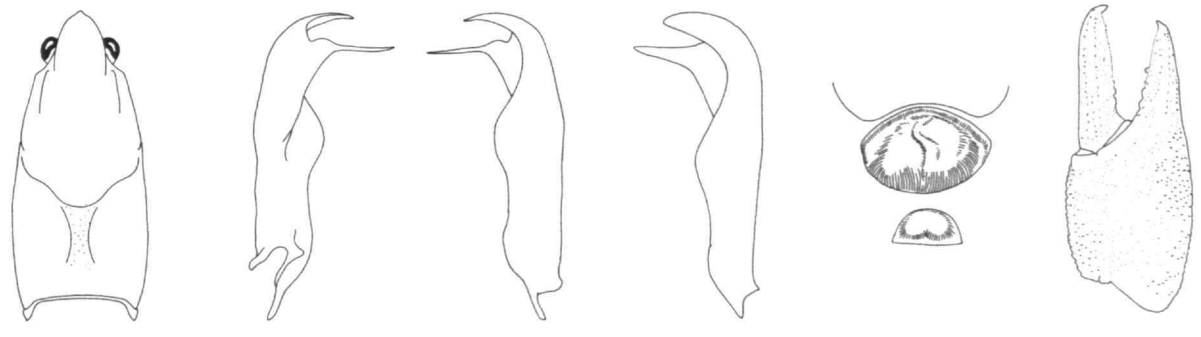
92. *Hobbseus orconectoides*



93. *Hobbseus cristatus*

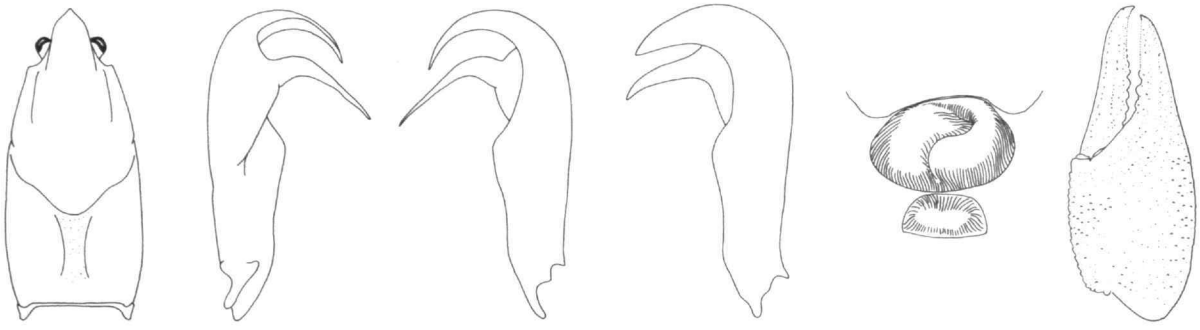


94. *Hobbseus prominens*

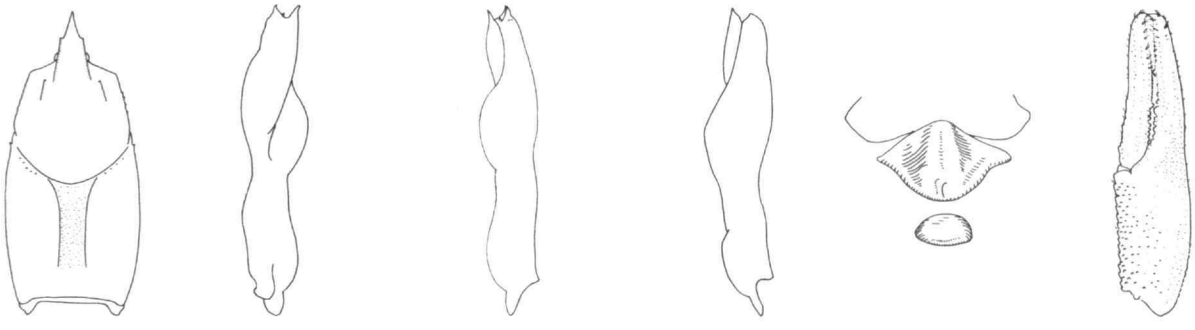


95. *Hobbseus attenuatus*

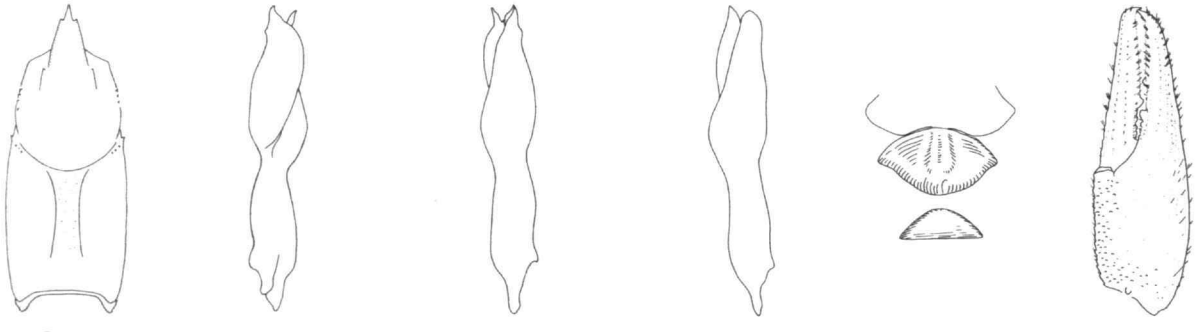
FIGURES 92–95



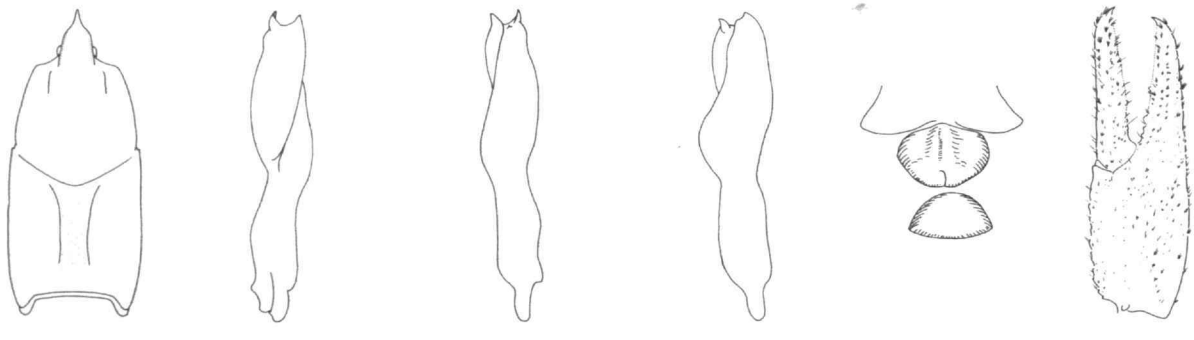
96. Hobbseus valleculus



97. Orconectes australis australis

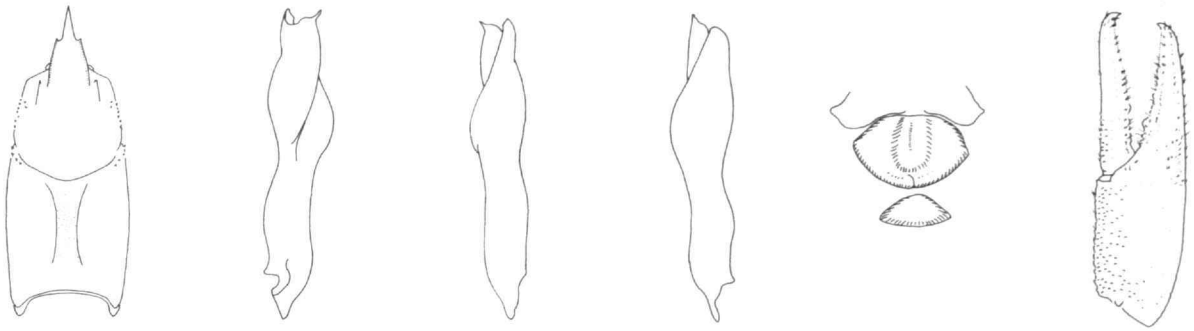


98. Orconectes australis packardi

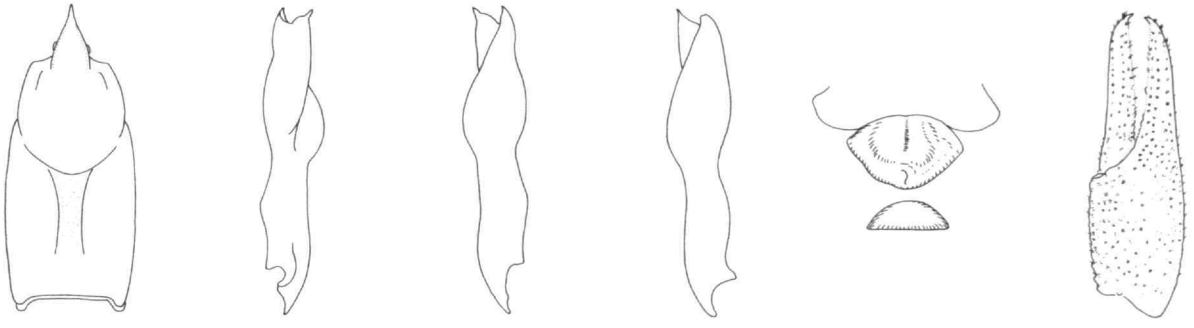


99. Orconectes incomptus

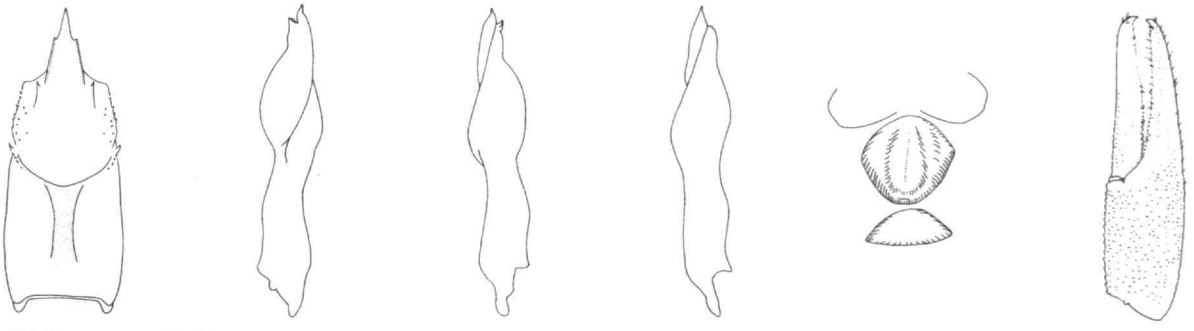
FIGURES 96–99



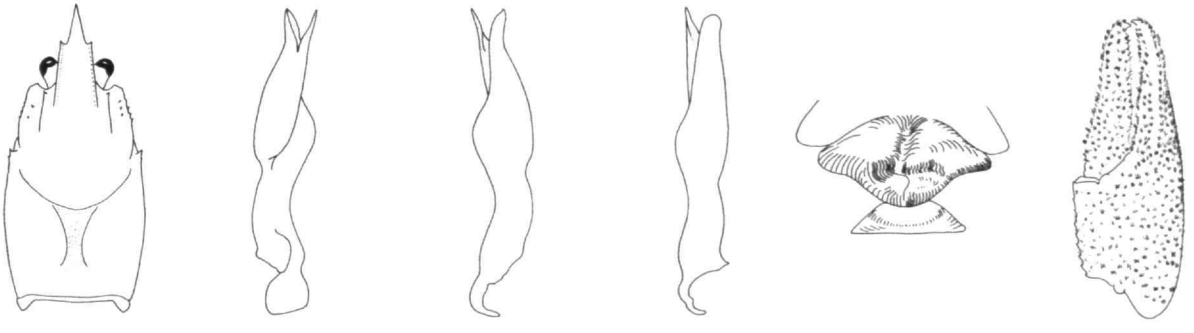
100. Orconectes inermis inermis



101. Orconectes inermis testii

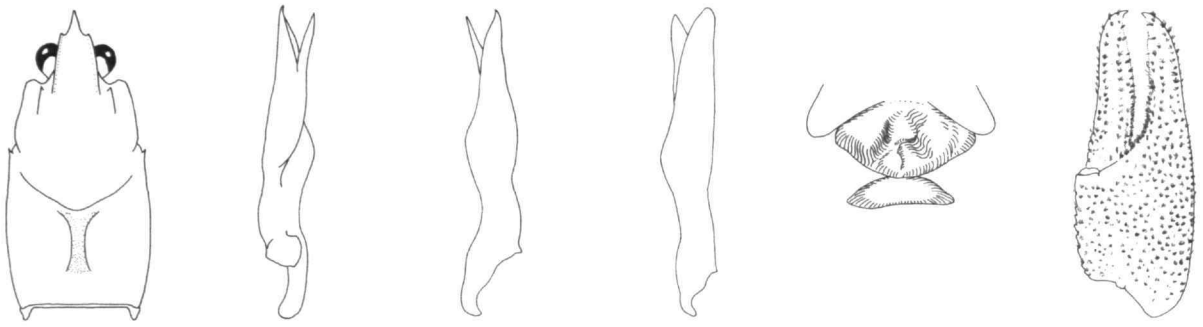


102. Orconectes pellucidus

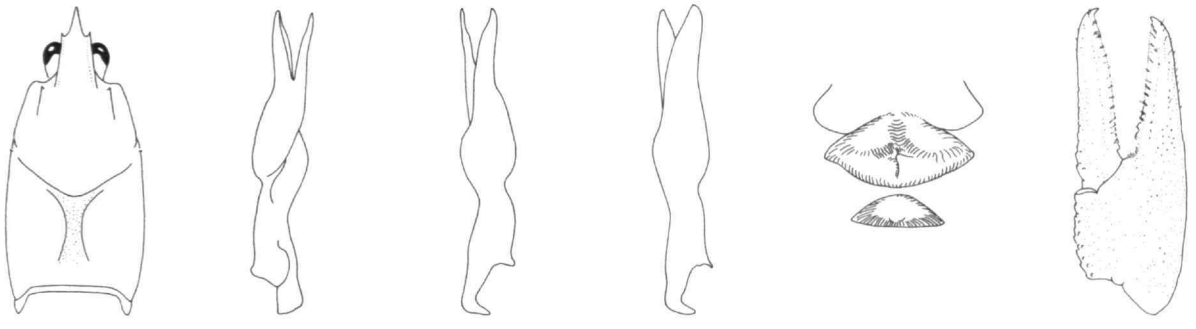


103. Orconectes limosus

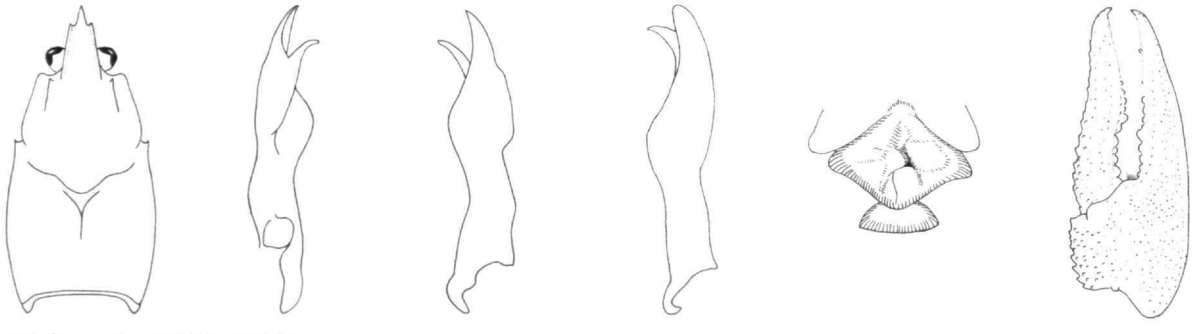
FIGURES 100–103



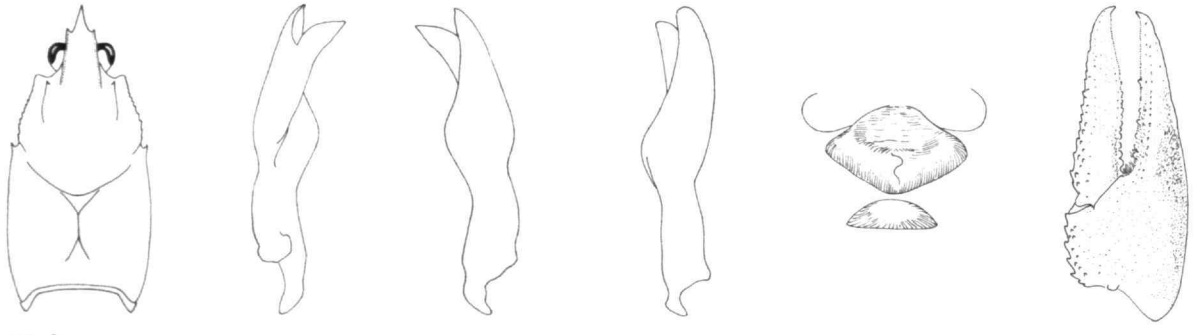
104. Orconectes wrighti



105. Orconectes indianensis

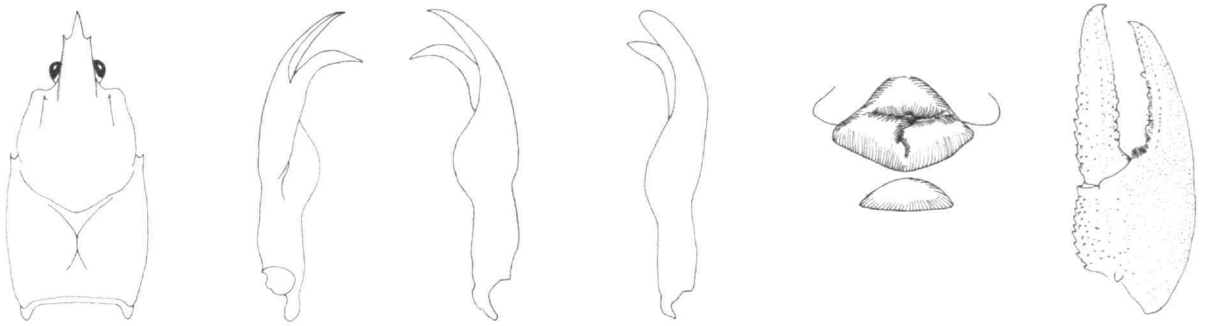


106. Orconectes difficilis difficilis

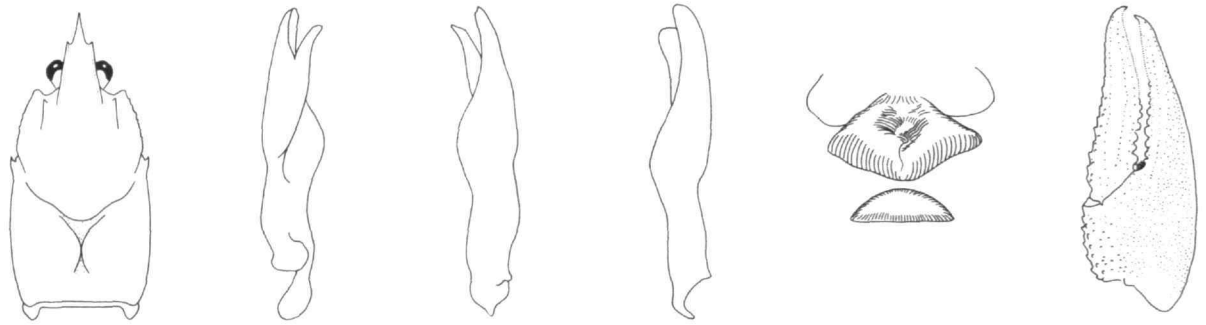


107. Orconectes difficilis blacki

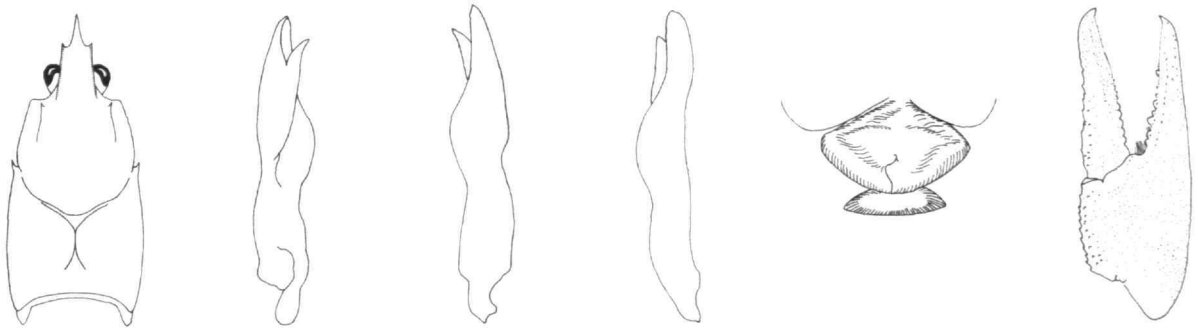
FIGURES 104–107



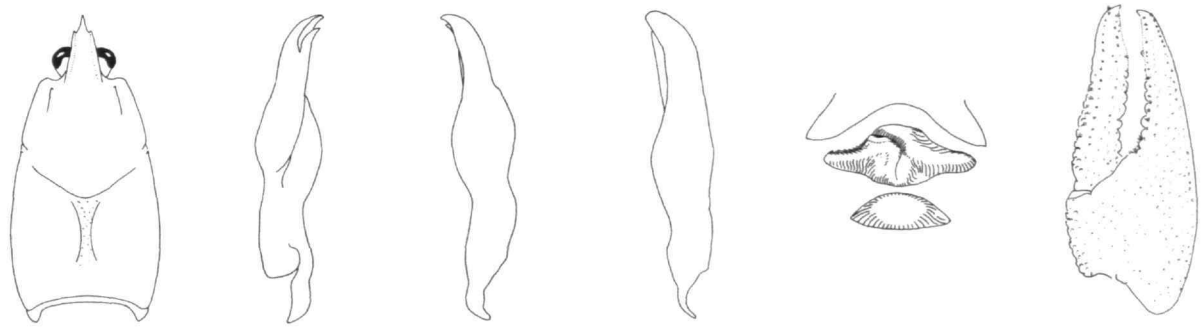
108. Orconectes difficilis maletae



109. Orconectes difficilis hathawayi

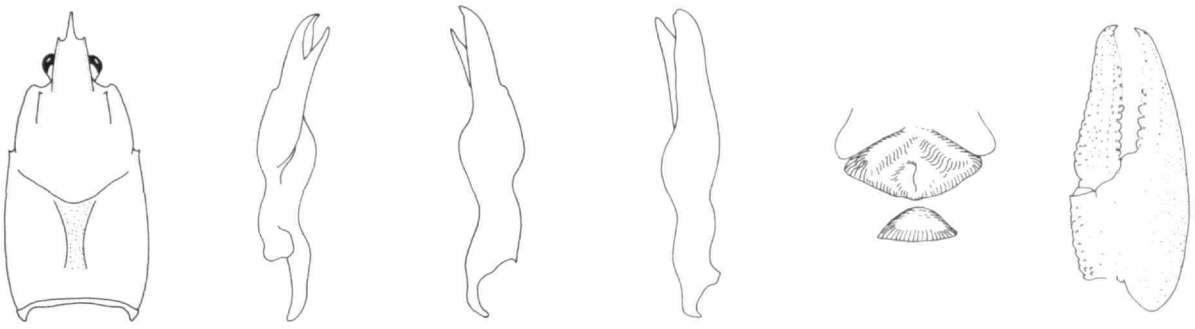


110. Orconectes perfectus

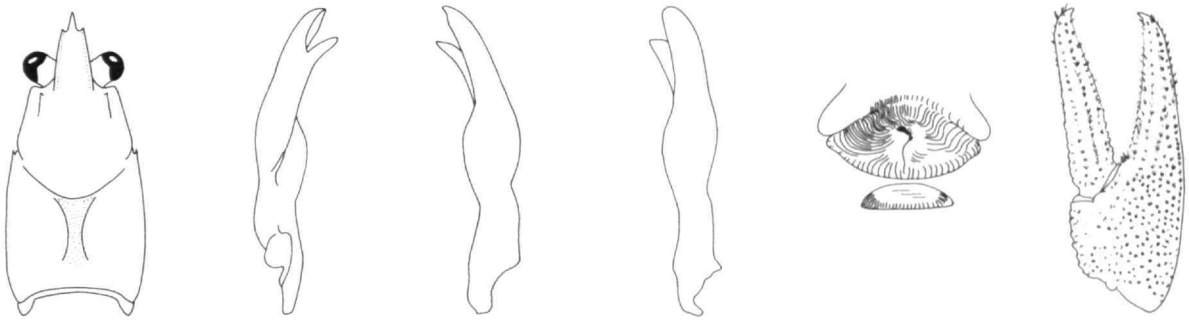


111. Orconectes harrisonii

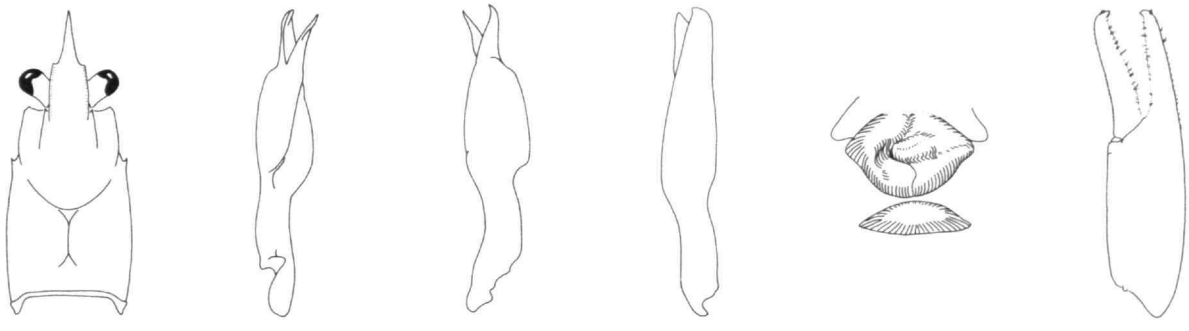
FIGURES 108–111



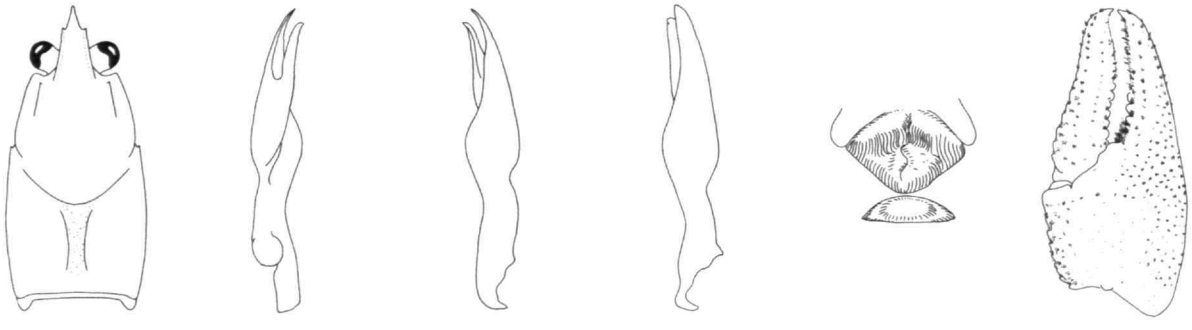
112. Orconectes sloanii



113. Orconectes kentuckiensis

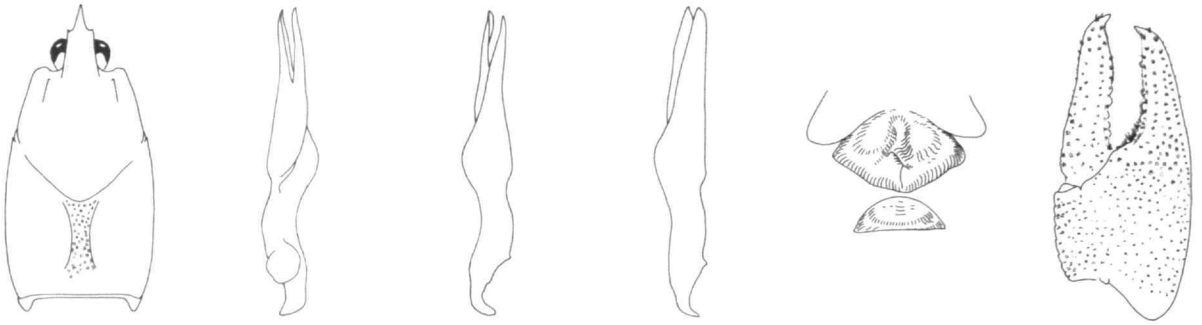


114. Orconectes lancifer

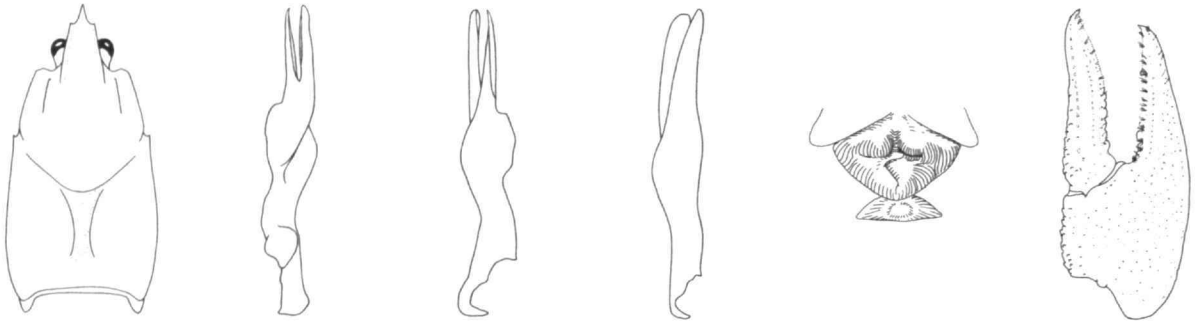


115. Orconectes marchandi

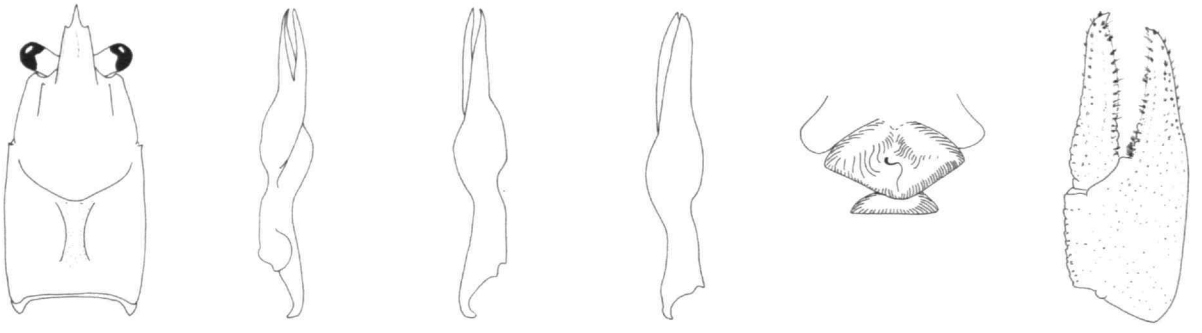
FIGURES 112–115



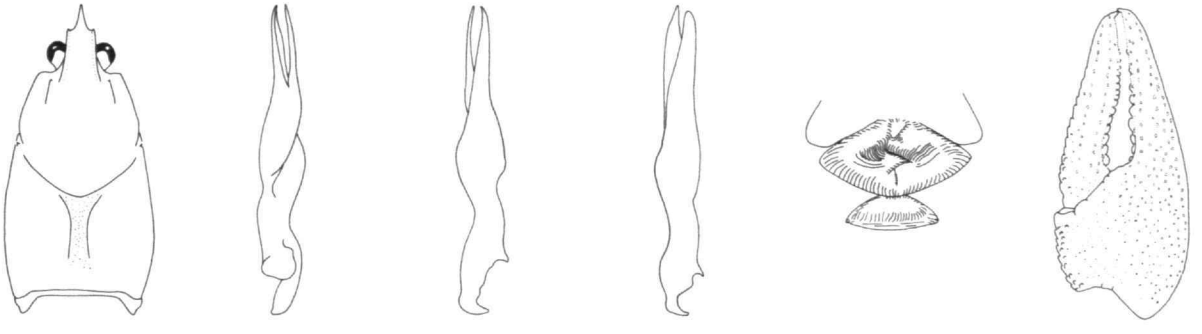
116. Orconectes eupunctus



117. Orconectes obscurus

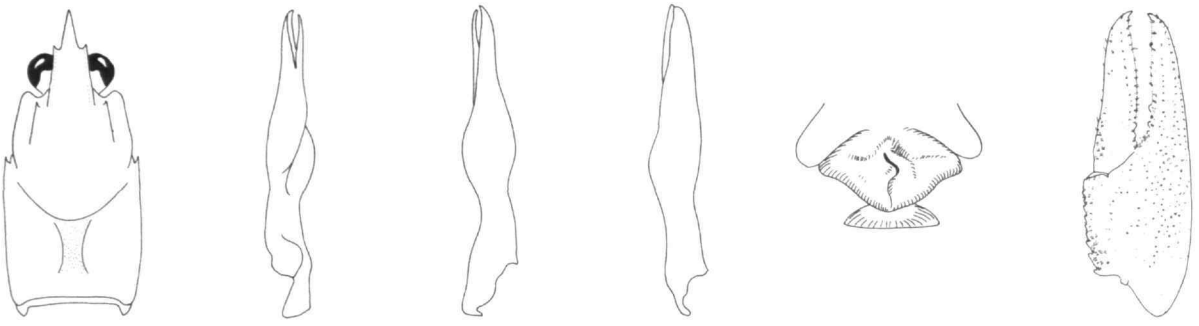


118. Orconectes propinquus

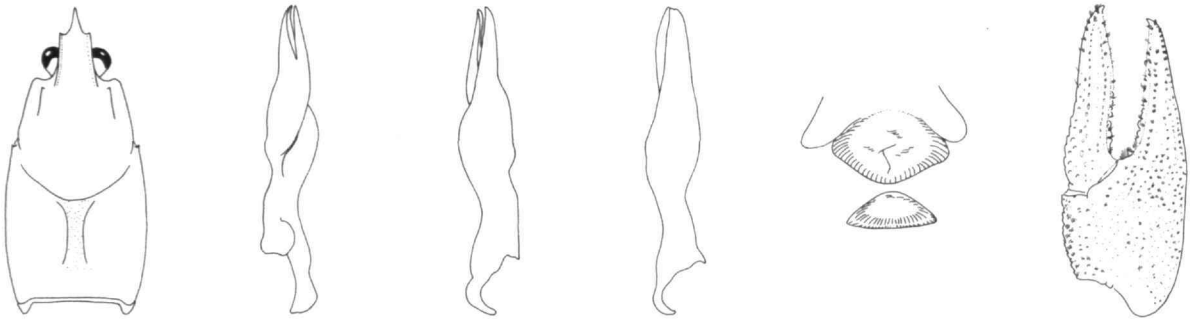


119. Orconectes jeffersoni

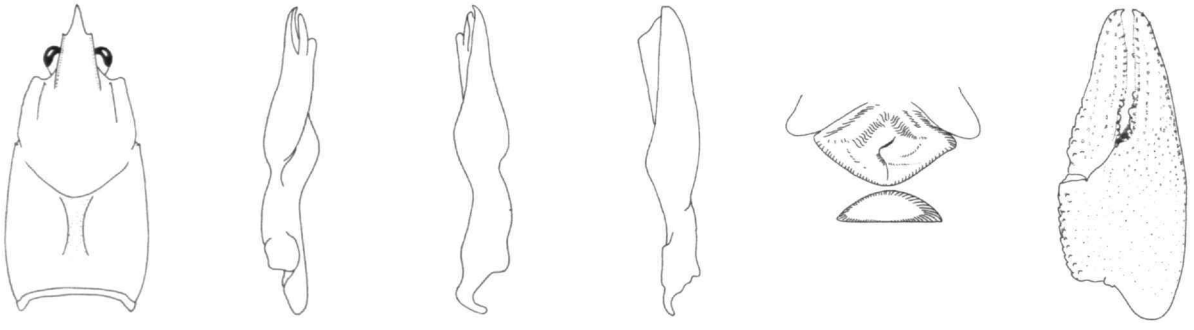
FIGURES 116–119



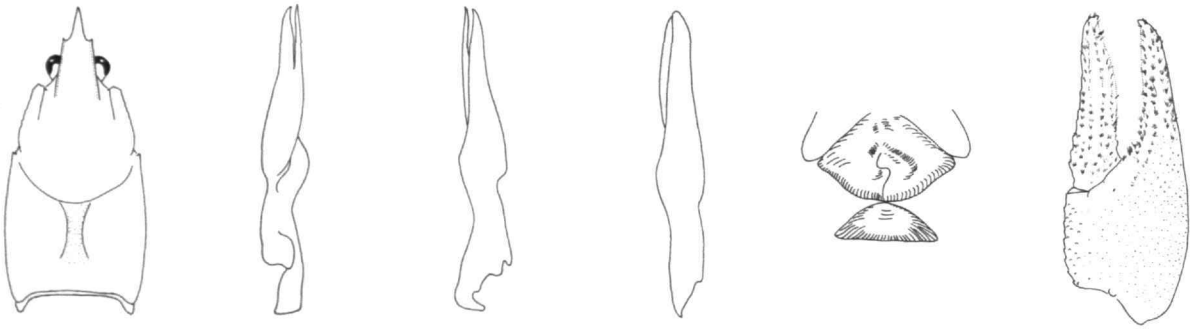
120. Orconectes virginiensis



121. Orconectes sanbornii sanbornii

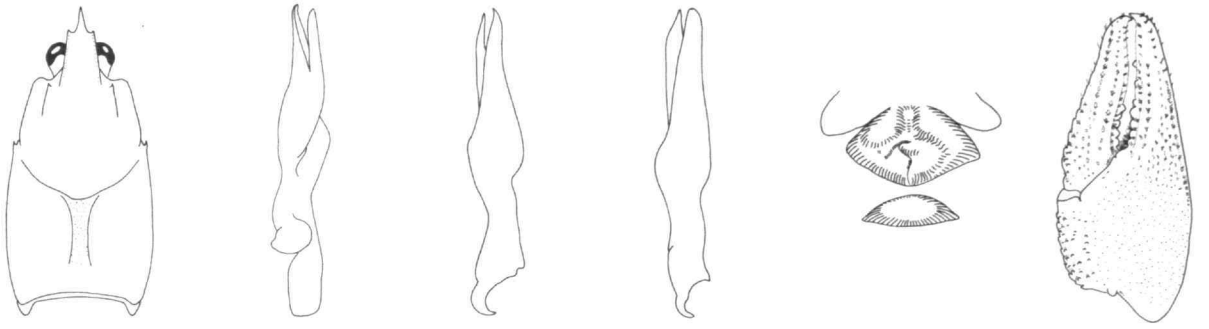


122. Orconectes sanbornii erismophorous

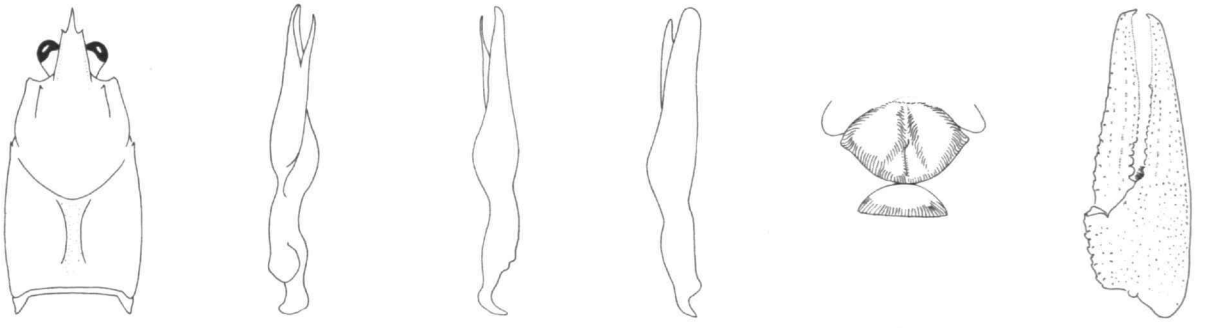


123. Orconectes erichsonianus

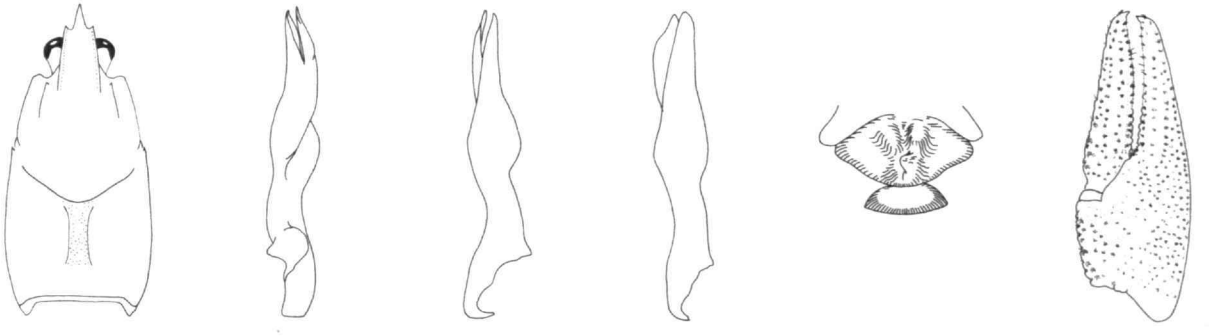
FIGURES 120–123



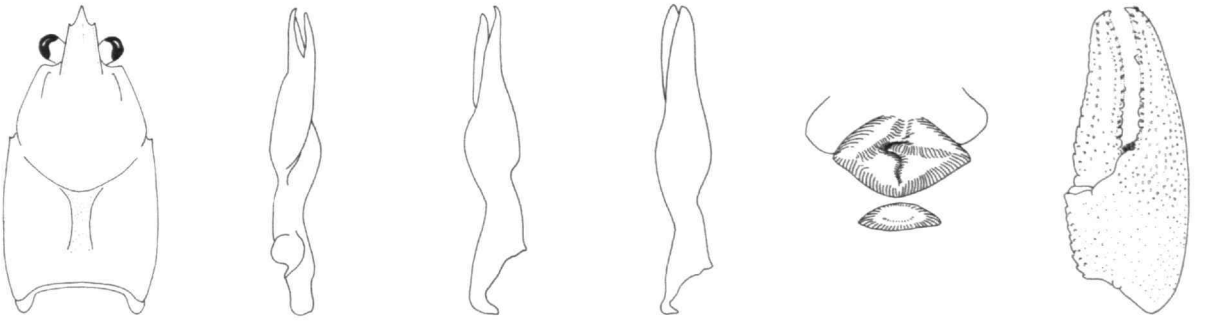
124. Orconectes rafinesquei



125. Orconectes bisectus

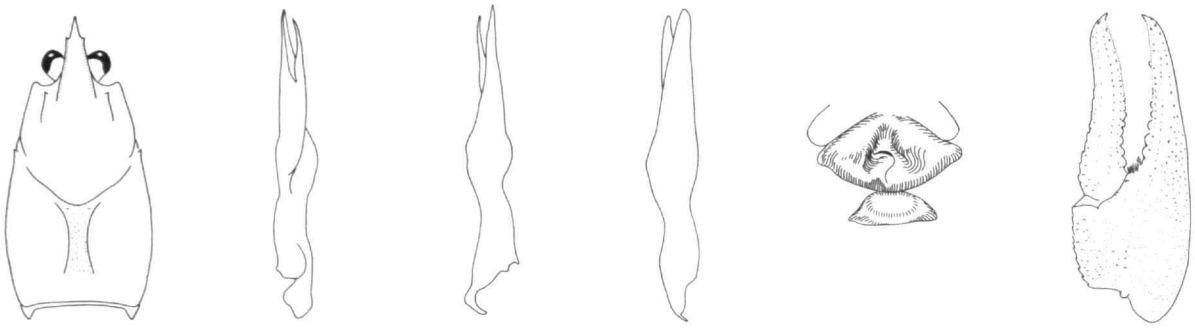


126. Orconectes tricuspis

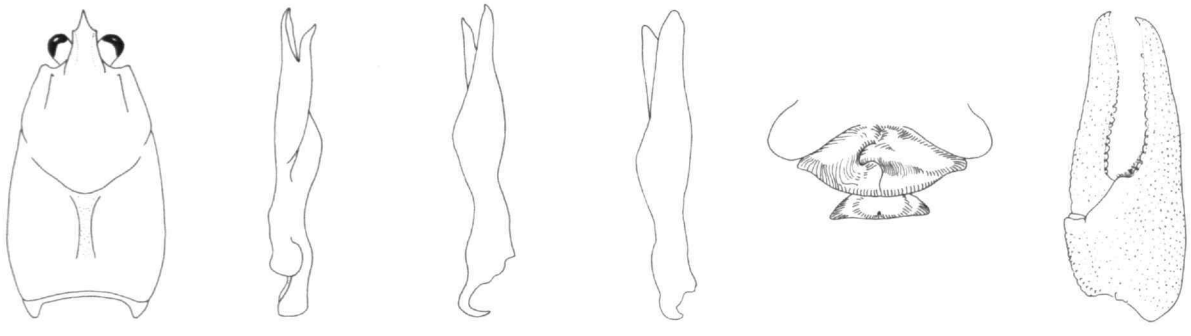


127. Orconectes iowaensis

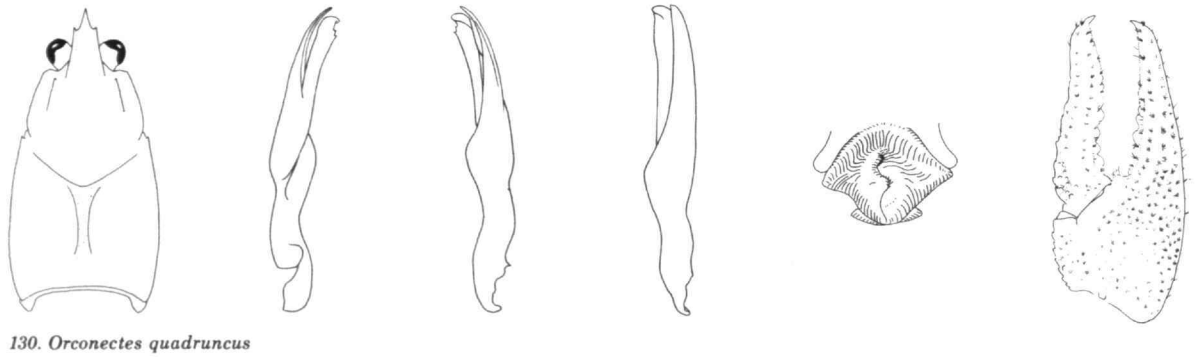
FIGURES 124–127



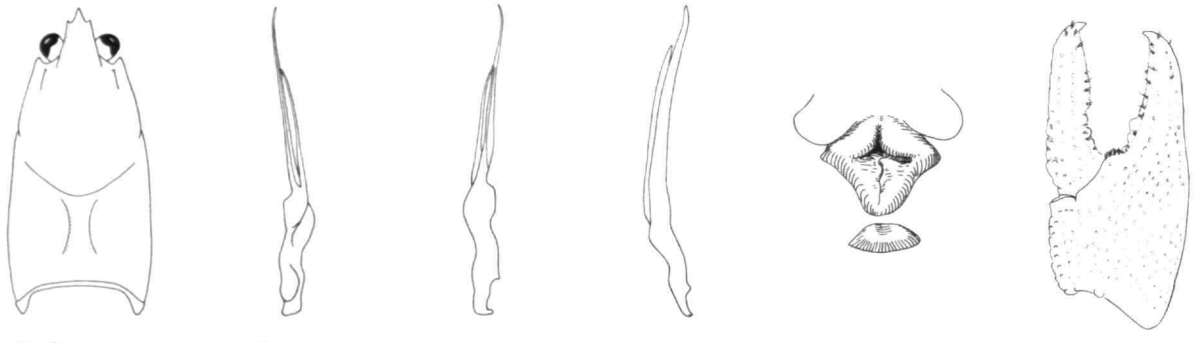
128. Orconectes illinoiensis



129. Orconectes shoupi

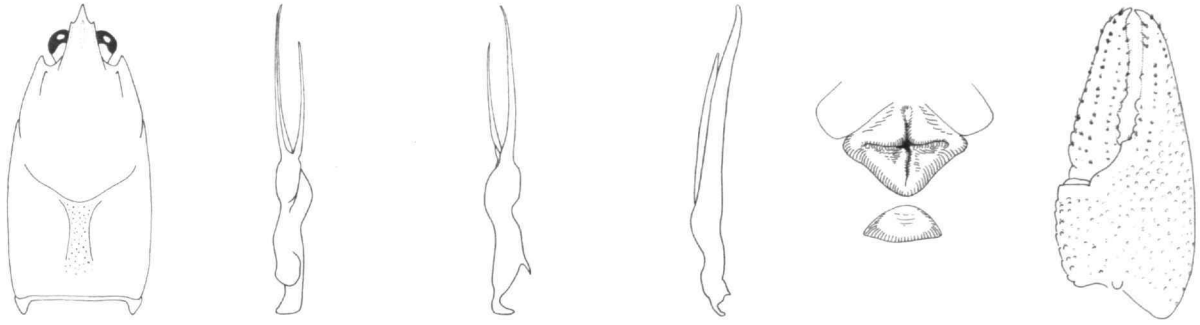


130. Orconectes quadruncus

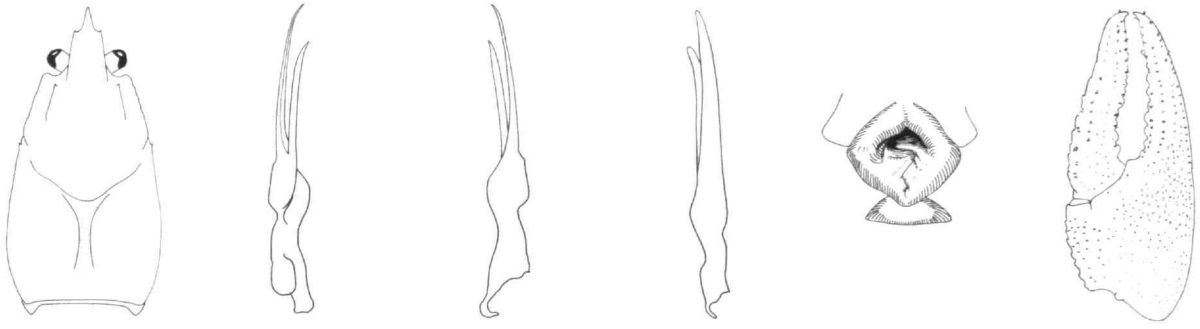


131. Orconectes leptogonopodus

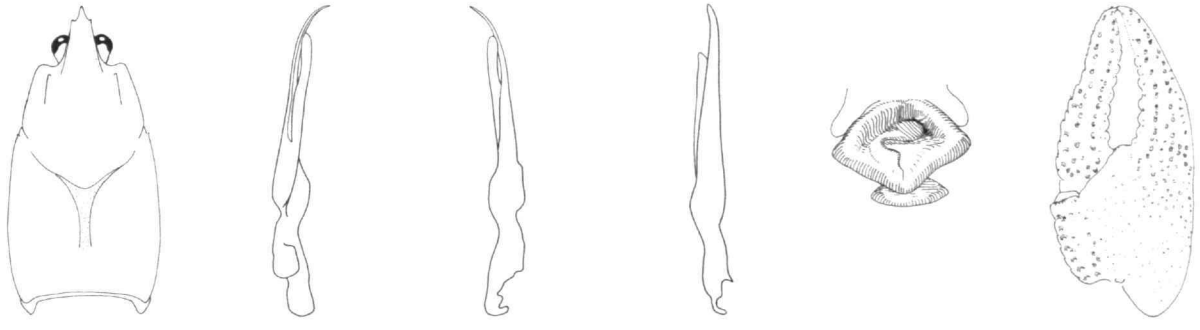
FIGURES 128–131



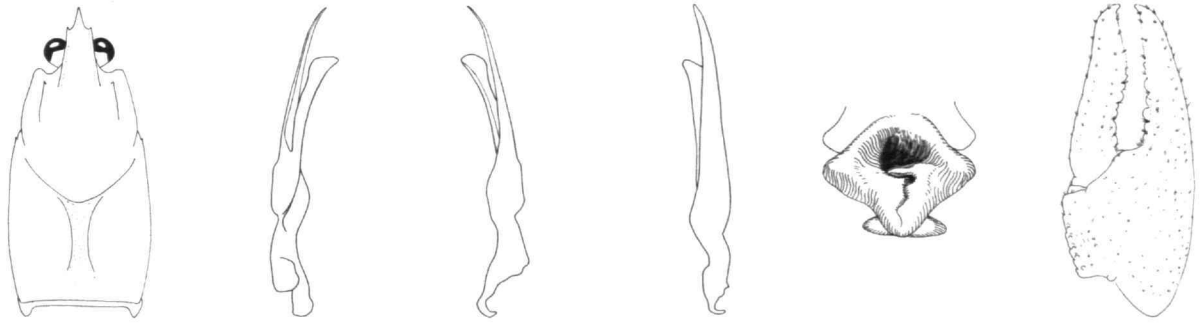
132. Orconectes acares



133. Orconectes punctimanus

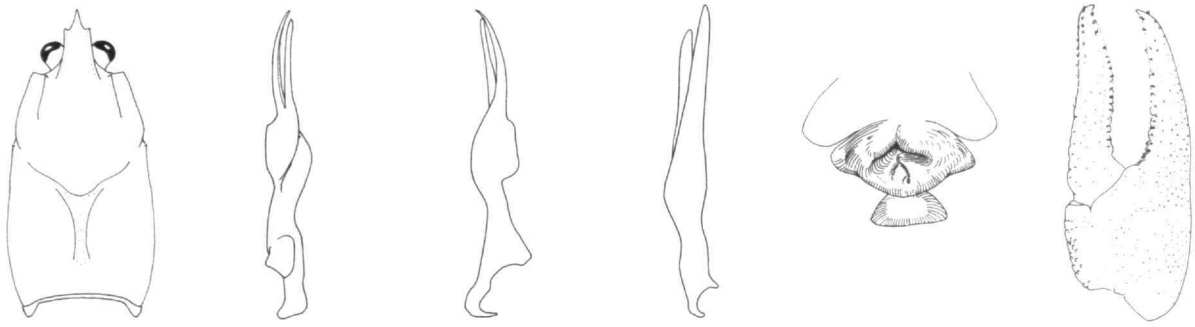


134. Orconectes hylas

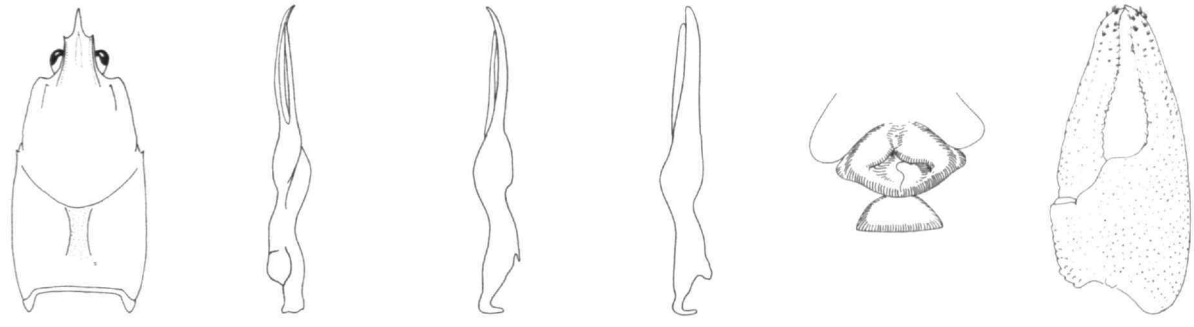


135. Orconectes peruncus

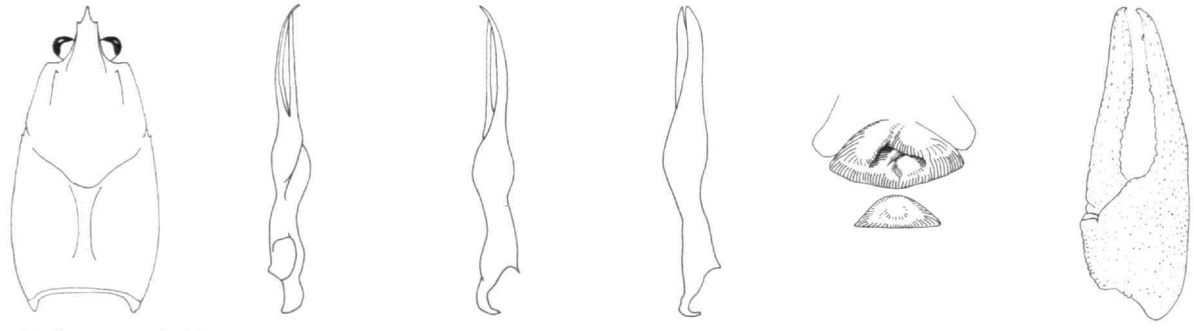
FIGURES 132–135



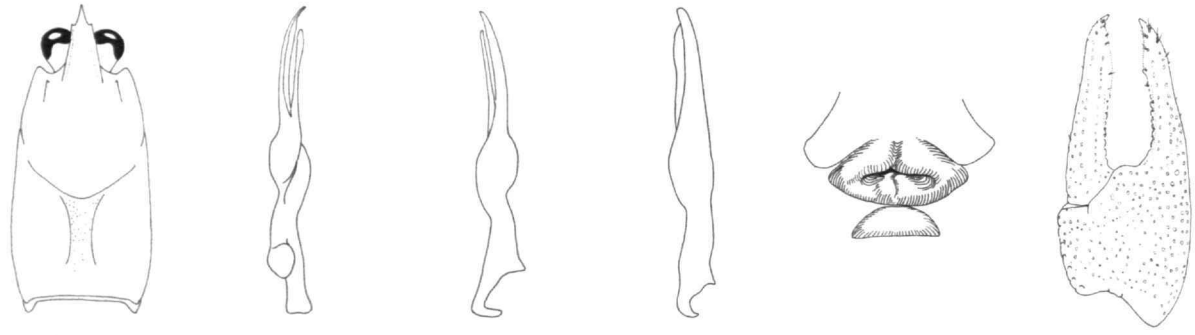
136. Orconectes rusticus



137. Orconectes forceps

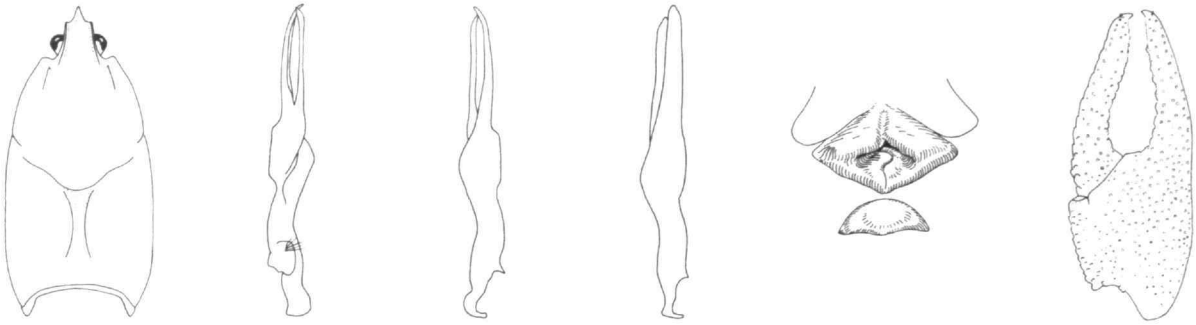


138. Orconectes placidus

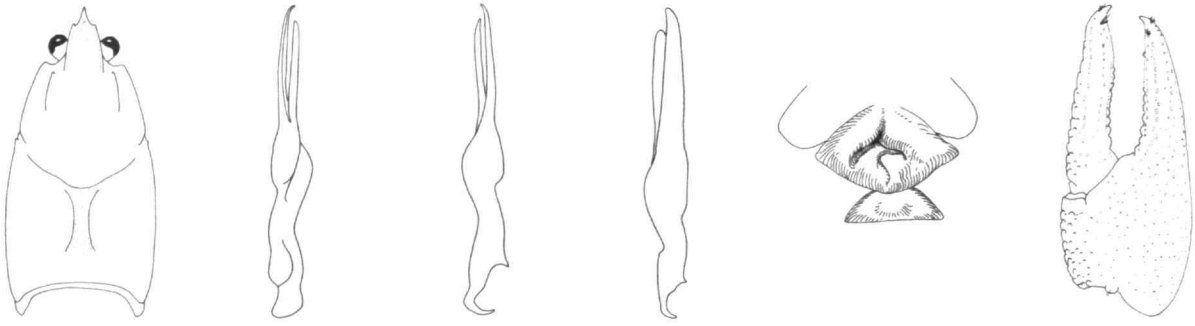


139. Orconectes barrenensis

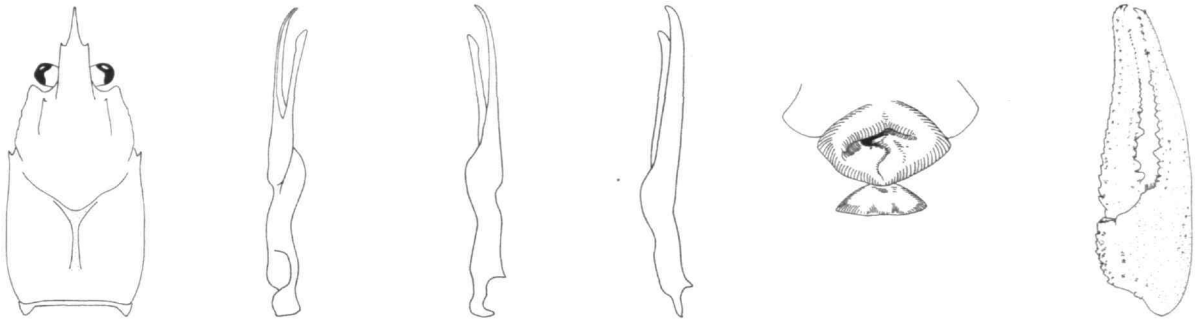
FIGURES 136–139



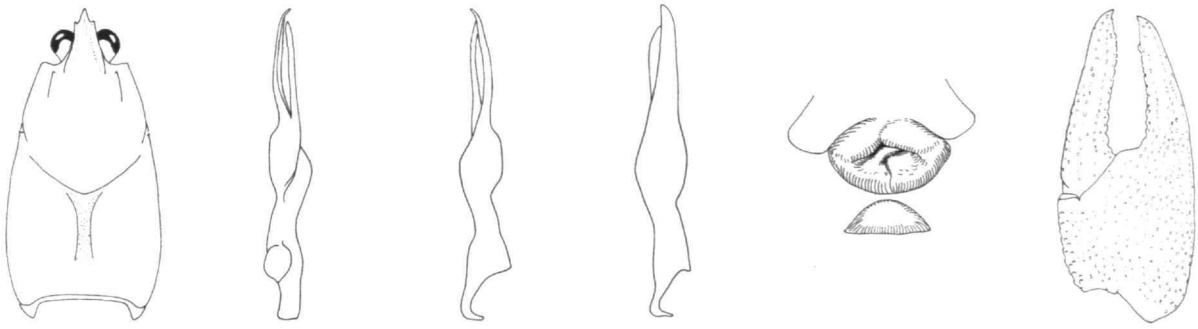
140. Orconectes neglectus chaenodactylus



141. Orconectes neglectus neglectus

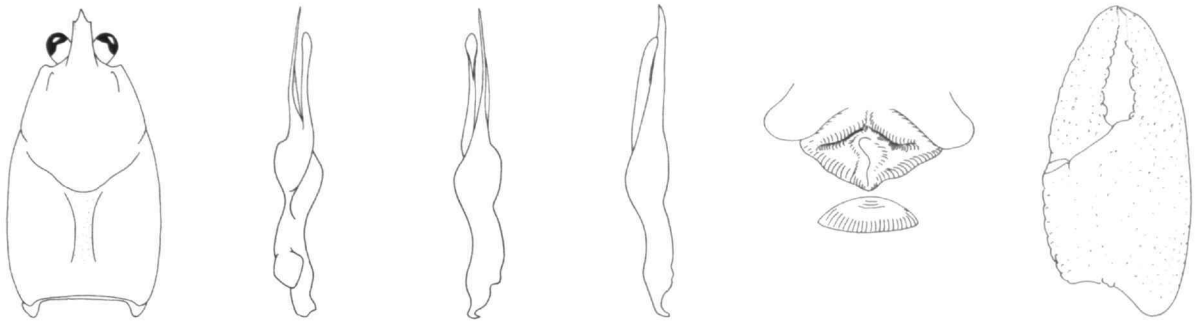


142. Orconectes longidigitus

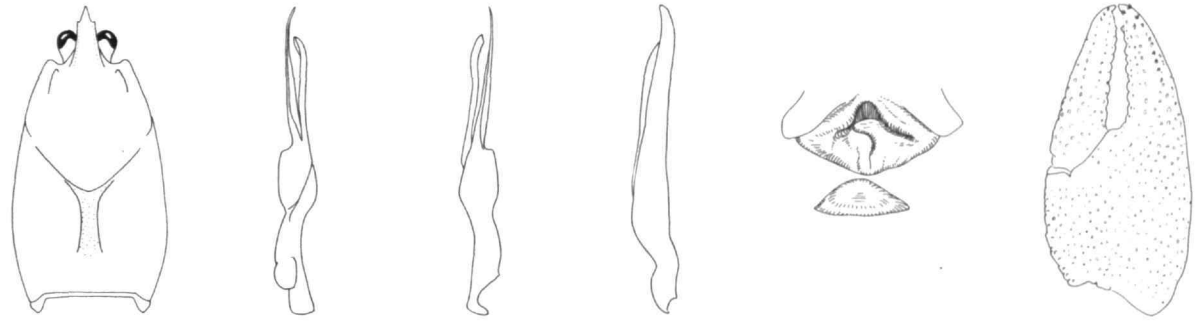


143. Orconectes mirus

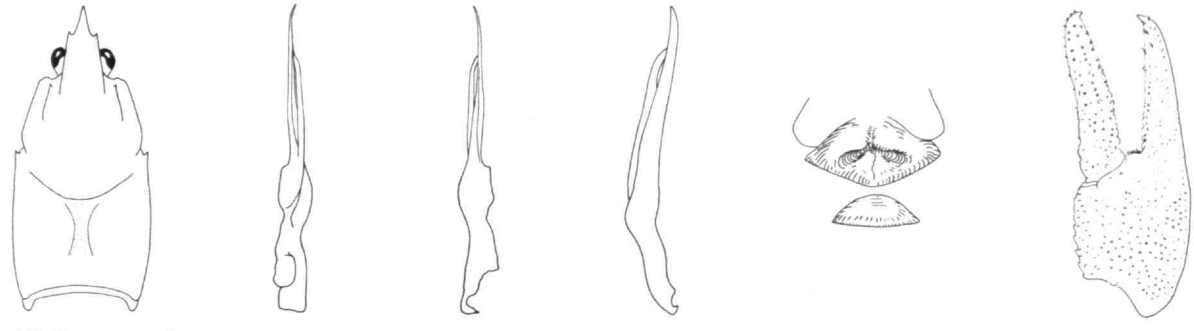
FIGURES 140–143



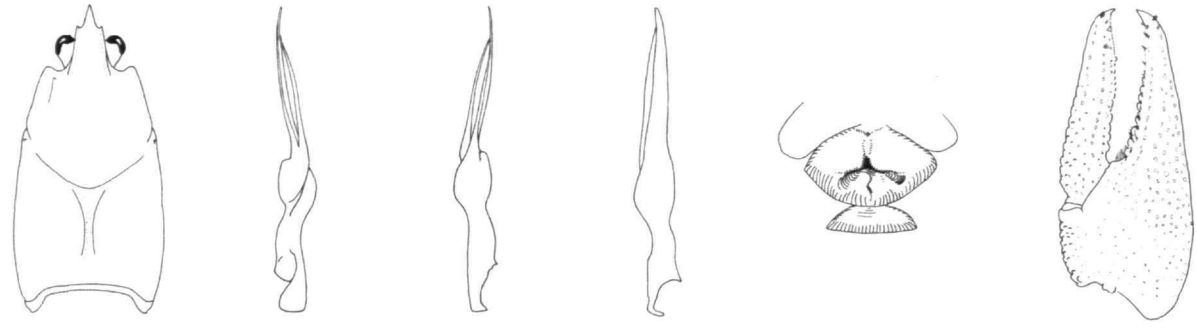
144. *Orconectes nana*



145. *Orconectes macrus*

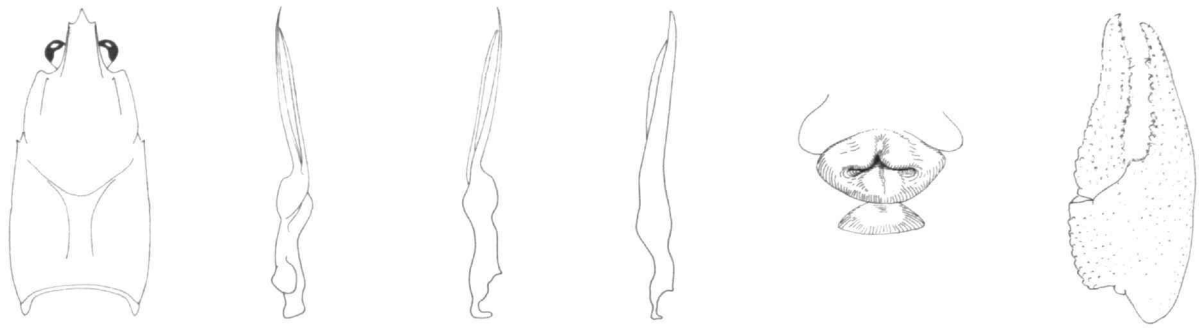


146. *Orconectes spinosus*

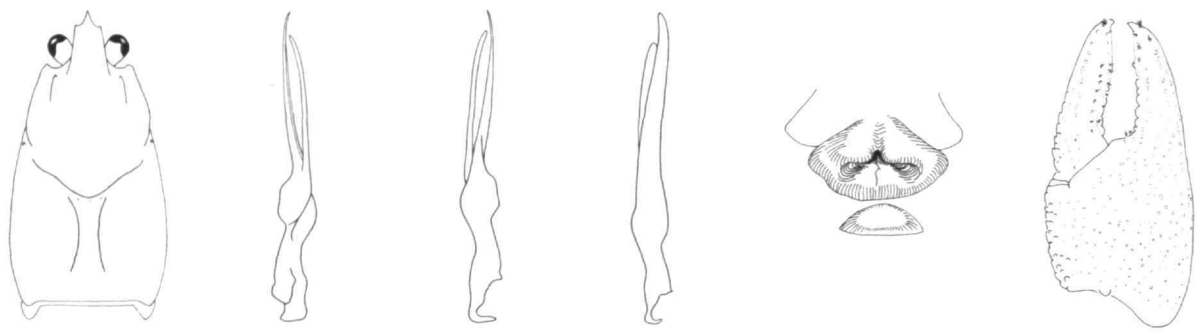


147. *Orconectes juvenilis*

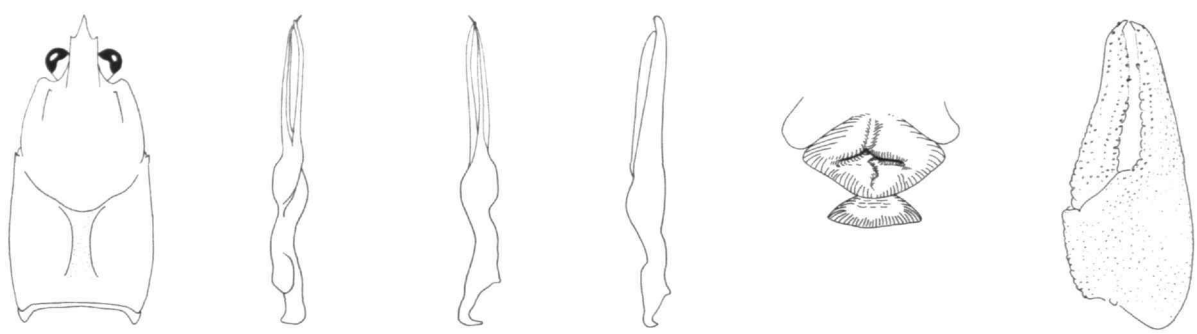
FIGURES 144–147



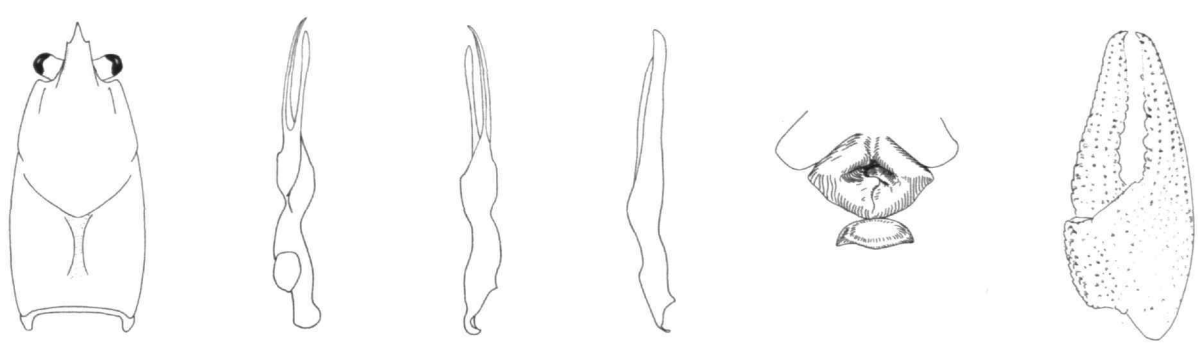
148. Orconectes putnami



149. Orconectes medius

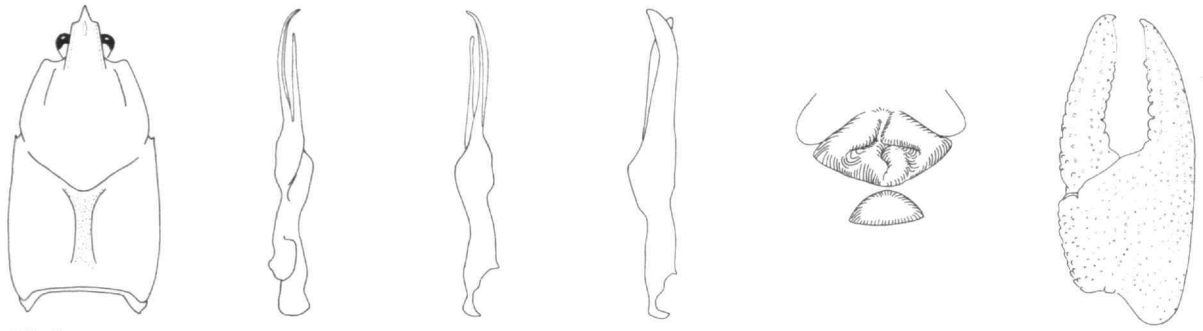


150. Orconectes luteus

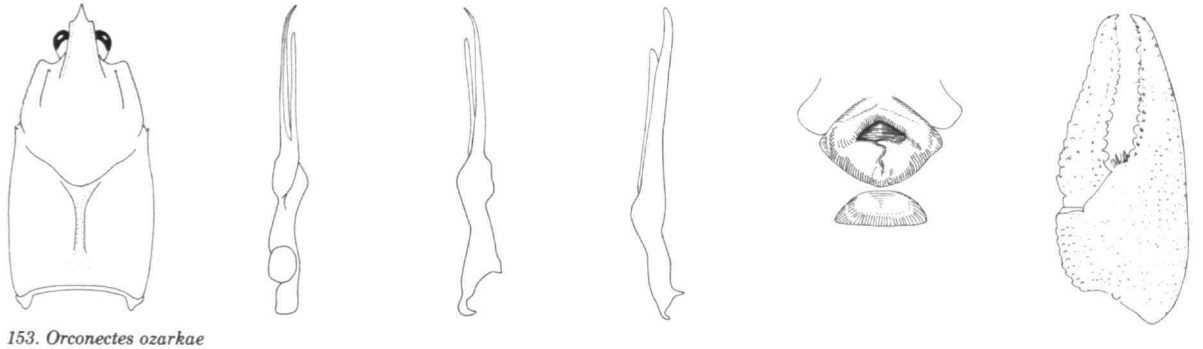


151. Orconectes menae

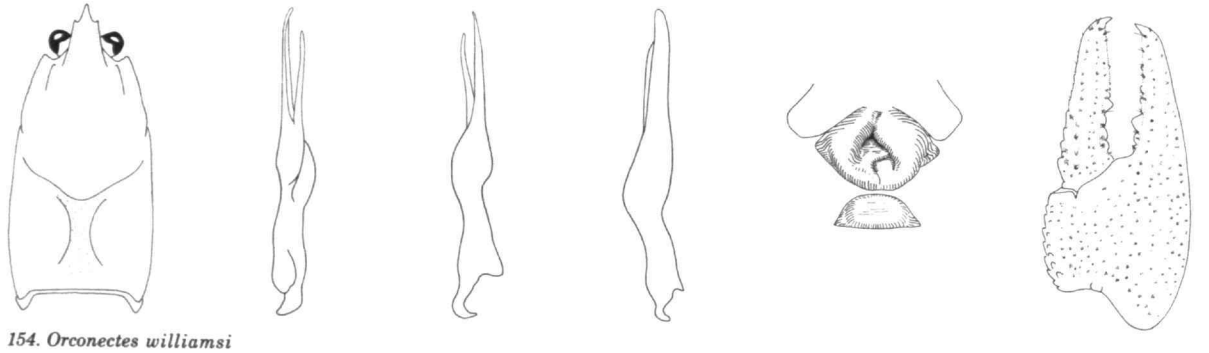
FIGURES 148–151



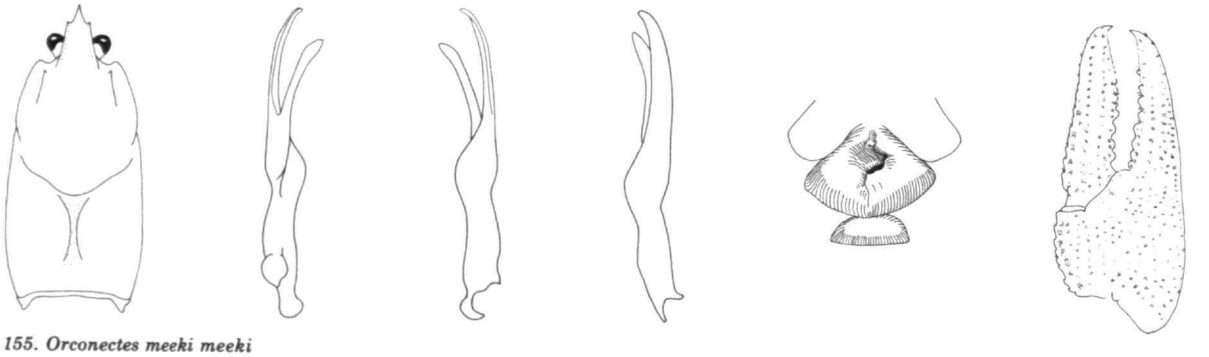
152. *Orconectes transfuga*



153. *Orconectes ozarkae*

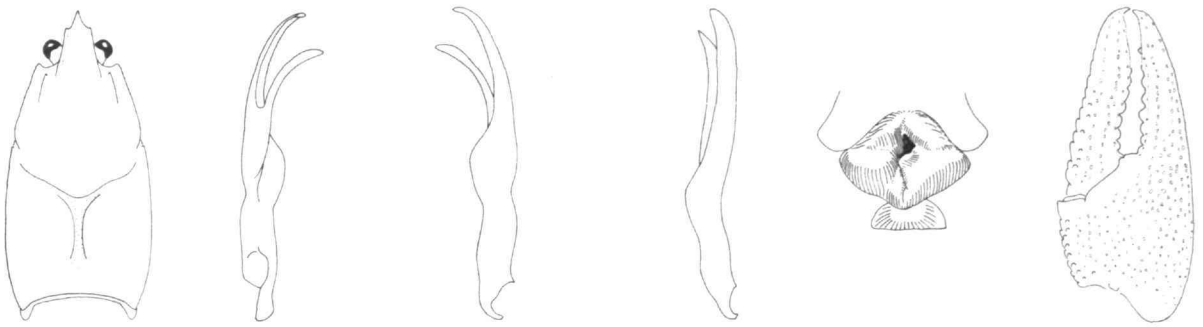


154. *Orconectes williamsi*

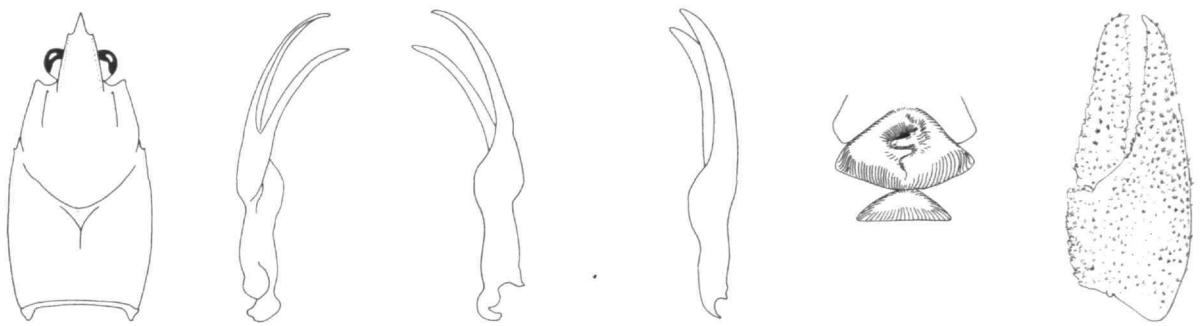


155. *Orconectes meeki meeki*

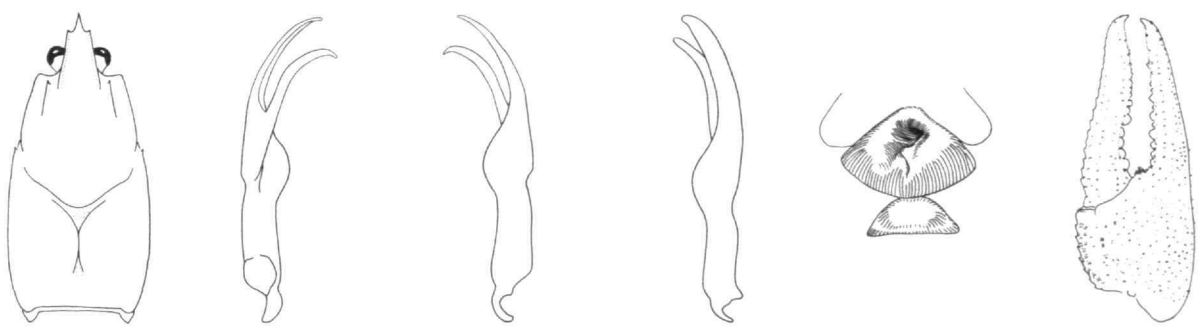
FIGURES 152–155



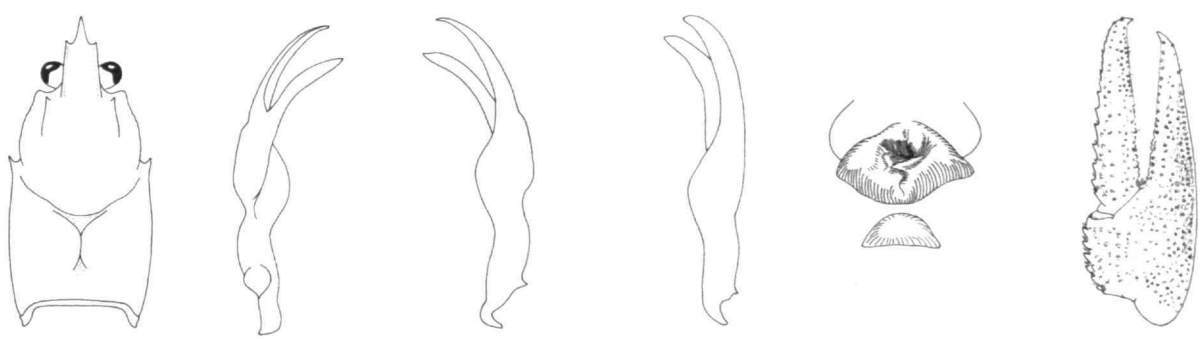
156. Orconectes meeki brevis



157. Orconectes palmeri palmeri

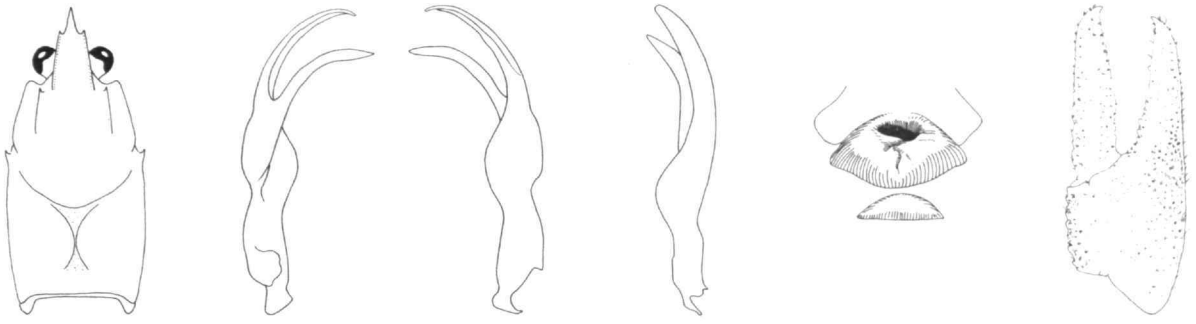


158. Orconectes palmeri longimanus

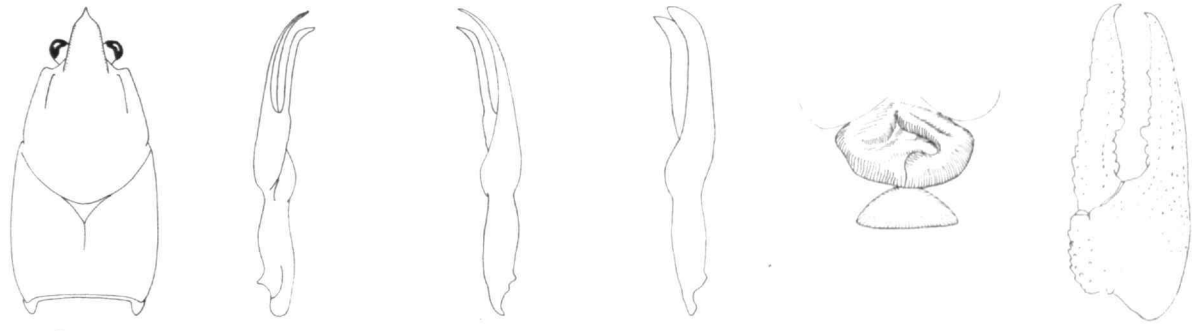


159. Orconectes palmeri creolanus

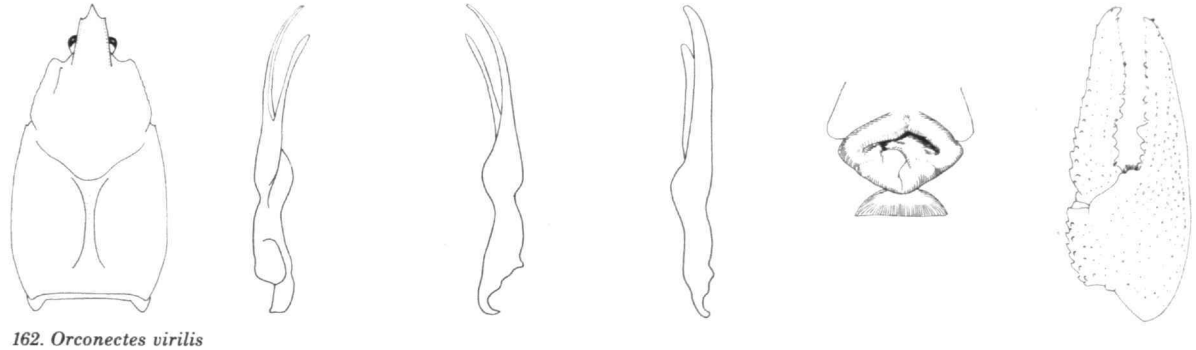
FIGURES 156–159



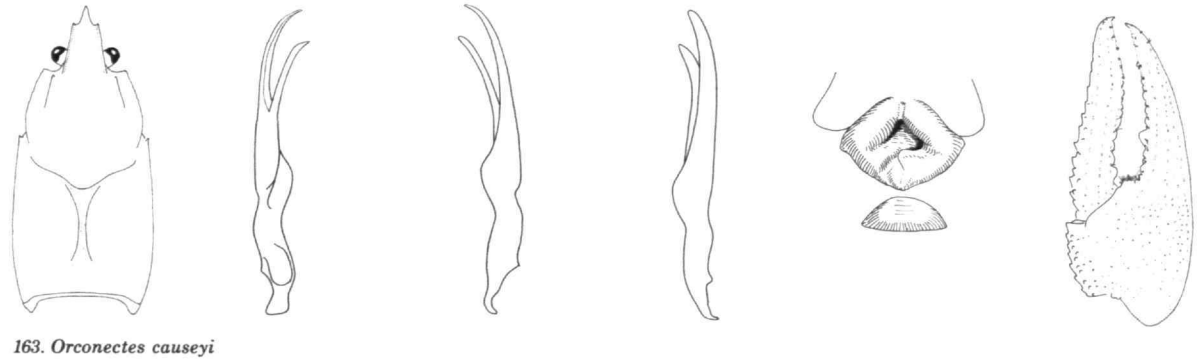
160. Orconectes hobbsi



161. Orconectes mississippiensis

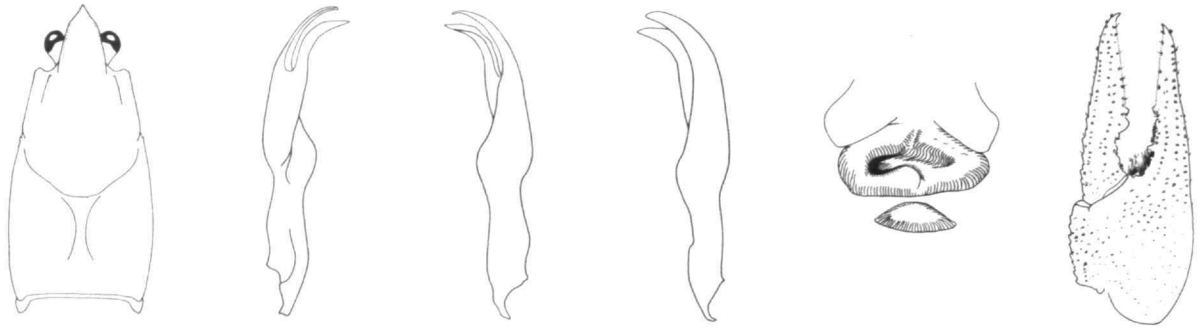


162. Orconectes virilis

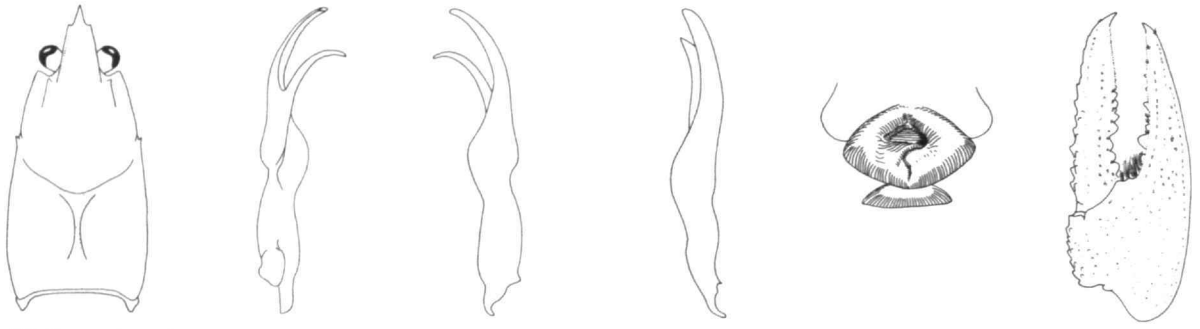


163. Orconectes causeyi

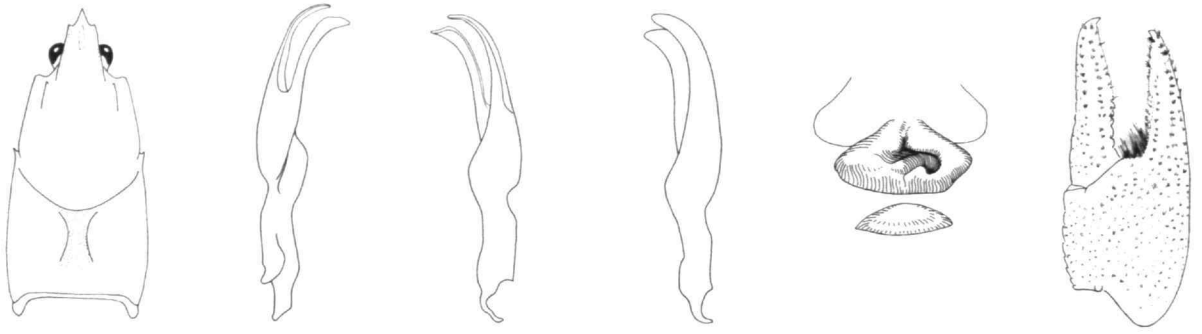
FIGURES 160–163



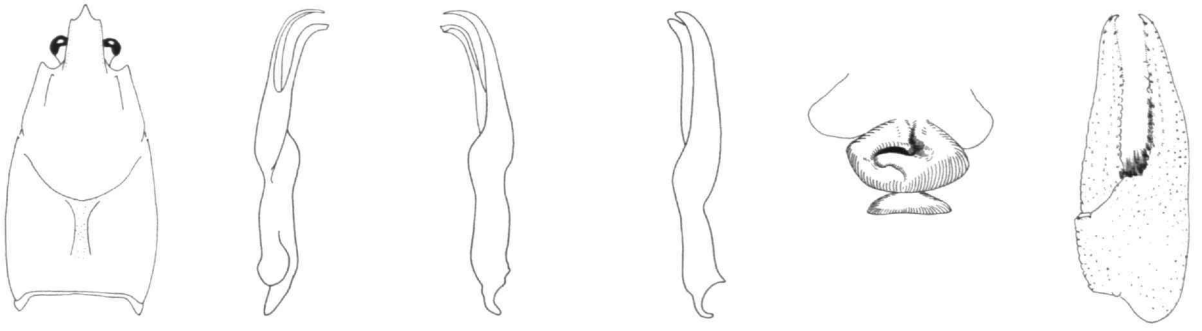
164. Orconectes immunis



165. Orconectes nais

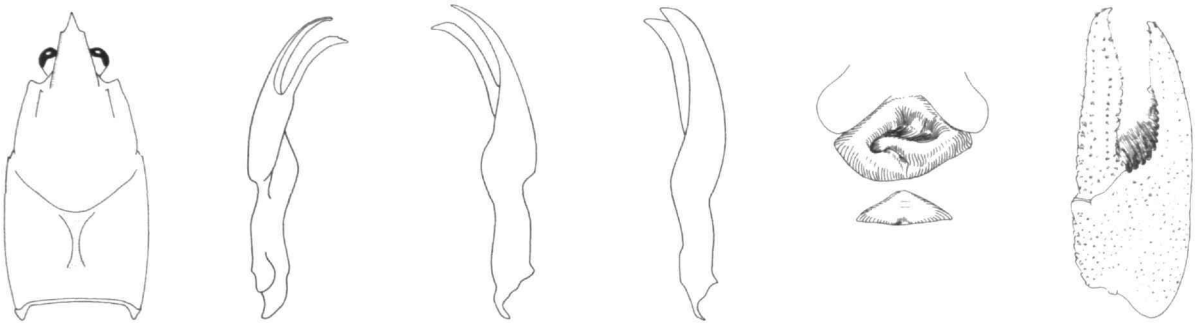


166. Orconectes alabamensis

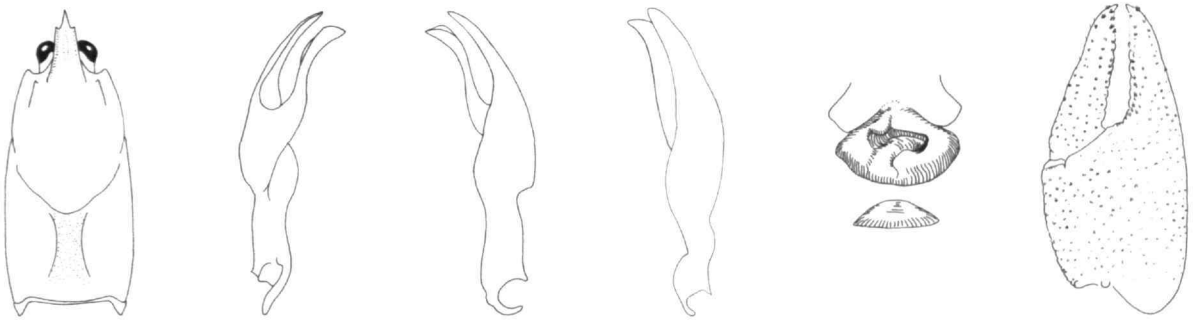


167. Orconectes rhoadesi

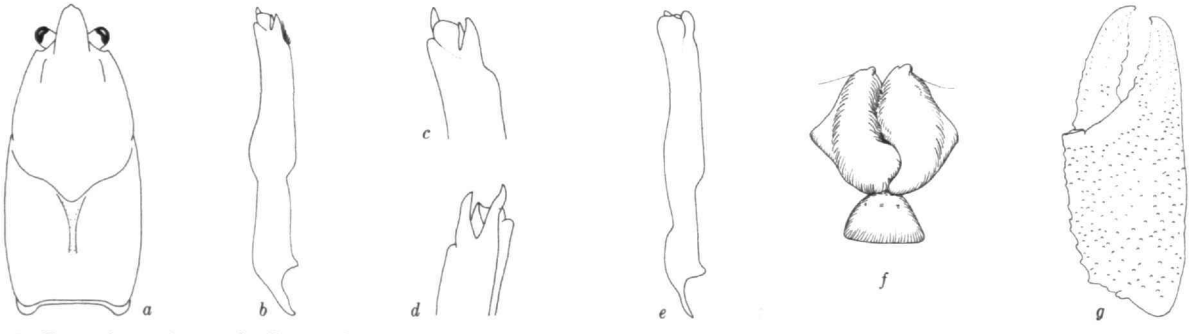
FIGURES 164–167



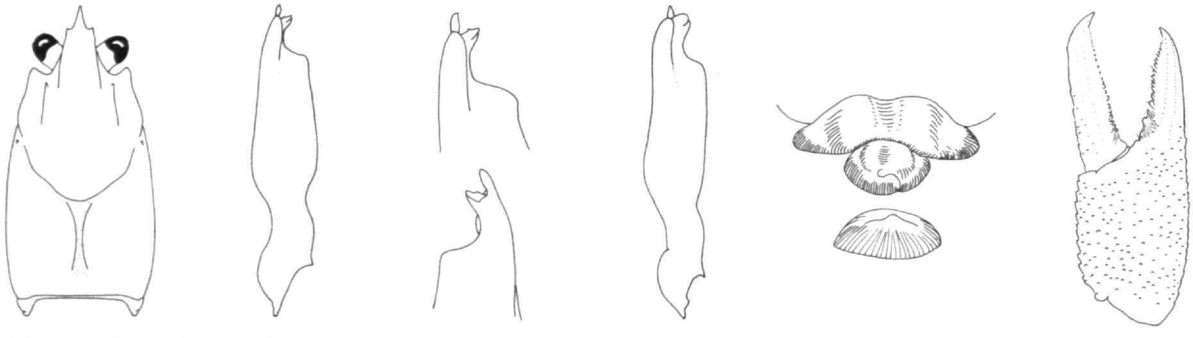
168. Orconectes validus



169. Orconectes compressus

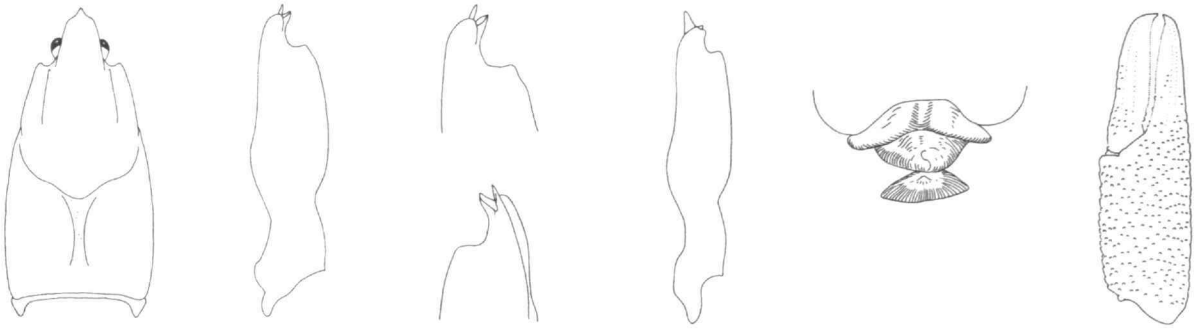


170. Procambarus (Acucauda) fitzpatricki

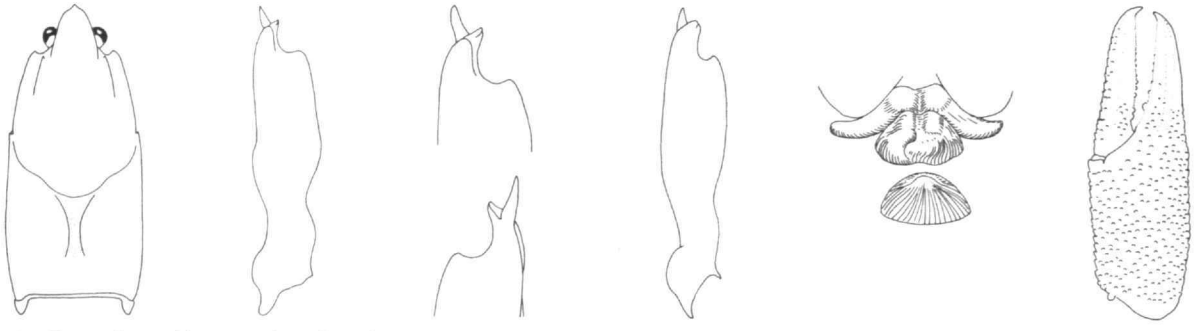


171. Procambarus (Austrocambarus) vazquezae

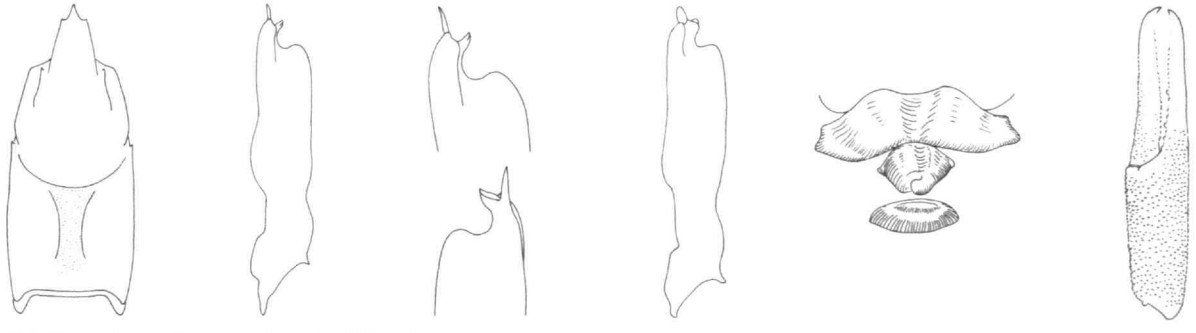
FIGURES 168–171



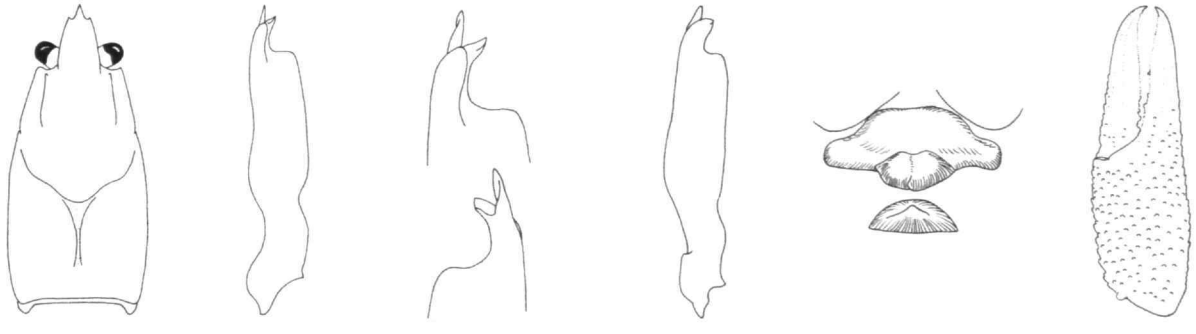
172. Procambarus (Austrocambarus) aztecus



173. Procambarus (Austrocambarus) mexicanus

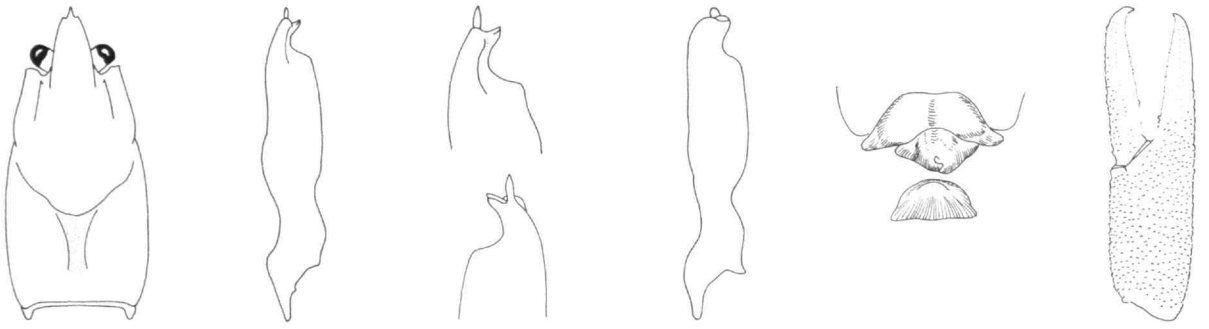


174. Procambarus (Austrocambarus) rodriguezi

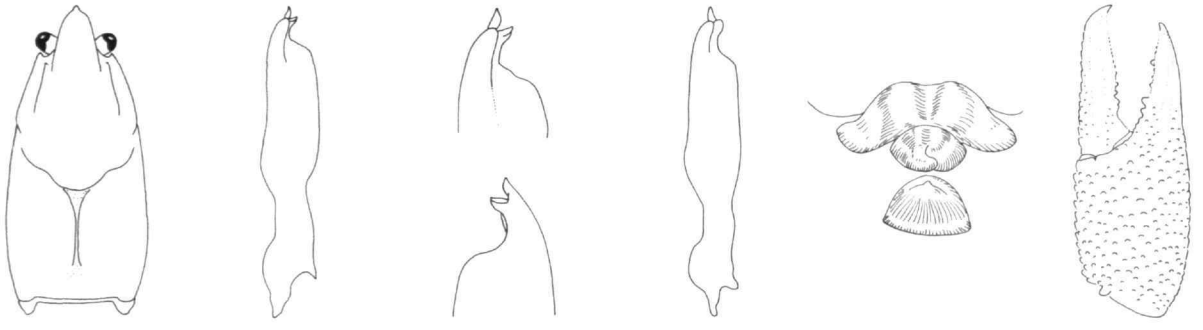


175. Procambarus (Austrocambarus) veracruzanus

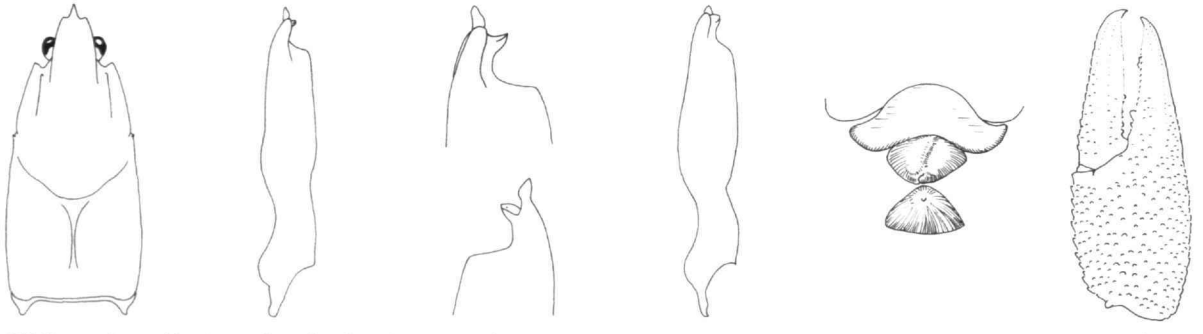
FIGURES 172–175



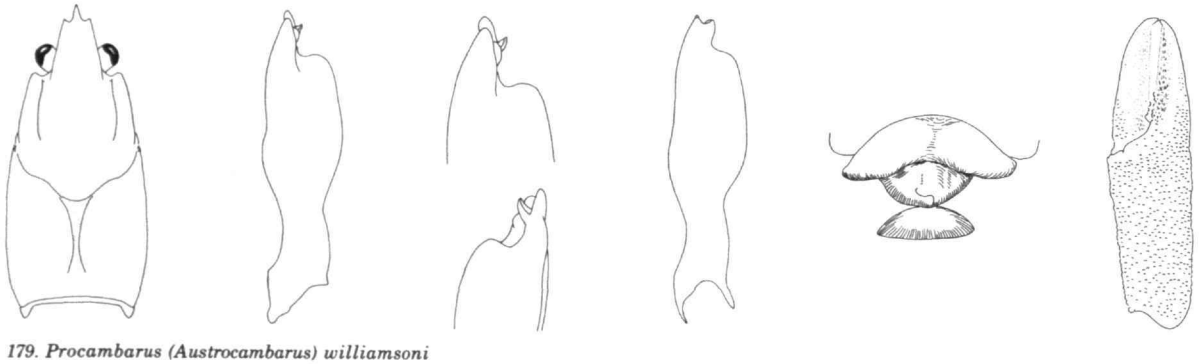
176. Procambarus (Austrocambarus) mirandai



177. Procambarus (Austrocambarus) ruthveni ruthveni

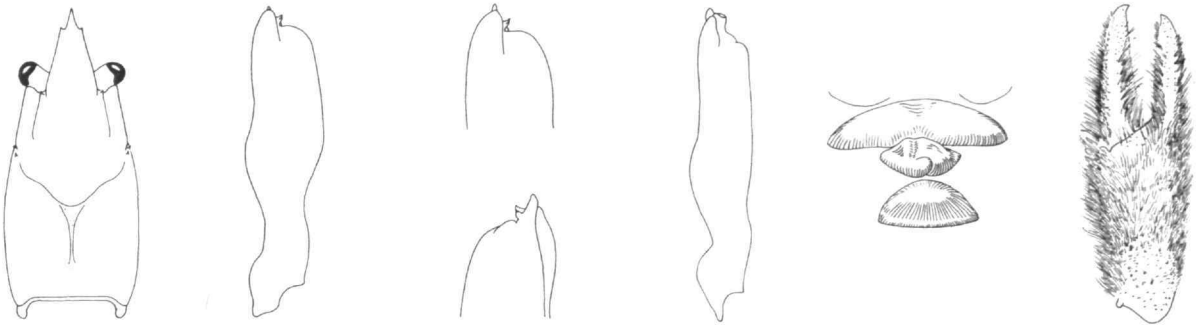


178. Procambarus (Austrocambarus) ruthveni zapoapensis

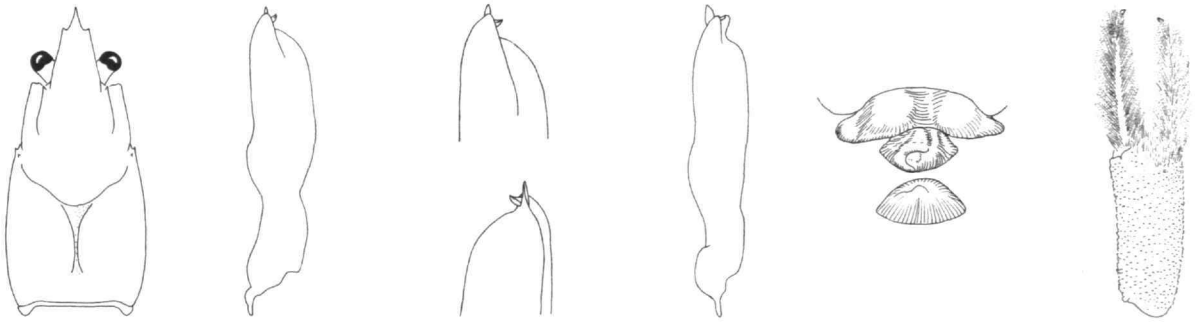


179. Procambarus (Austrocambarus) williamsoni

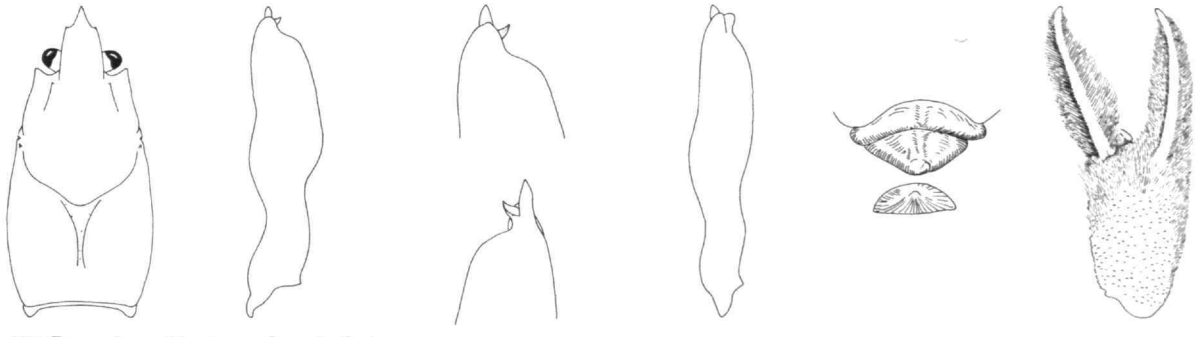
FIGURES 176–179



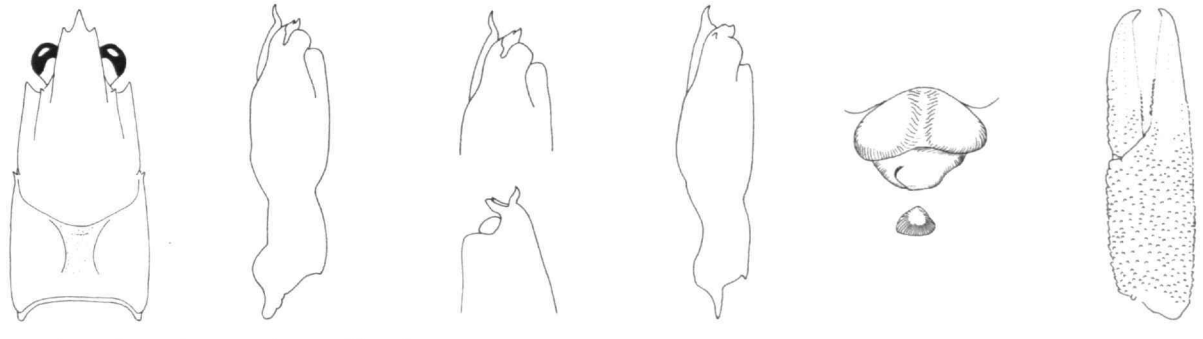
180. Procambarus (Austrocambarus) acanthophorus



181. Procambarus (Austrocambarus) llamasi

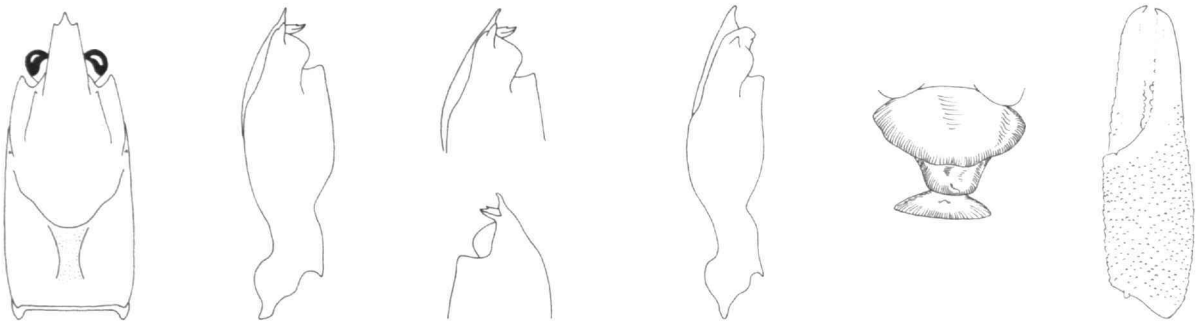


182. Procambarus (Austrocambarus) pilosimanus

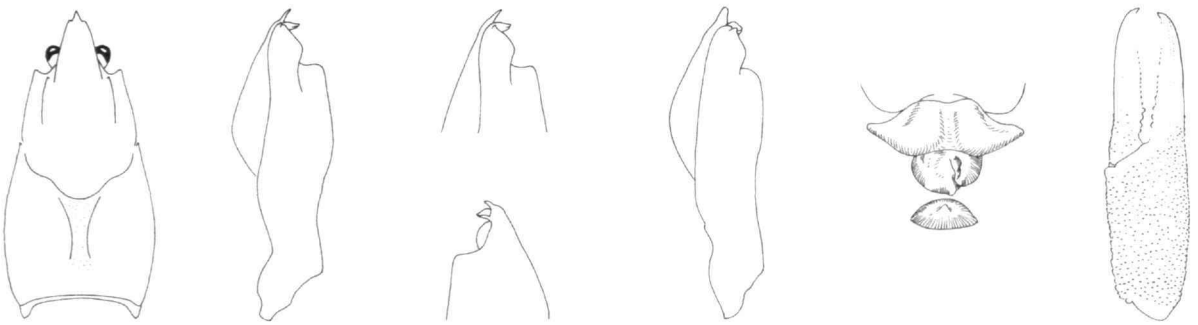


183. Procambarus (Austrocambarus) atkinsoni

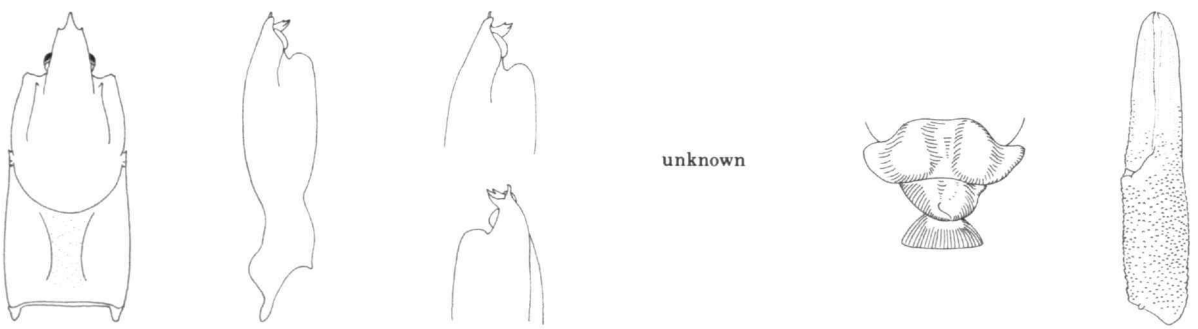
FIGURES 180–183



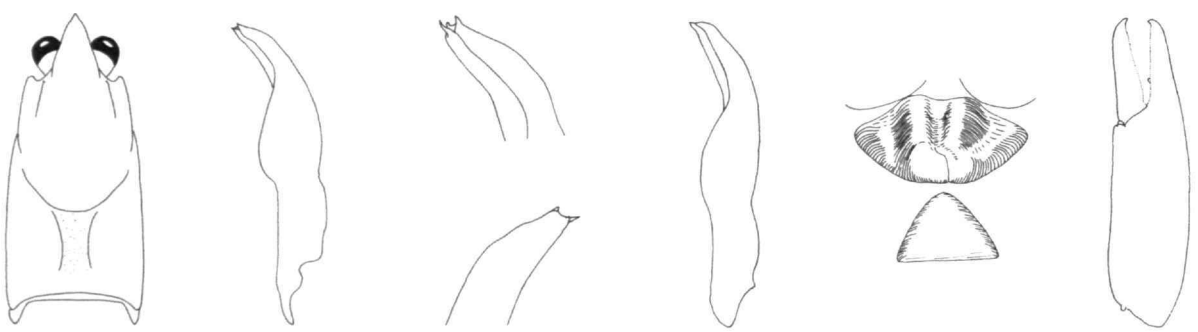
184. Procambarus (Austrocambarus) cubensis rivalis



185. Procambarus (Austrocambarus) cubensis cubensis

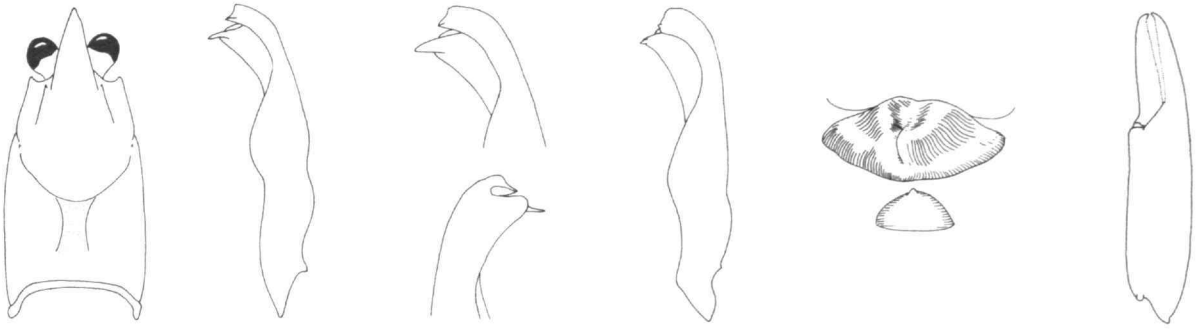


186. Procambarus (Austrocambarus) niveus

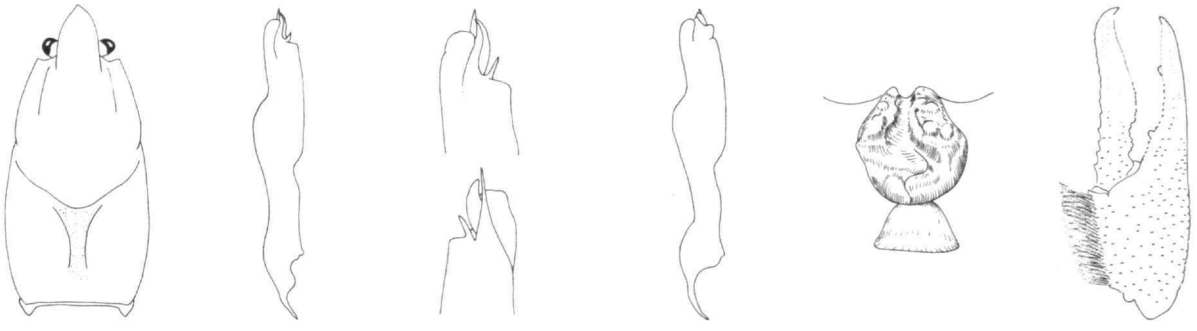


187. Procambarus (Capillicambarus) hinei

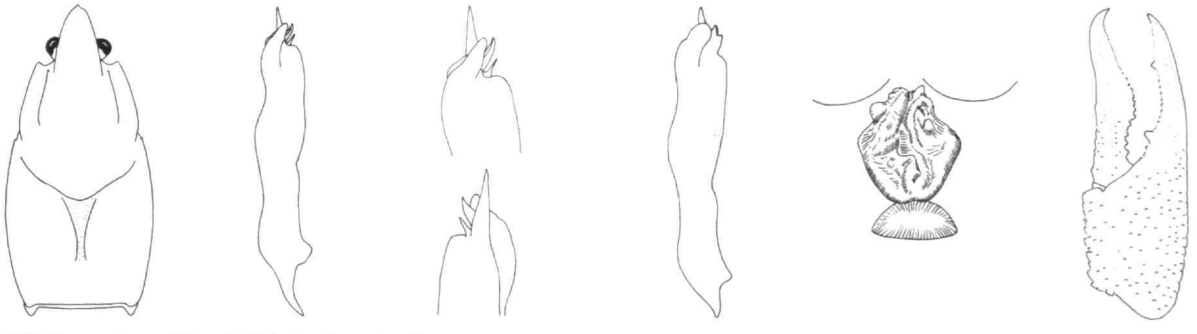
FIGURES 184–187



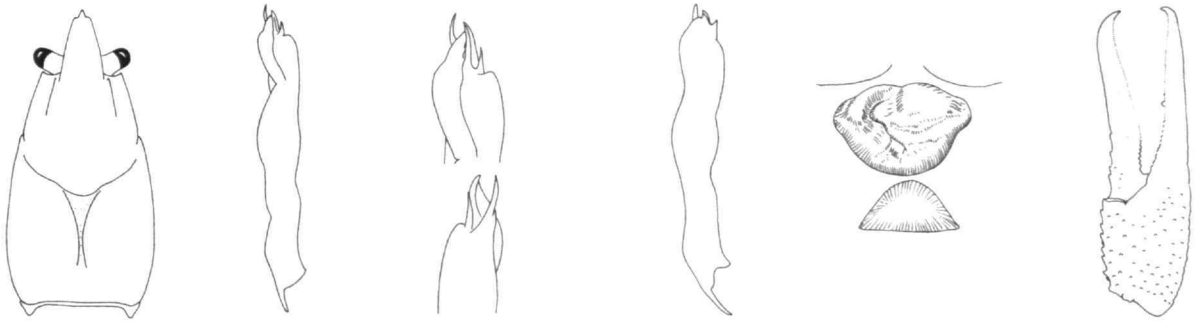
188. Procambarus (Capillicambarus) incilis



189. Procambarus (Girardiella) tulanei

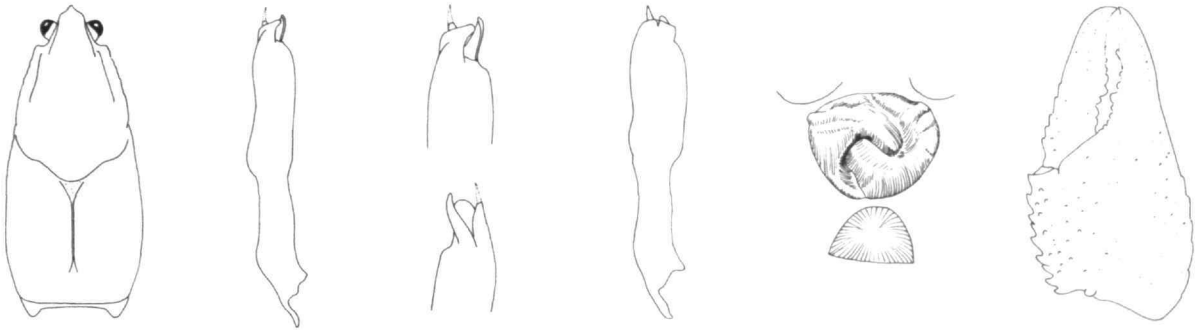


190. Procambarus (Girardiella) simulans simulans

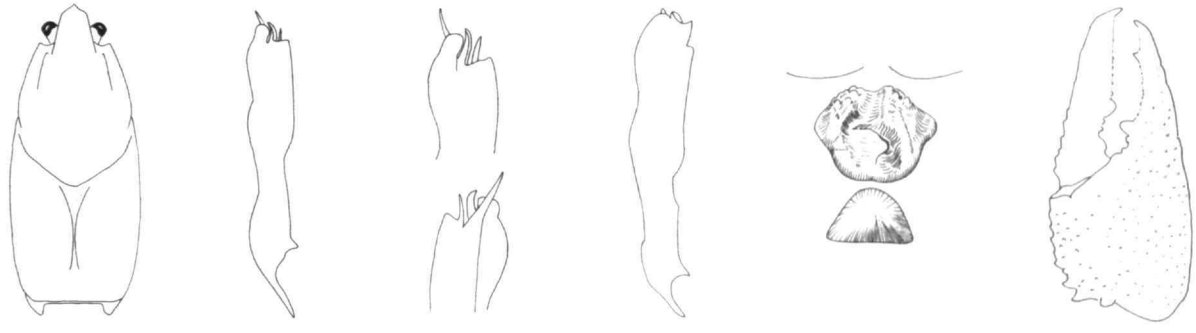


191. Procambarus (Girardiella) simulans regiomontanus

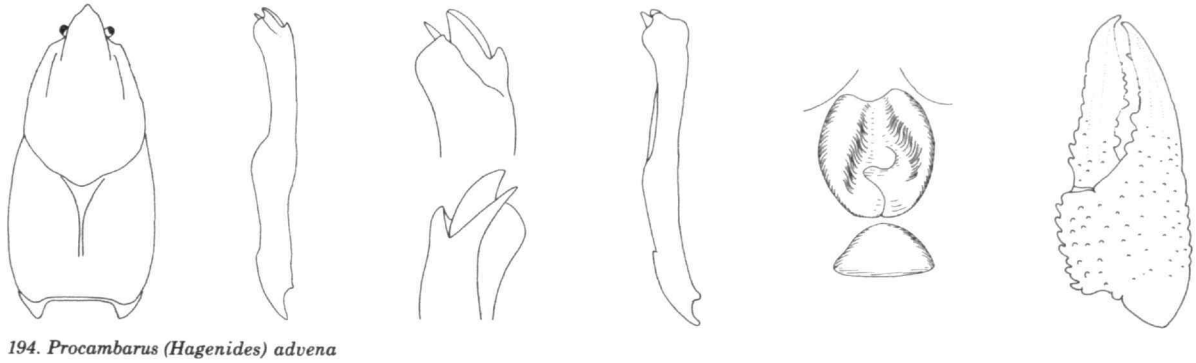
FIGURES 188–191



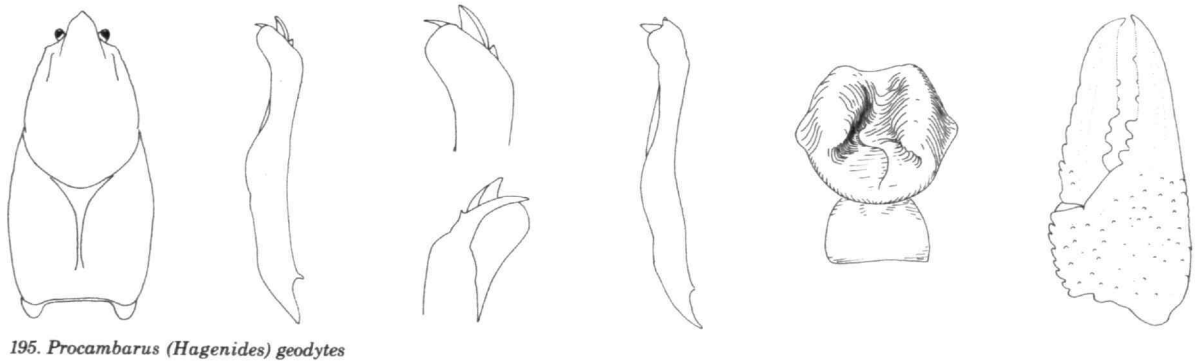
192. Procambarus (Girardiella) hagenianus



193. Procambarus (Girardiella) gracilis

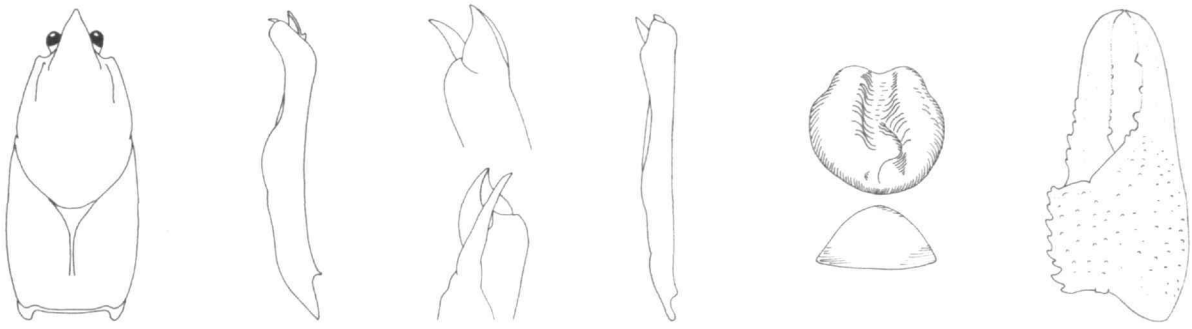


194. Procambarus (Hagenides) advena

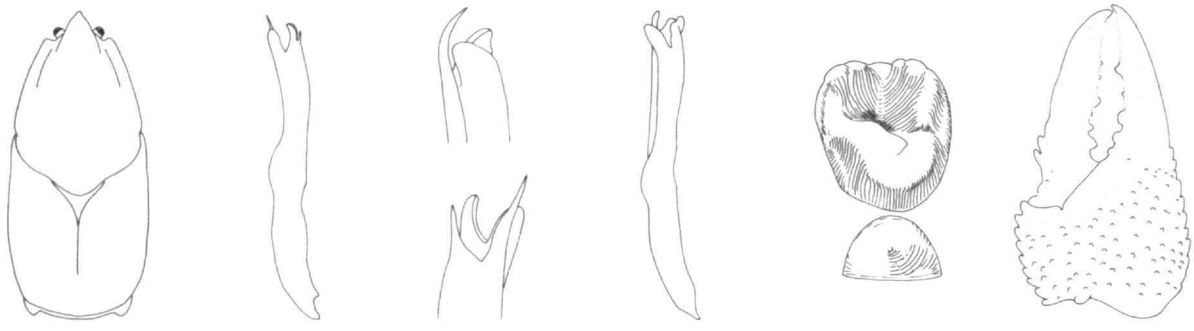


195. Procambarus (Hagenides) geodytes

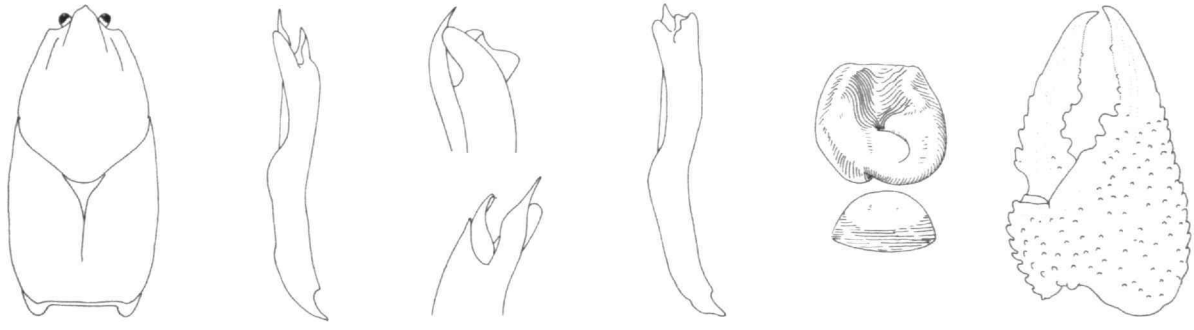
FIGURES 192–195



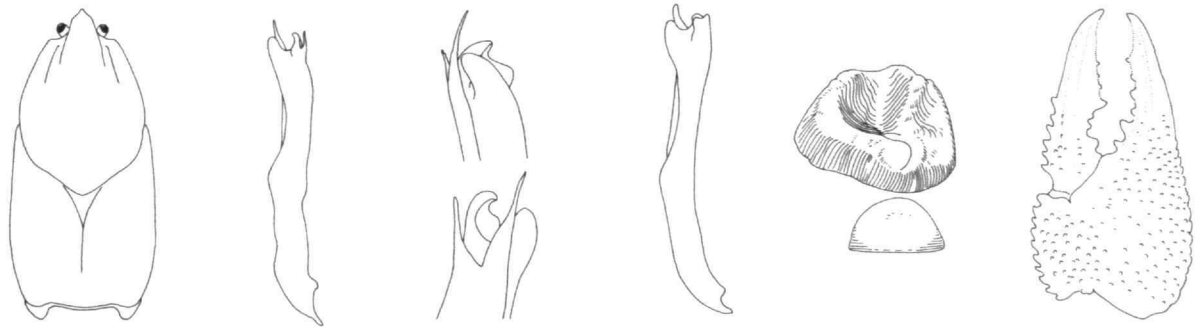
196. Procambarus (Hagenides) pygmaeus



197. Procambarus (Hagenides) rogersi ocklocknensis

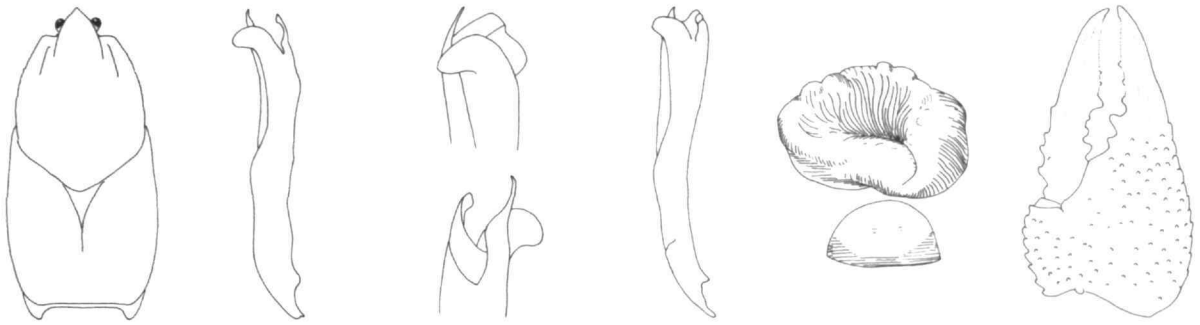


198. Procambarus (Hagenides) rogersi campestris

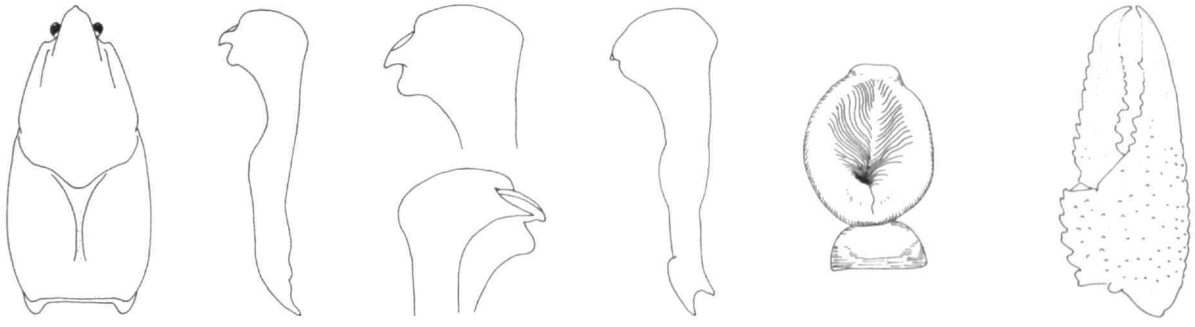


199. Procambarus (Hagenides) rogersi expletus

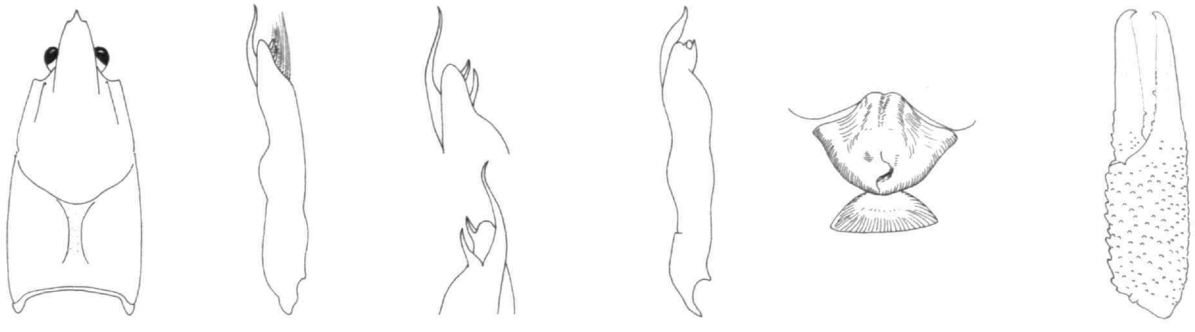
FIGURES 196–199



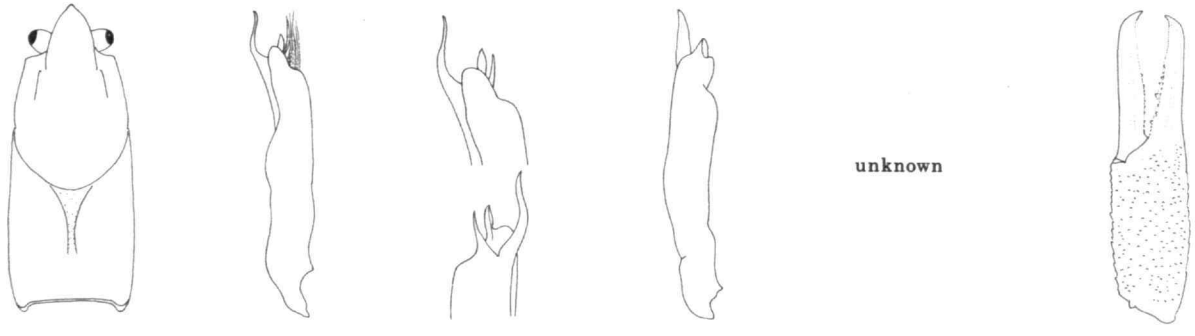
200. Procambarus (Hagenides) rogersi rogersi



201. Procambarus (Hagenides) truculentus

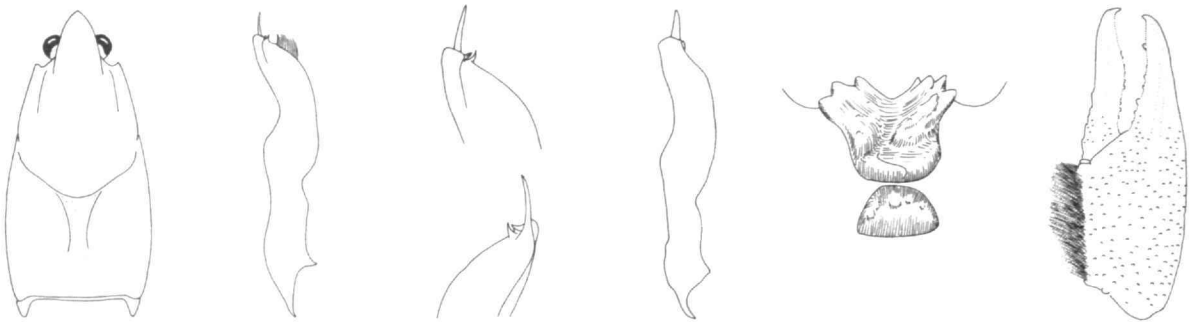


202. Procambarus (Leconticambarus) alleni

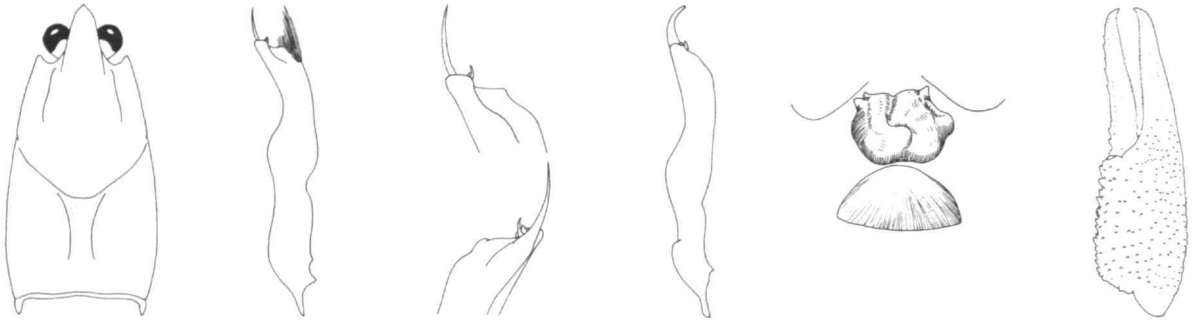


203. Procambarus (Leconticambarus) milleri

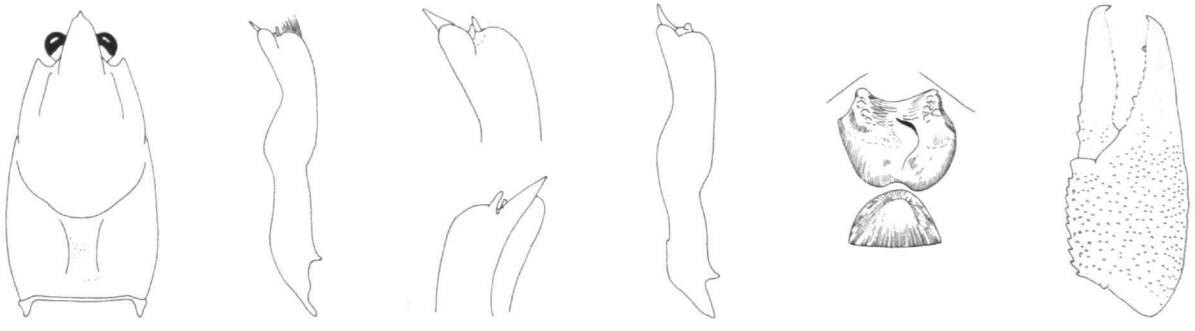
FIGURES 200–203



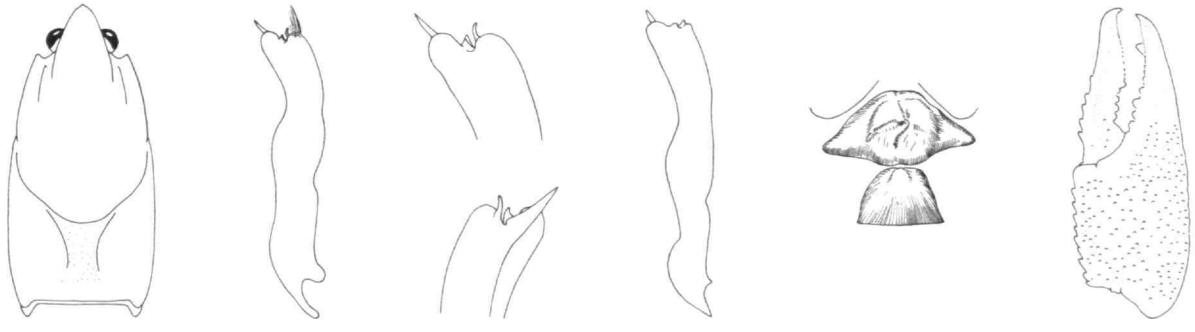
204. Procambarus (Leconticambarus) barbatus



205. Procambarus (Leconticambarus) latipleurum

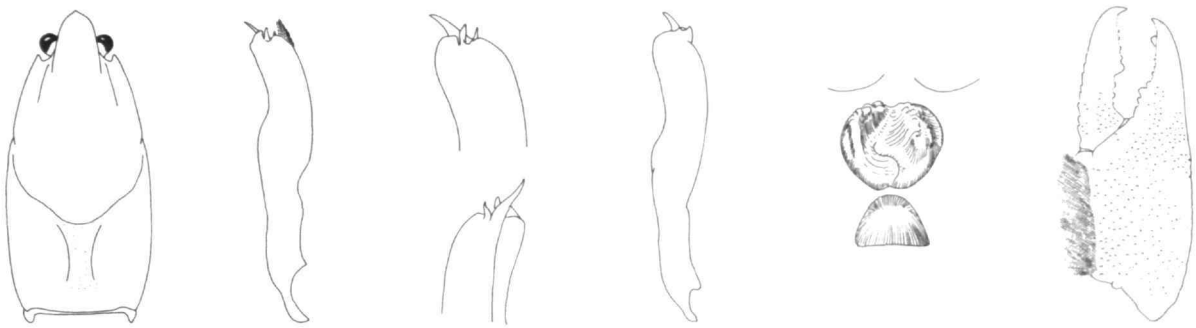


206. Procambarus (Leconticambarus) apalachicolae

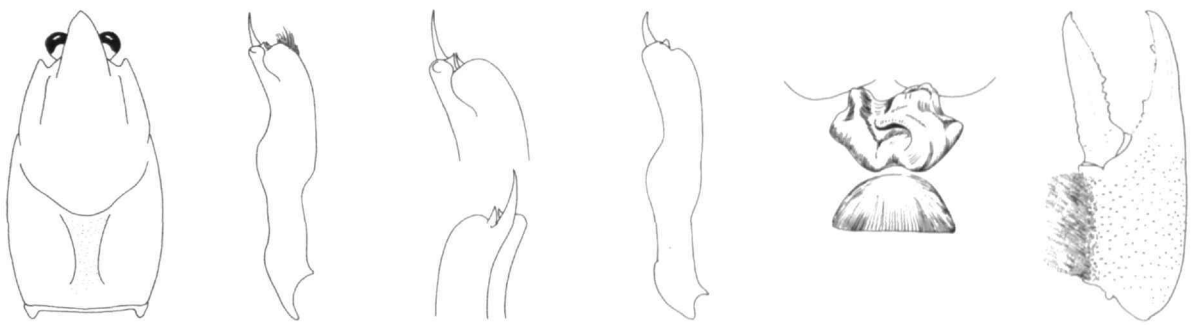


207. Procambarus (Leconticambarus) econfinae

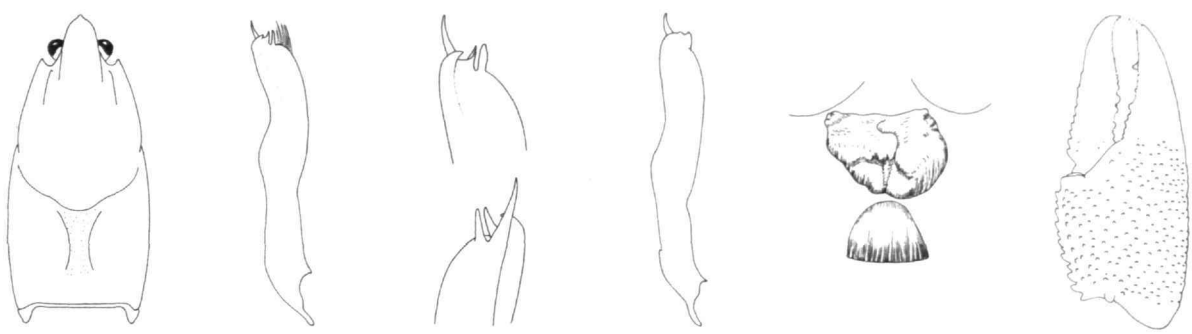
FIGURES 204–207



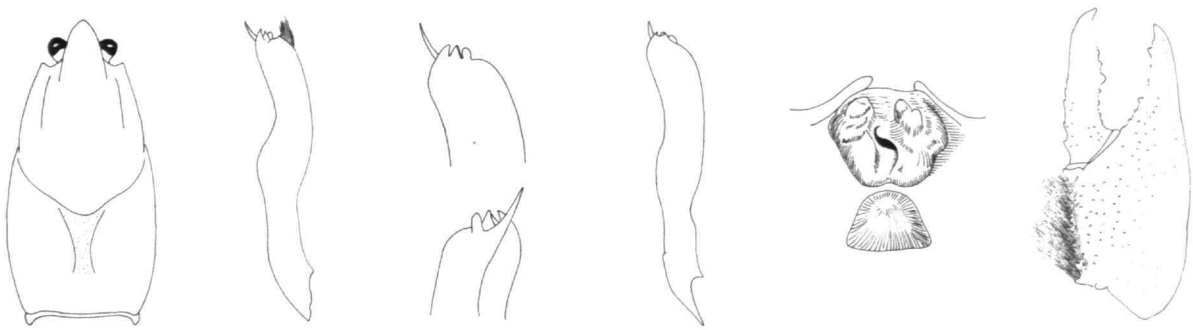
208. Procambarus (Leconticambarus) escambiensis



209. Procambarus (Leconticambarus) pubischelae

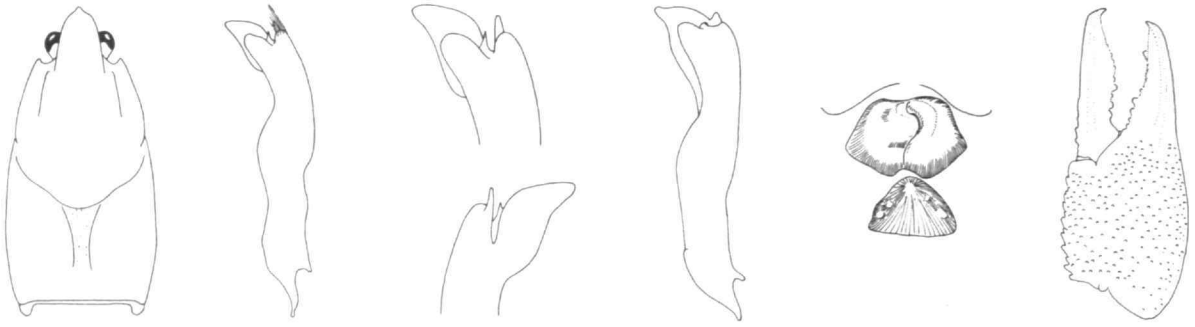


210. Procambarus (Leconticambarus) rathbunae

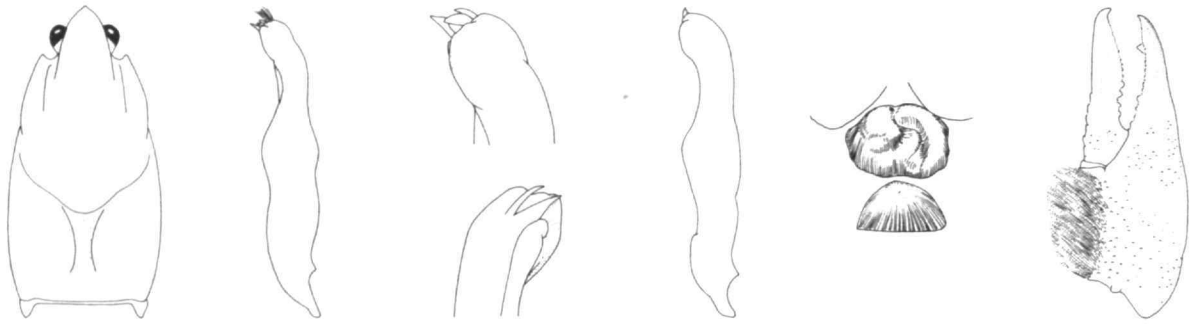


211. Procambarus (Leconticambarus) capillatus

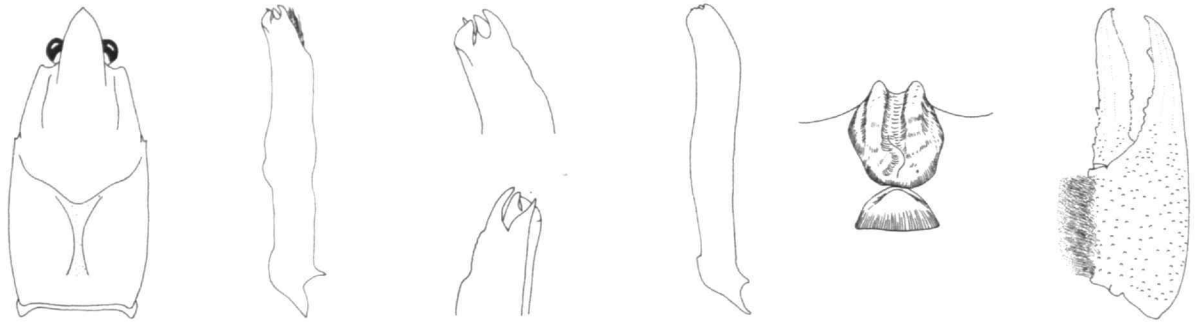
FIGURES 208–211



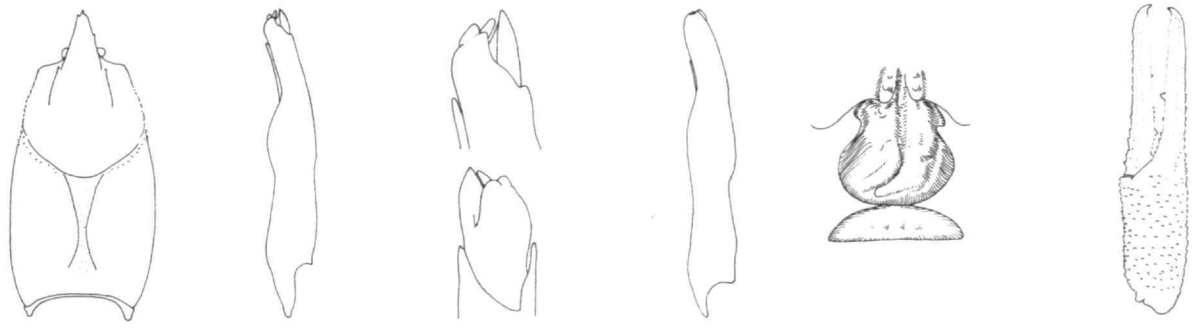
212. *Procambarus (Leconticambarus) kilbyi*



213. *Procambarus (Leconticambarus) hubbelli*

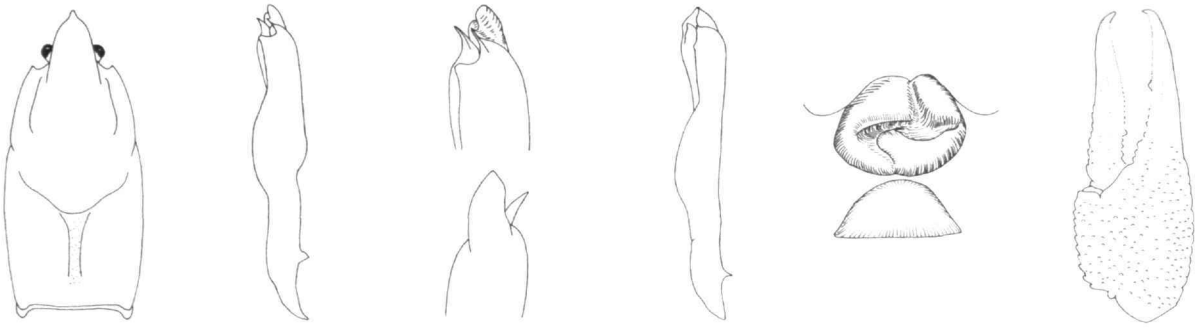


214. *Procambarus (Leconticambarus) shermani*

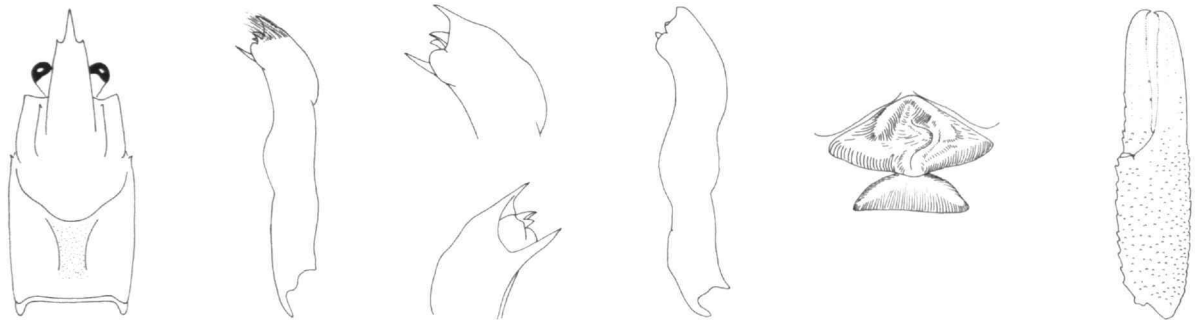


215. *Procambarus (Lonnbergius) acherontis*

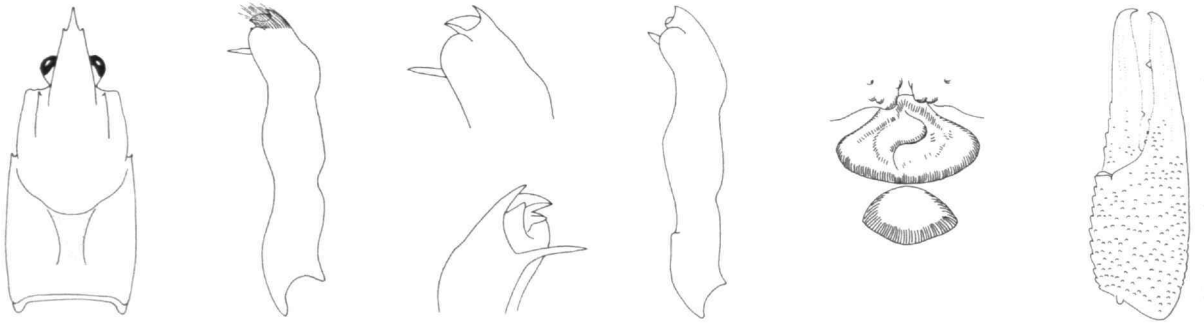
FIGURES 212–215



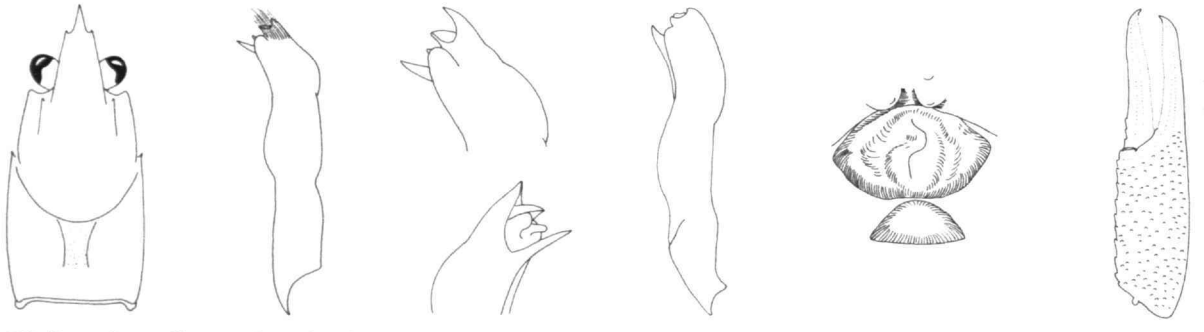
216. Procambarus (Mexicambarus) bouvieri



217. Procambarus (Ortmannicus) pictus

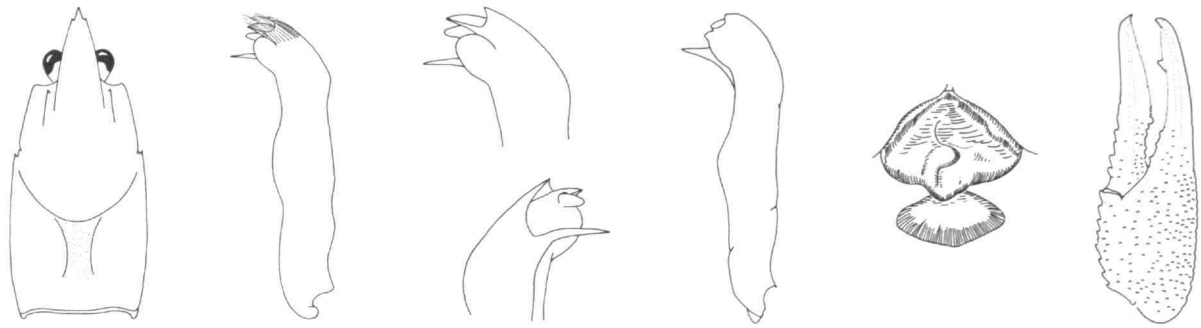


218. Procambarus (Ortmannicus) enoplosternum

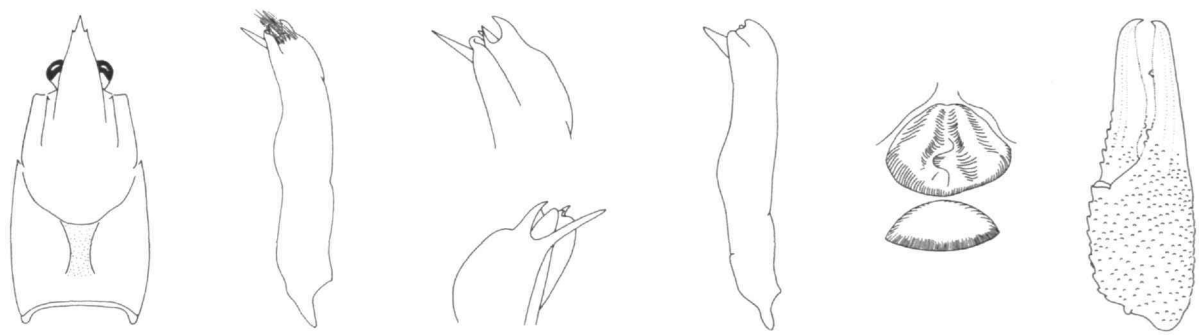


219. Procambarus (Ortmannicus) chacei

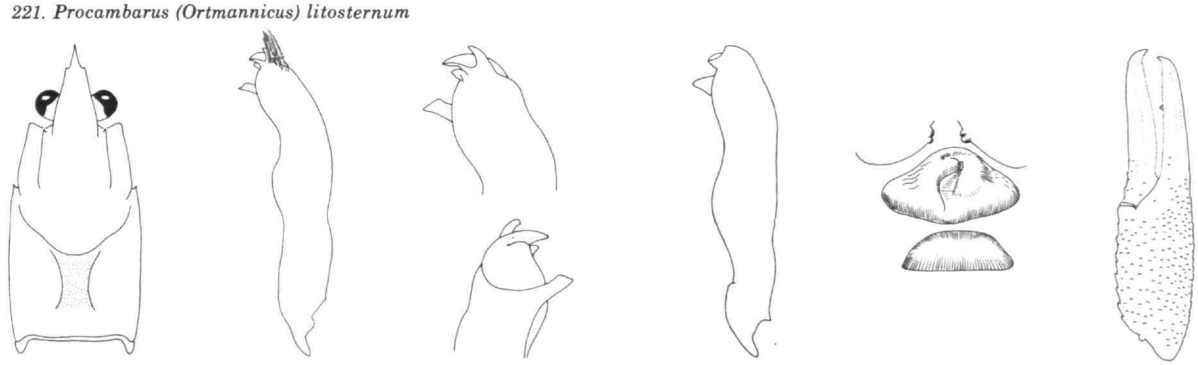
FIGURES 216–219



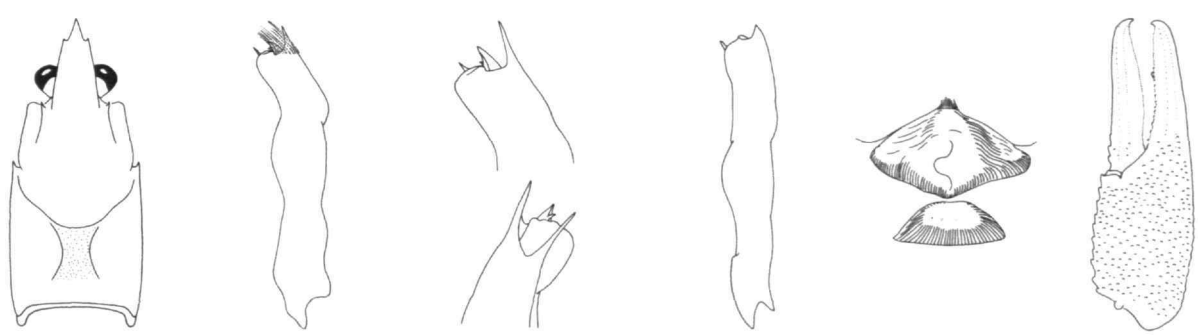
220. Procambarus (Ortmannicus) epicyrtus



221. Procambarus (Ortmannicus) litosternum

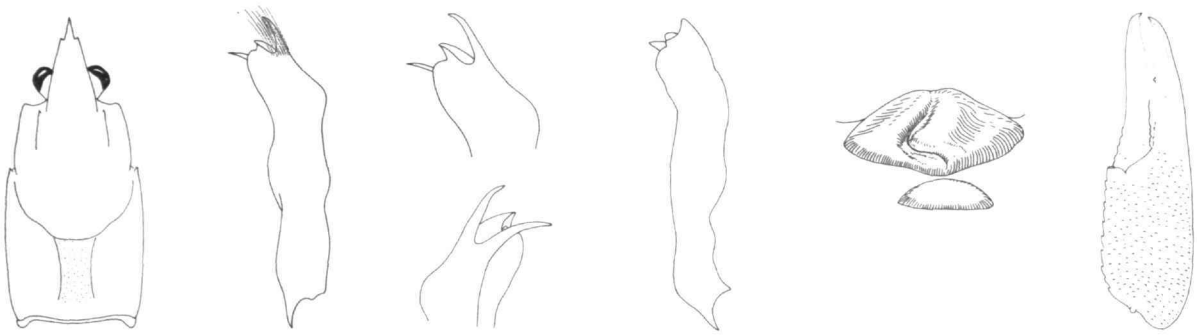


222. Procambarus (Ortmannicus) lepidodactylus

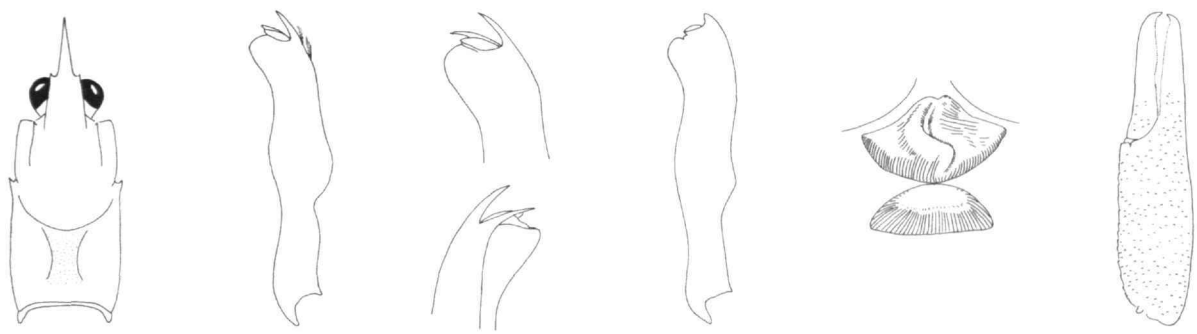


223. Procambarus (Ortmannicus) pubescens

FIGURES 220–223

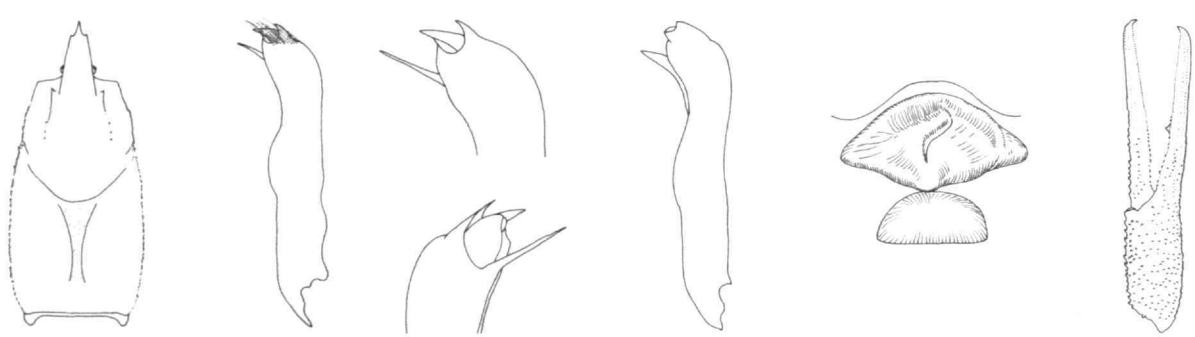


224. Procambarus (Ortmannicus) hirsutus



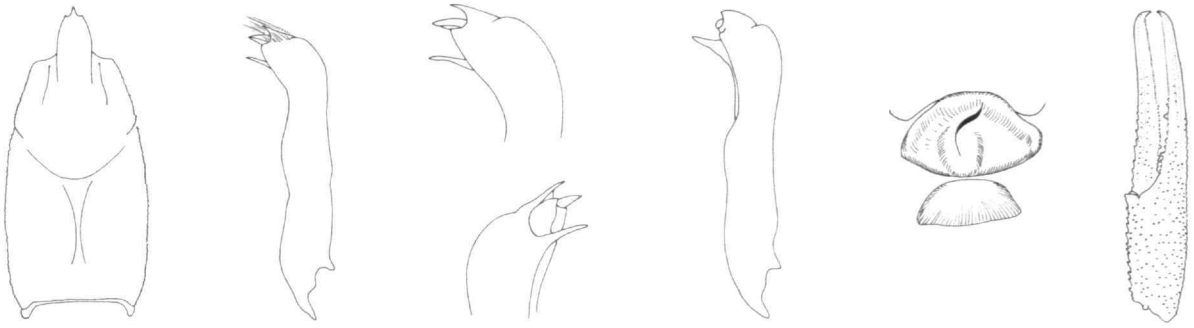
225. Procambarus (Ortmannicus) youngi

226. Procambarus (Ortmannicus) angustatus

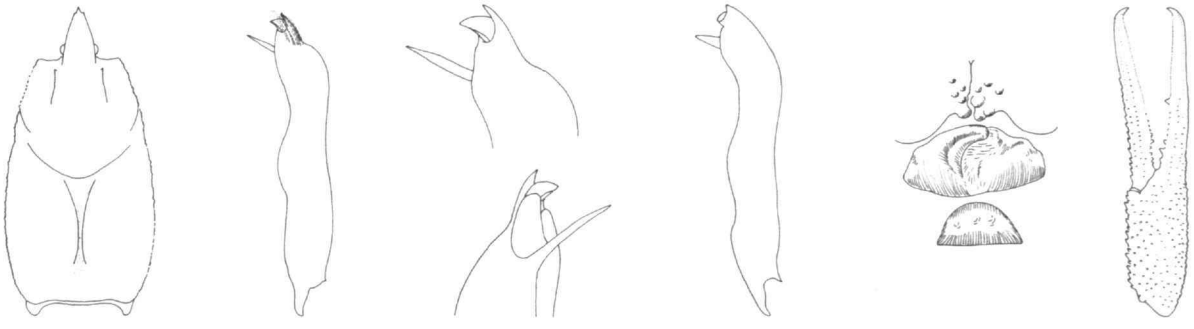


227. Procambarus (Ortmannicus) lucifugus alachua

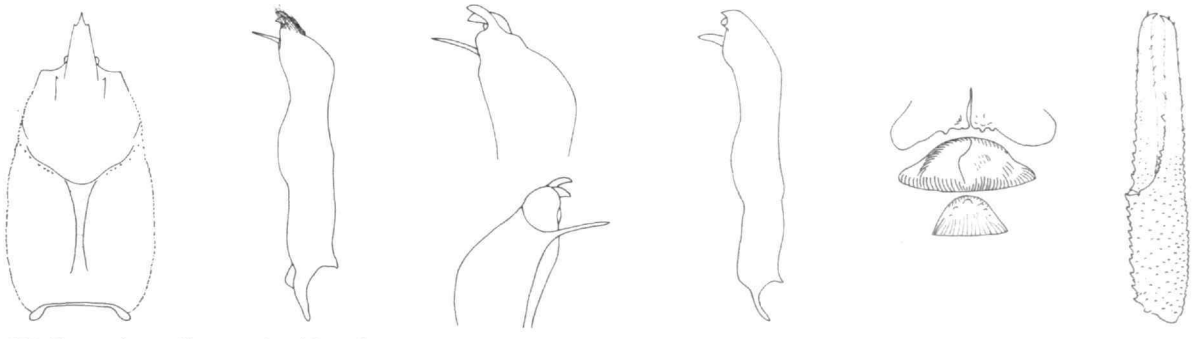
FIGURES 224–227



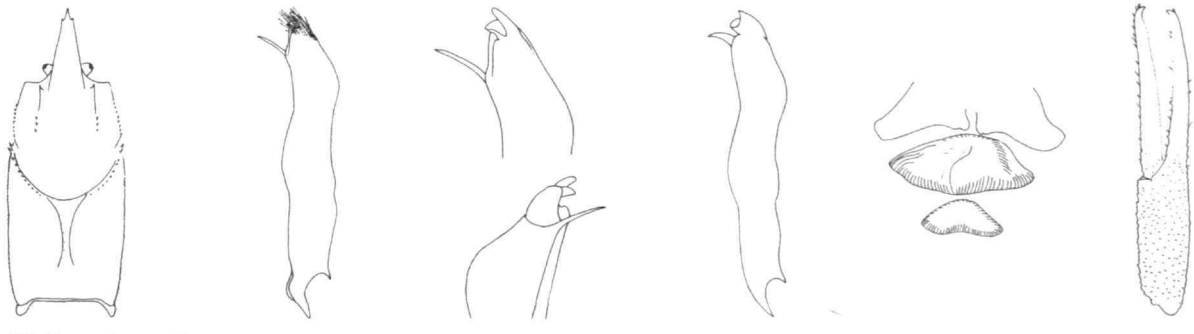
228. Procambarus (Ortmannicus) lucifugus lucifugus



229. Procambarus (Ortmannicus) pallidus

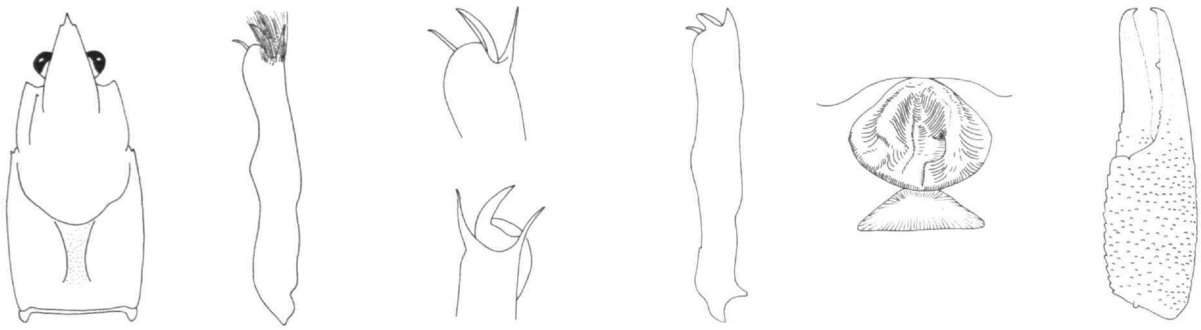


230. Procambarus (Ortmannicus) horsti

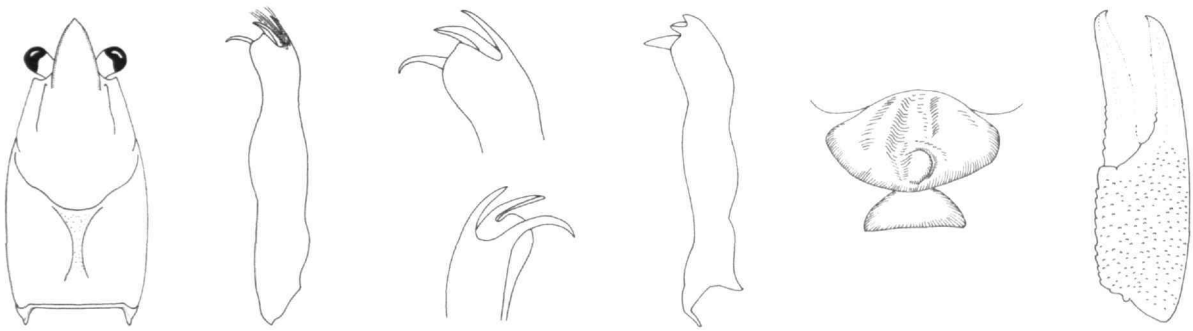


231. Procambarus (Ortmannicus) orcinus

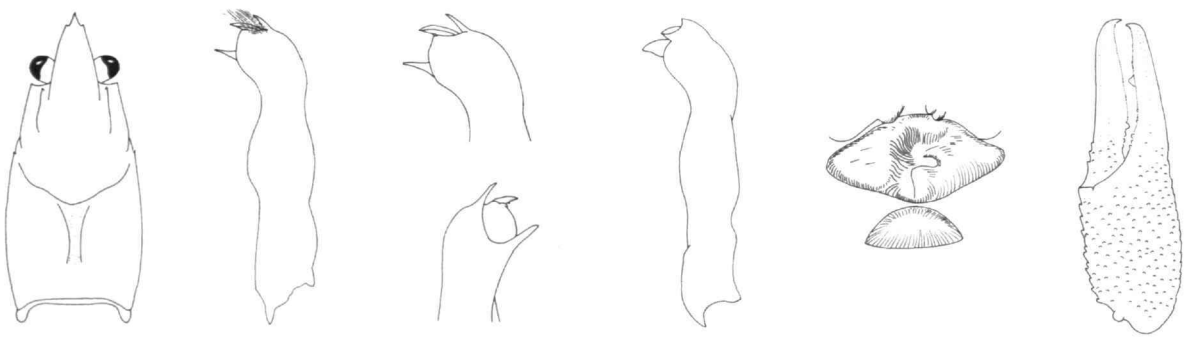
FIGURES 228–231



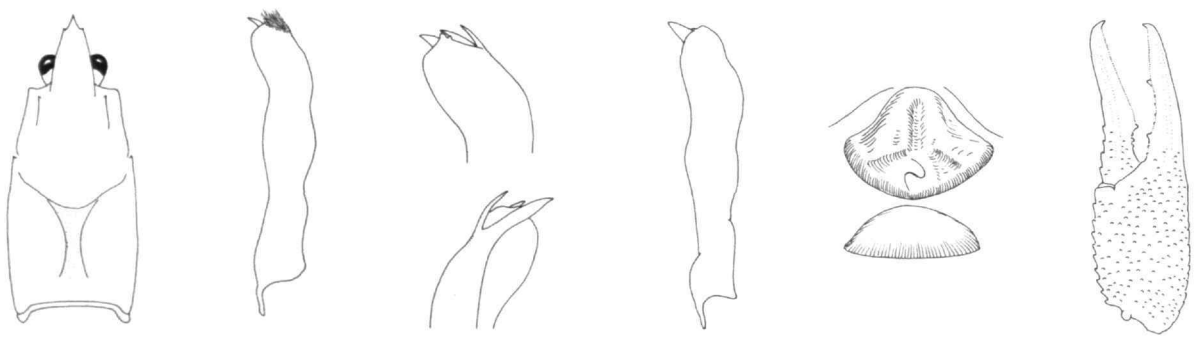
232. Procambarus (Ortmannicus) seminolae



233. Procambarus (Ortmannicus) ancylus

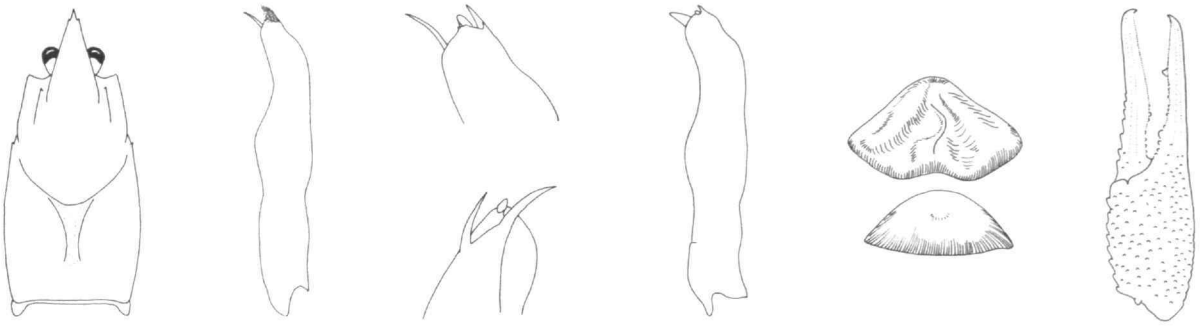


234. Procambarus (Ortmannicus) lunzi

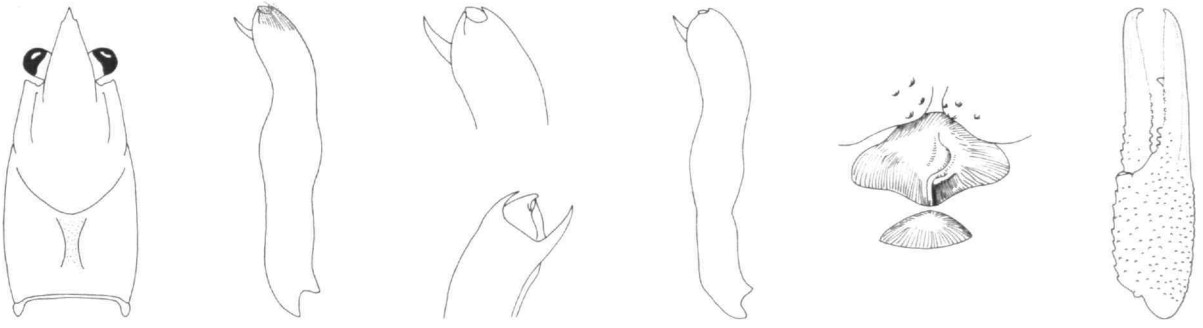


235. Procambarus (Ortmannicus) fallax

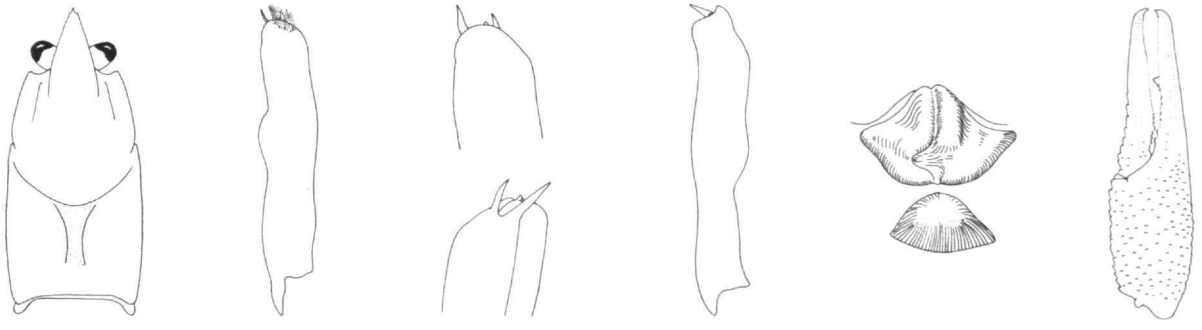
FIGURES 232–235



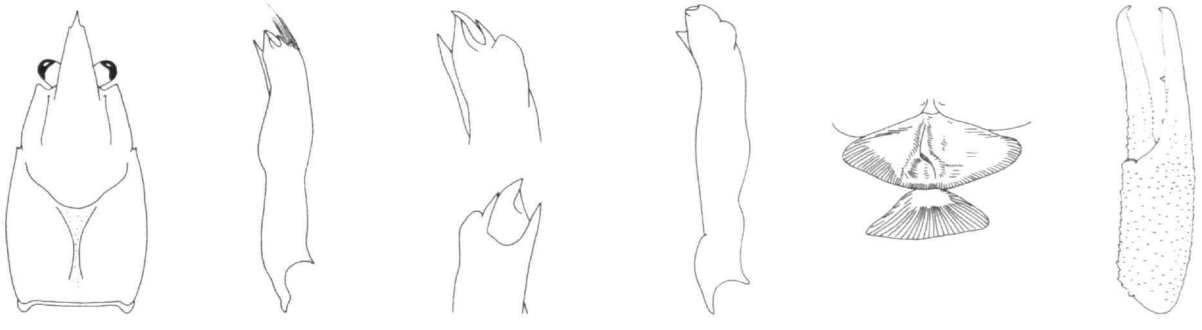
236. Procambarus (Ortmannicus) leonensis



237. Procambarus (Ortmannicus) evermanni

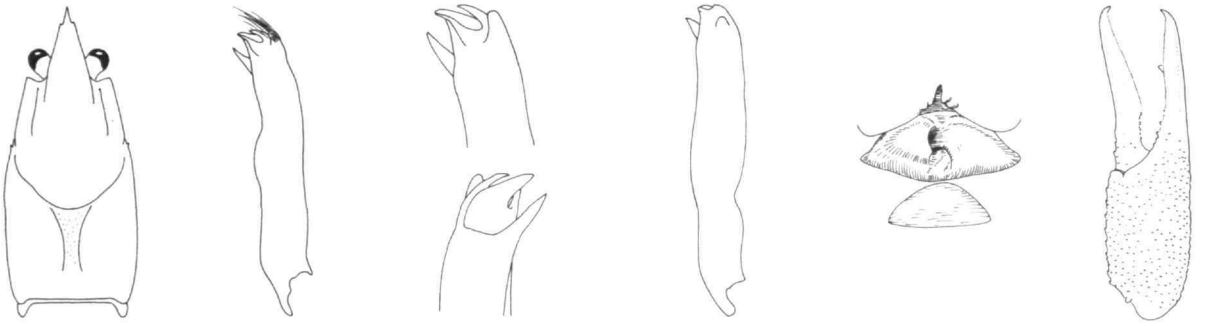


238. Procambarus (Ortmannicus) pycnogonopodus

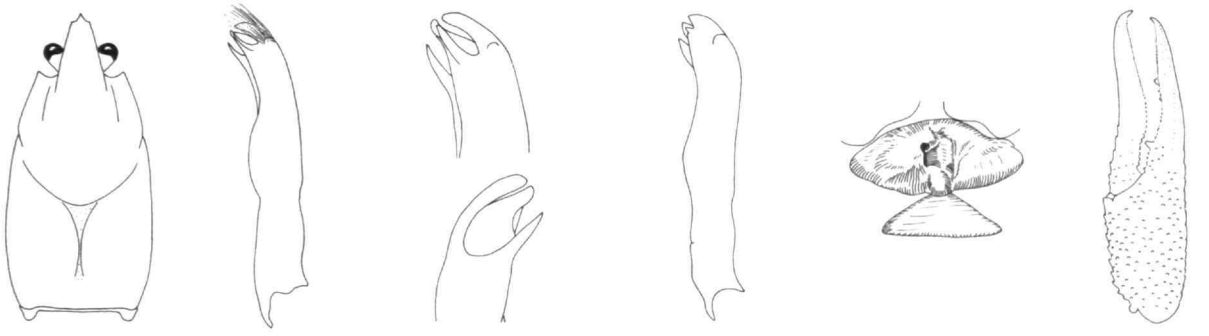


239. Procambarus (Ortmannicus) blandingii

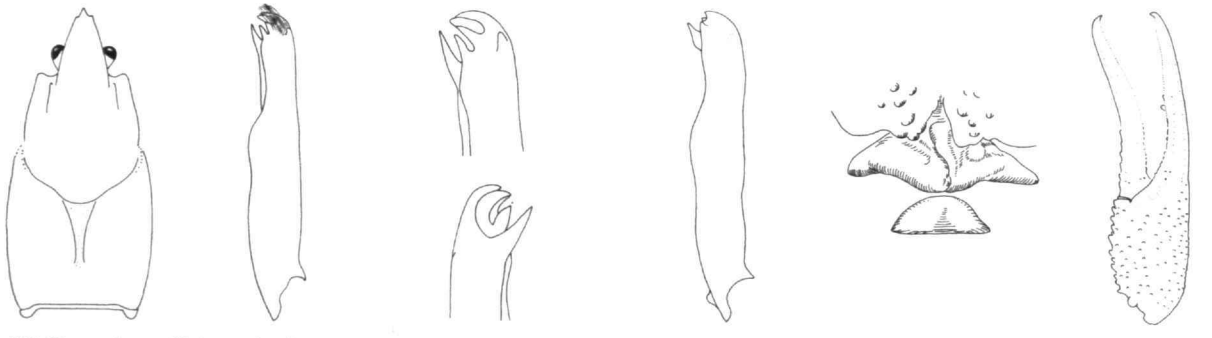
FIGURES 236–239



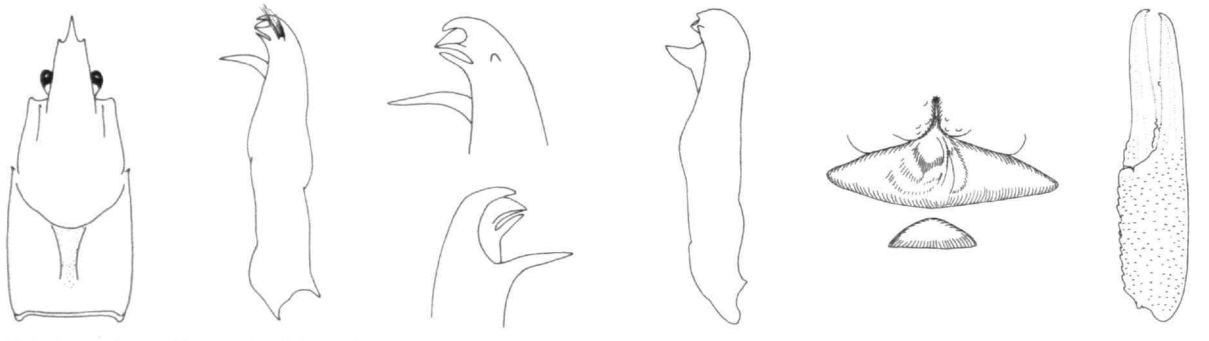
240. Procambarus (Ortmannicus) acutus acutus



241. Procambarus (Ortmannicus) acutus cuevachicae

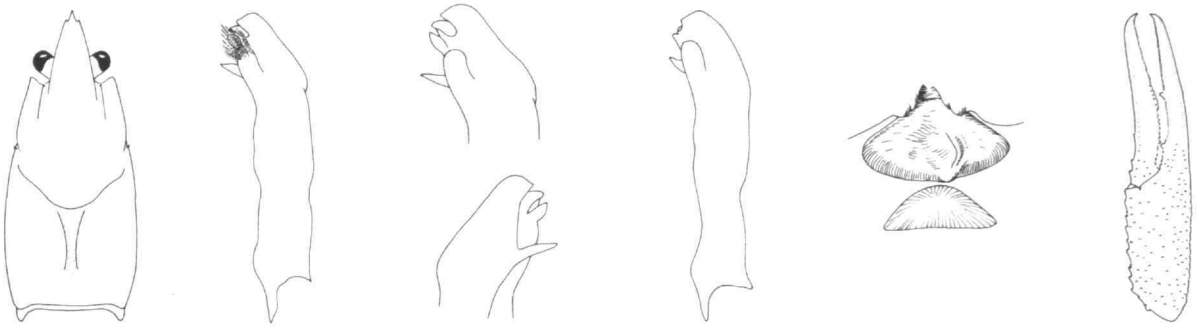


242. Procambarus (Ortmannicus) texanus

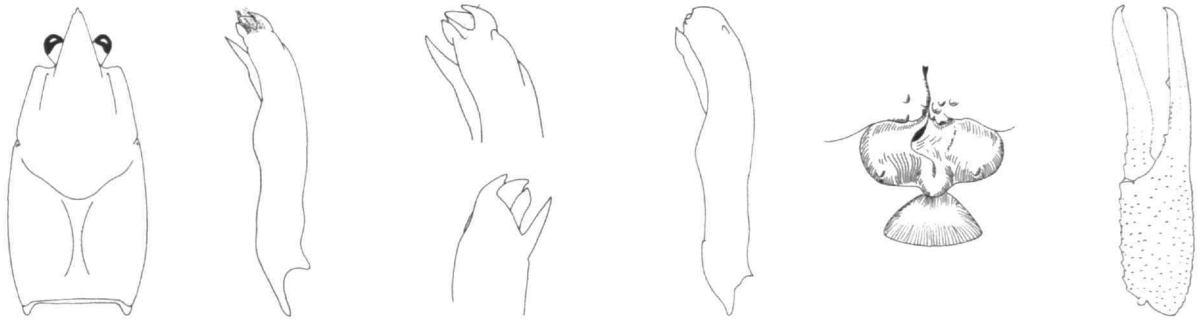


243. Procambarus (Ortmannicus) lecontei

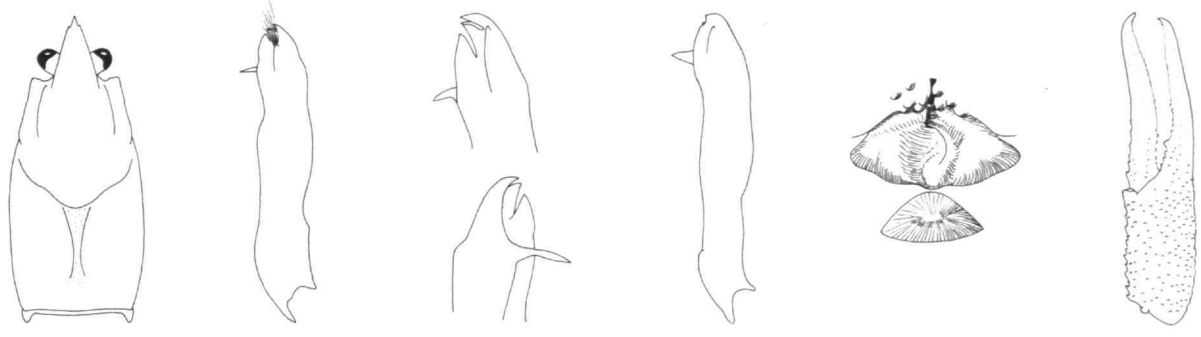
FIGURES 240–243



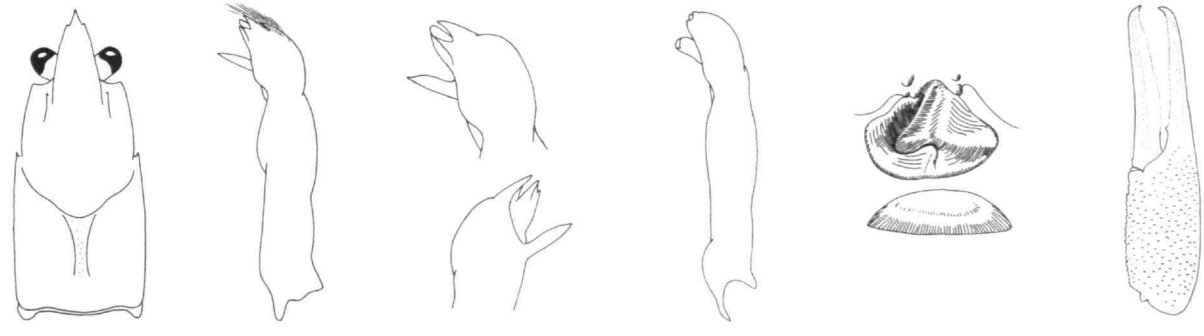
244. *Procambarus (Ortmannicus) hayi*



245. *Procambarus (Ortmannicus) lophotus*

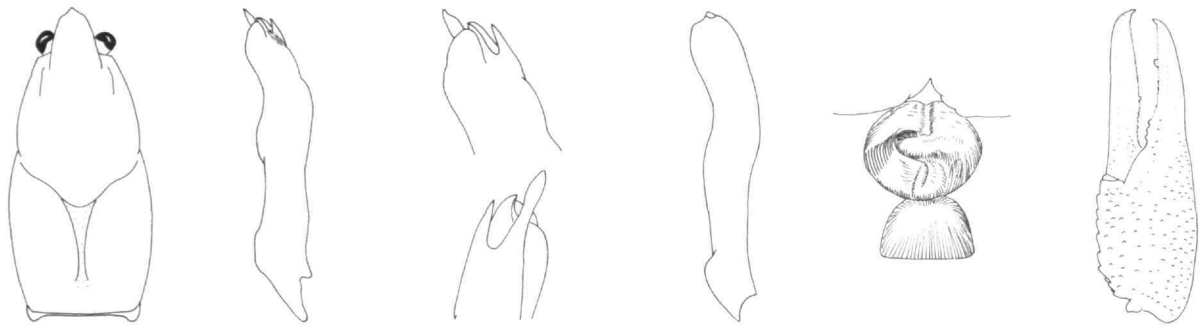


246. *Procambarus (Ortmannicus) acutissimus*

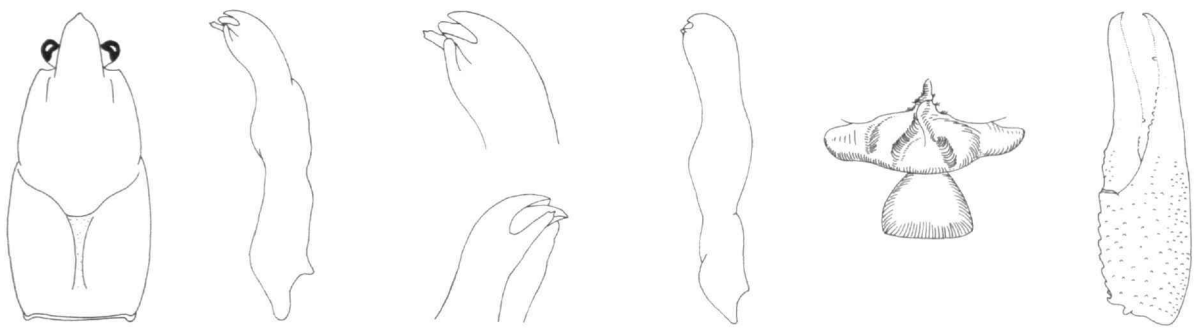


247. *Procambarus (Ortmannicus) verrucosus*

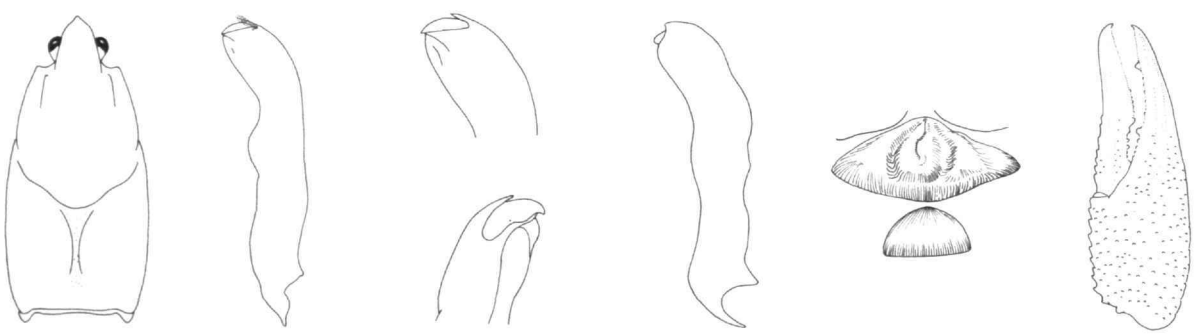
FIGURES 244–247



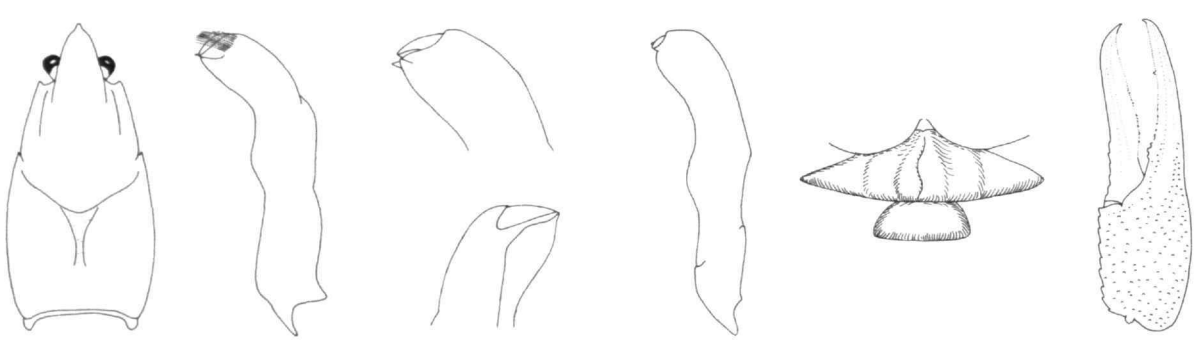
248. Procambarus (Ortmannicus) jaculus



249. Procambarus (Ortmannicus) hybus

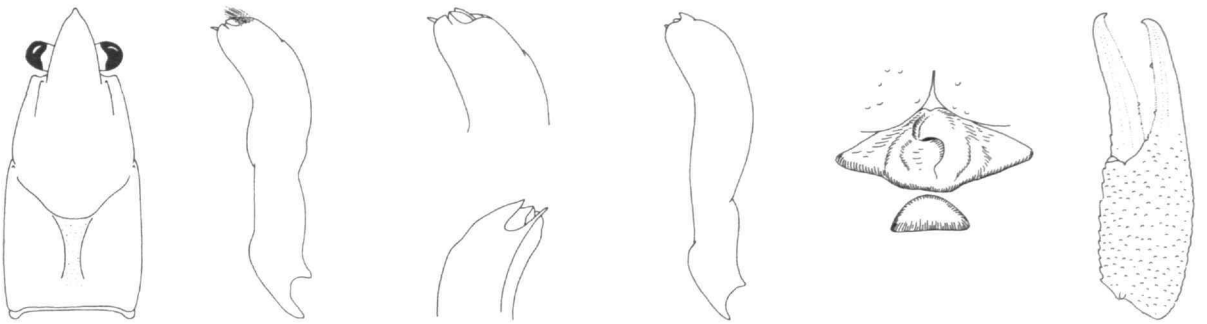


250. Procambarus (Ortmannicus) planirostris

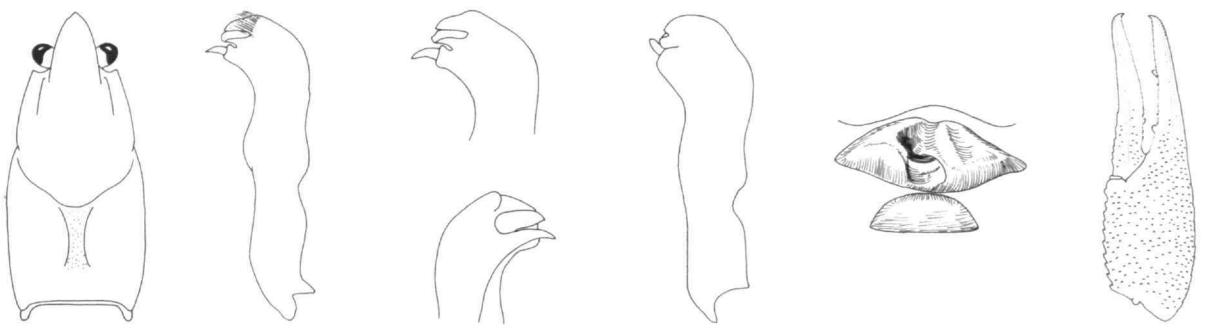


251. Procambarus (Ortmannicus) mancus

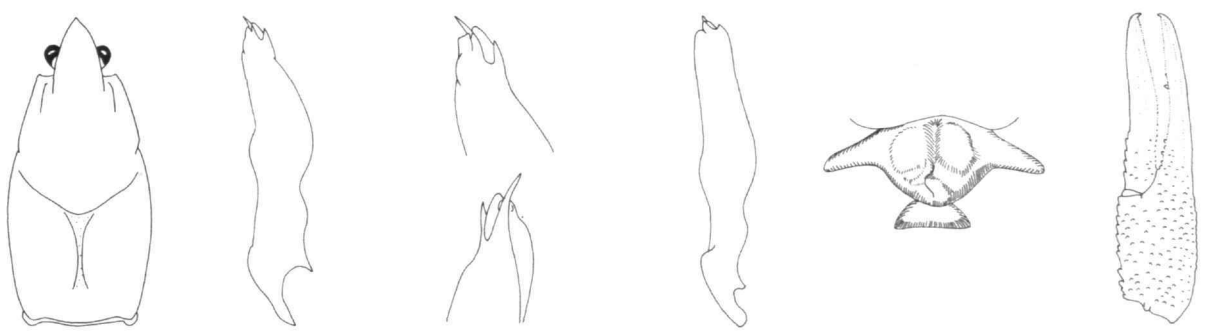
FIGURES 248–251



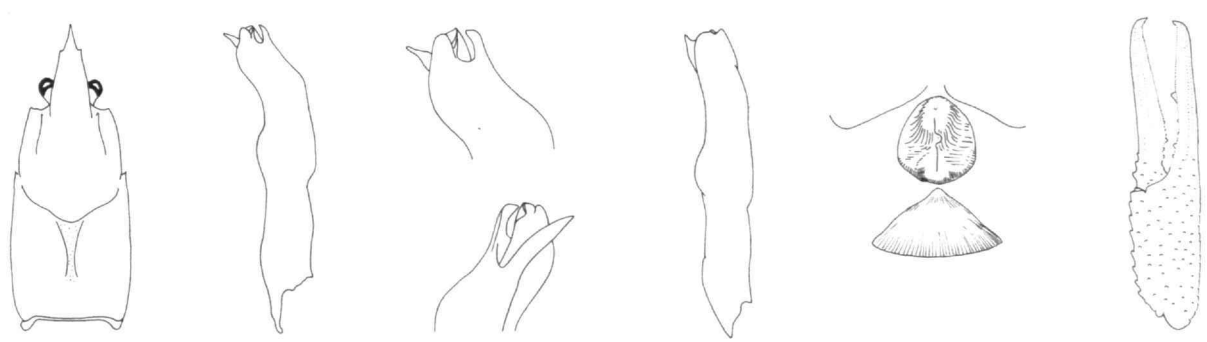
252. Procambarus (Ortmannicus) pearsei plumimanus



253. Procambarus (Ortmannicus) pearsei pearsei

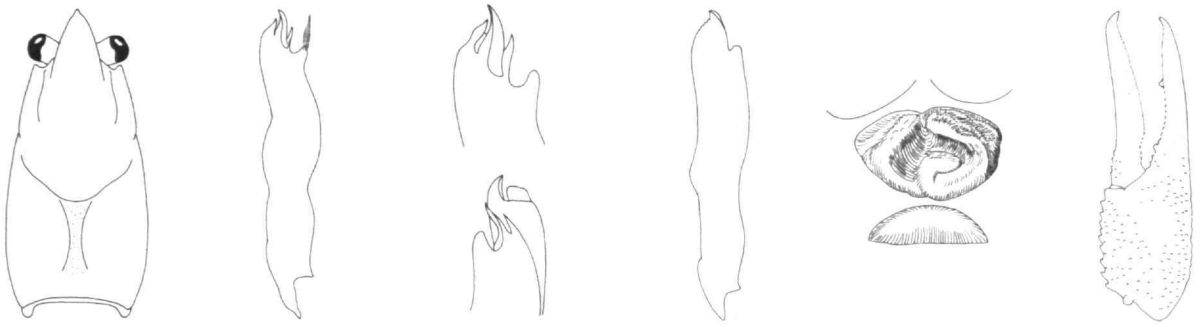


254. Procambarus (Ortmannicus) lewisi

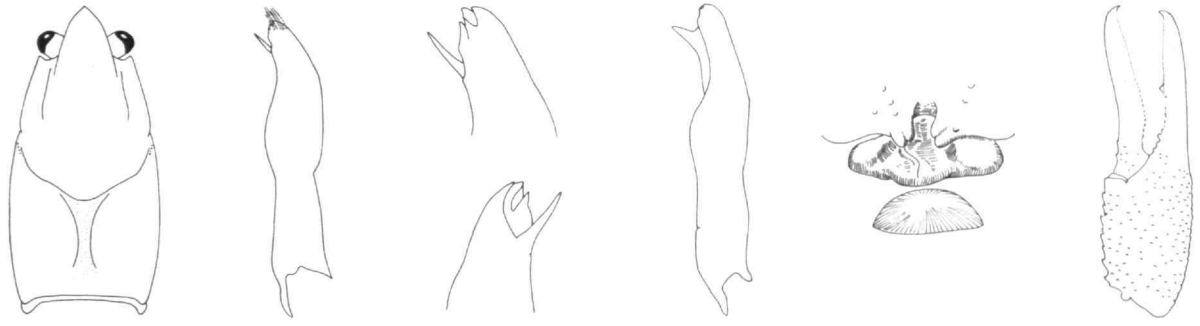


255. Procambarus (Ortmannicus) bivittatus

FIGURES 252–255

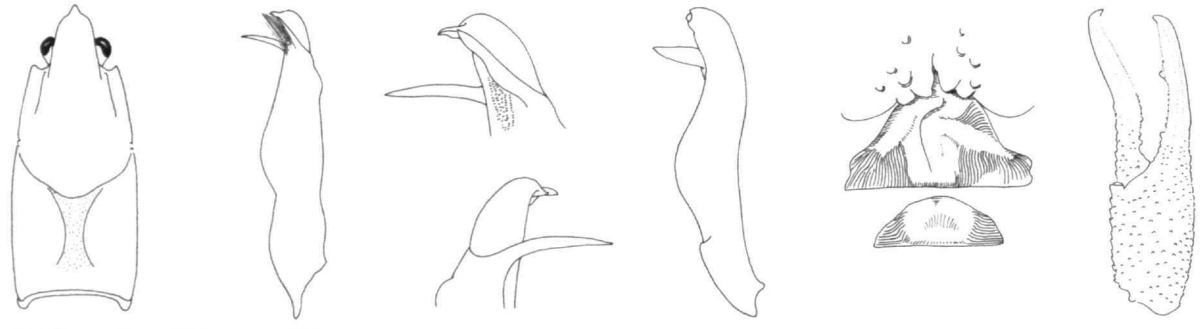


256. Procambarus (Ortmannicus) viaeviridis



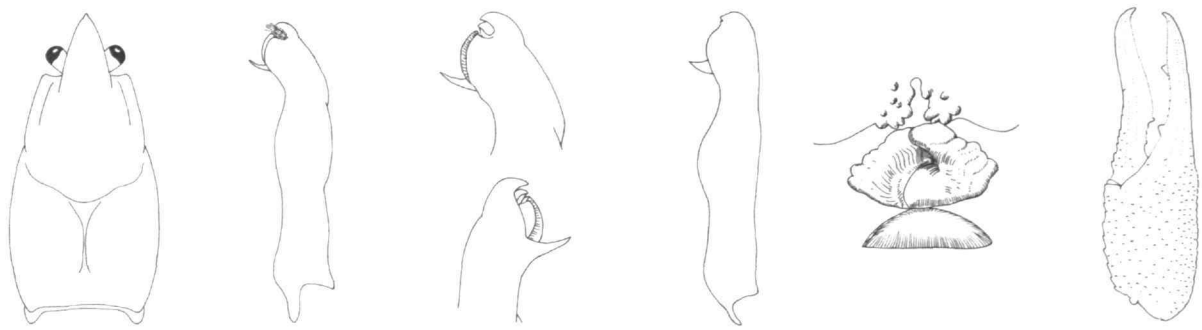
257. Procambarus (Ortmannicus) caballeroi

258. Procambarus (Ortmannicus) villalobosi

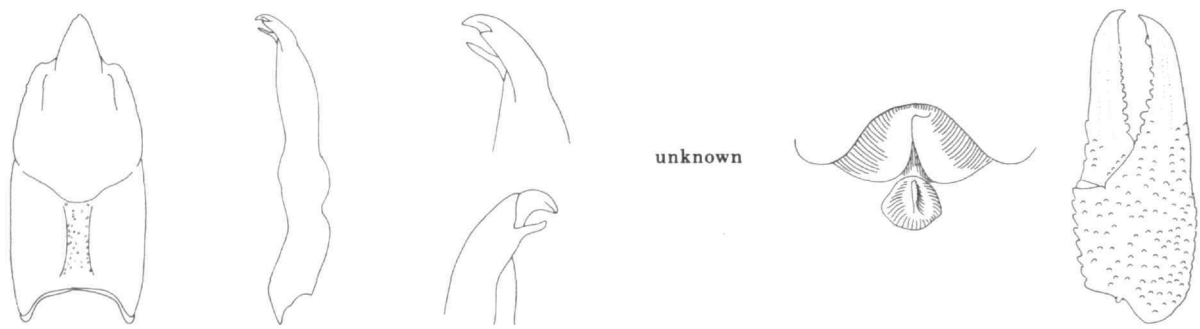


259. Procambarus (Ortmannicus) toltecae

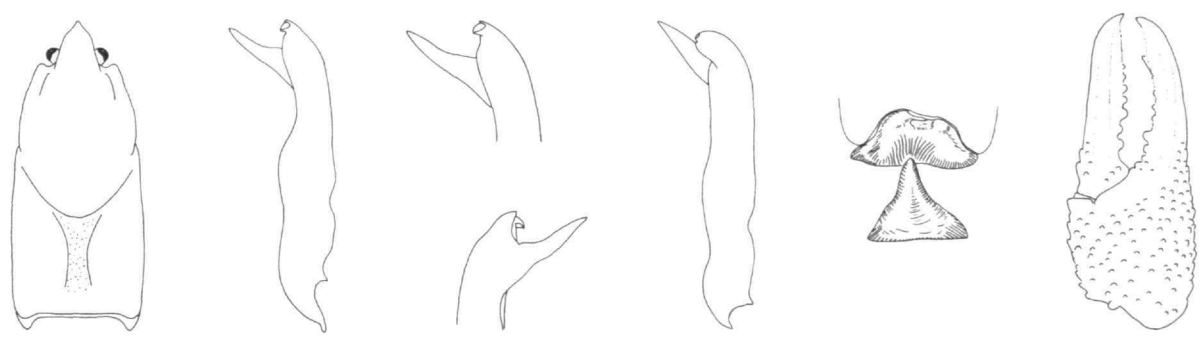
FIGURES 256–259



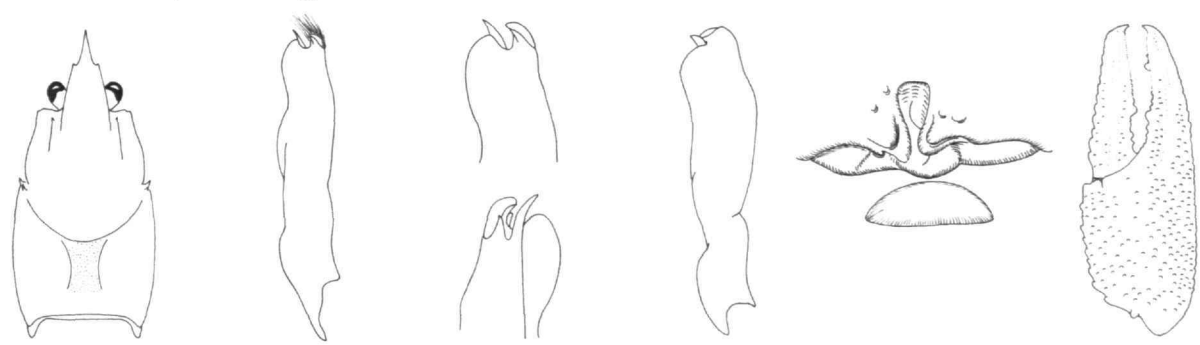
260. Procambarus (Ortmannicus) gonopodocristatus



261. Procambarus (Paracambarus) ortmannii

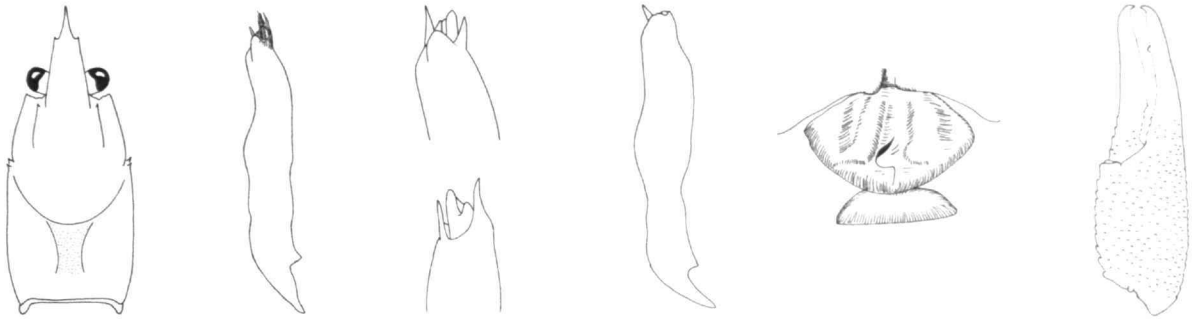


262. Procambarus (Paracambarus) paradoxus

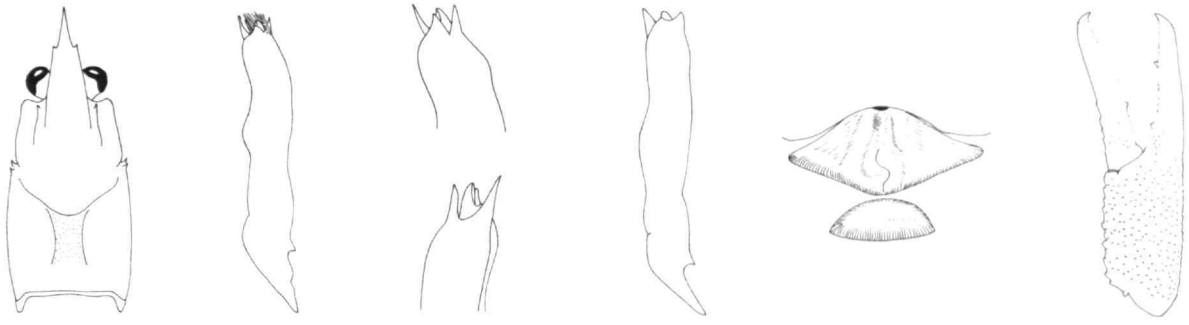


263. Procambarus (Pennides) suttkusi

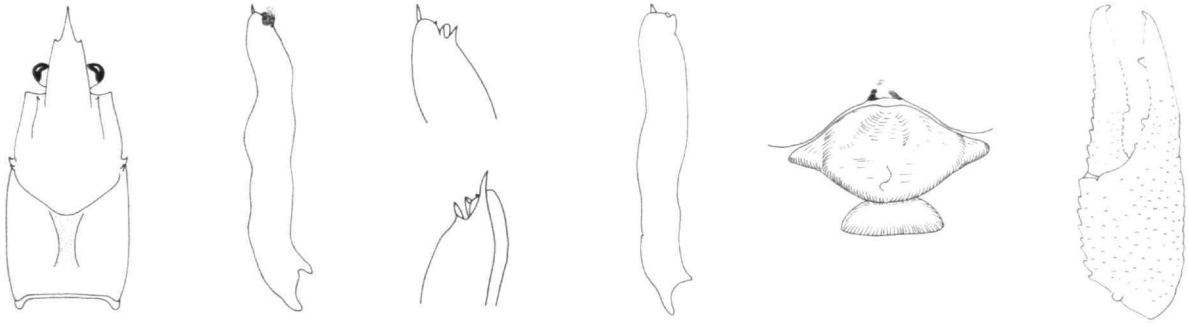
FIGURES 260–263



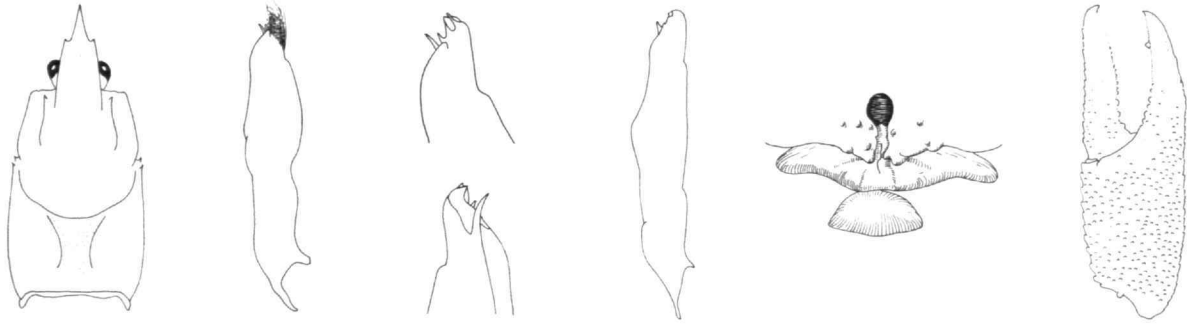
264. Procambarus (Pennides) natchitochae



265. Procambarus (Pennides) ablusus

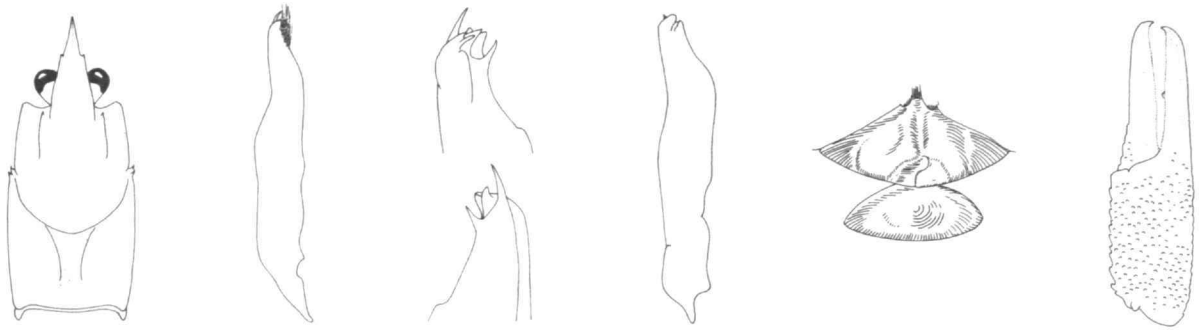


266. Procambarus (Pennides) elegans

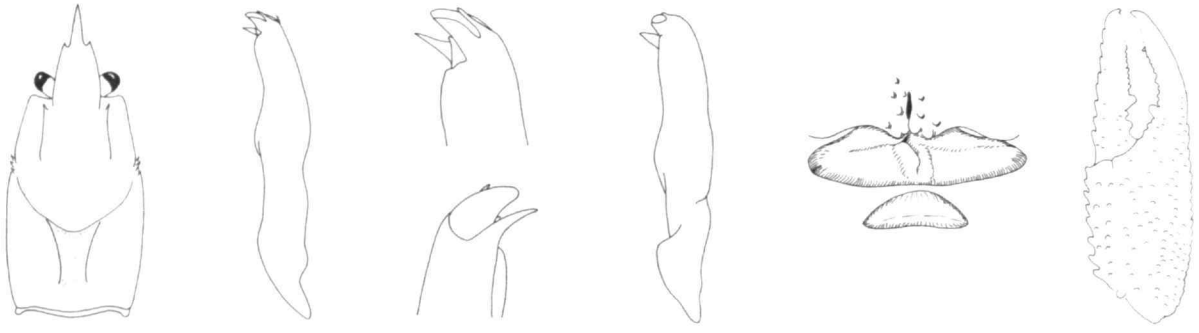


267. Procambarus (Pennides) versutus

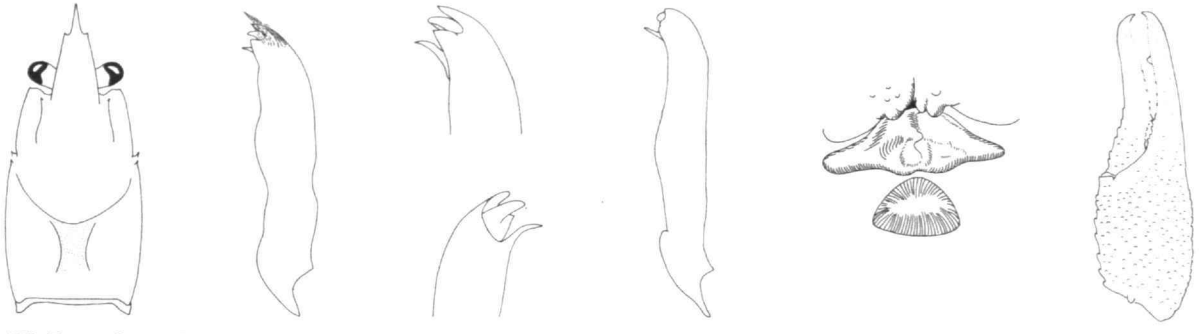
FIGURES 264–267



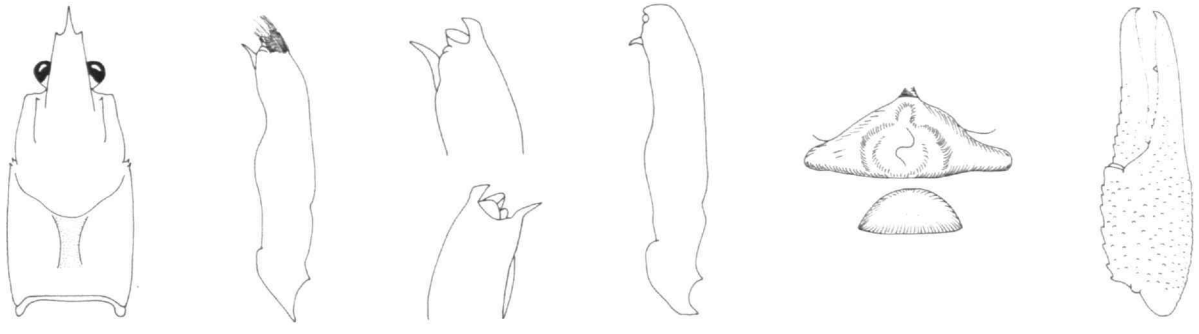
268. Procambarus (Pennides) lylei



269. Procambarus (Pennides) echinatus

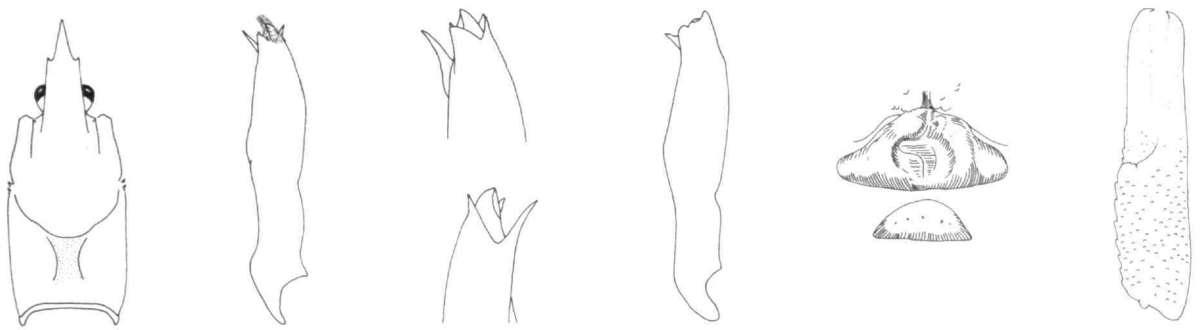


270. Procambarus (Pennides) dupratzi

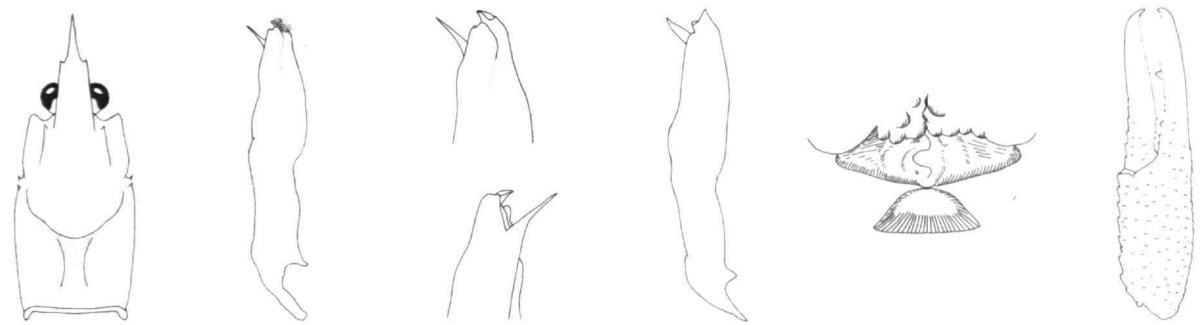


271. Procambarus (Pennides) vioscai

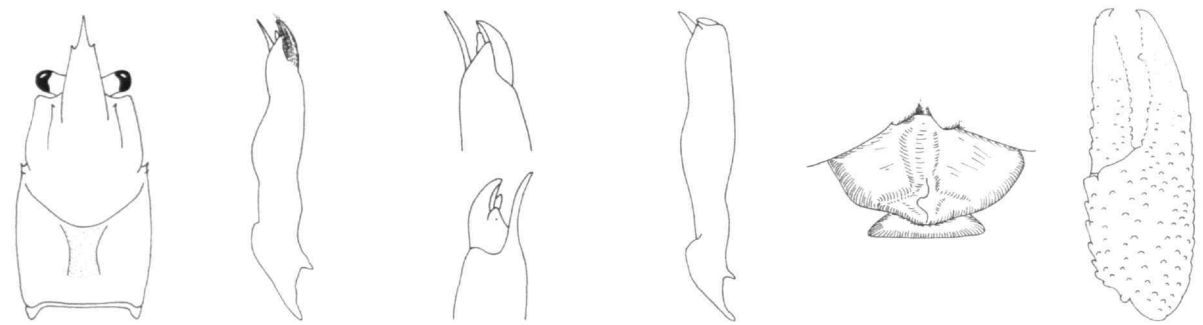
FIGURES 268–271



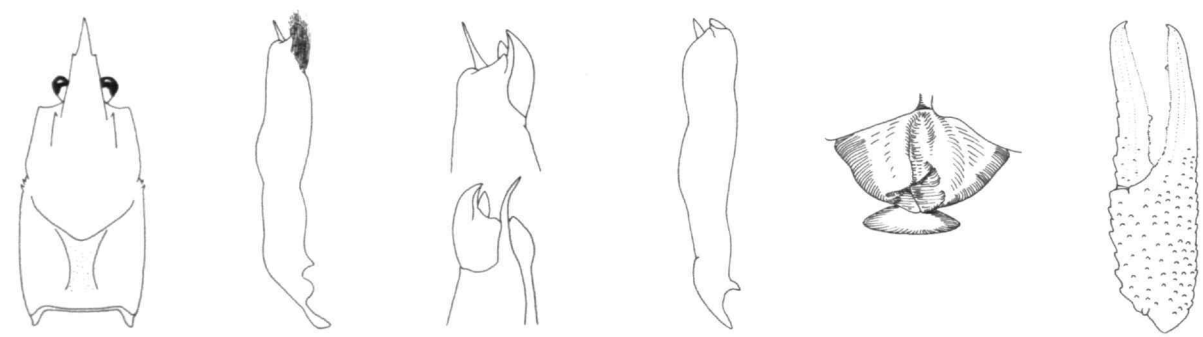
272. Procambarus (Pennides) penni



273. Procambarus (Pennides) lagniappe

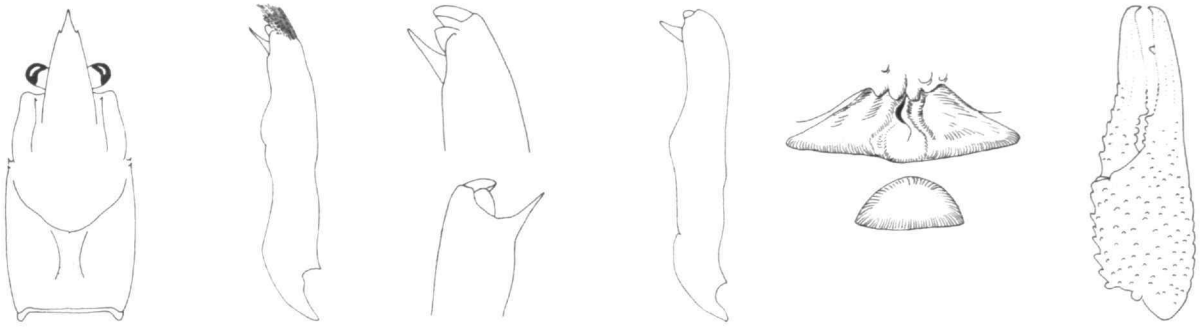


274. Procambarus (Pennides) spiculifer

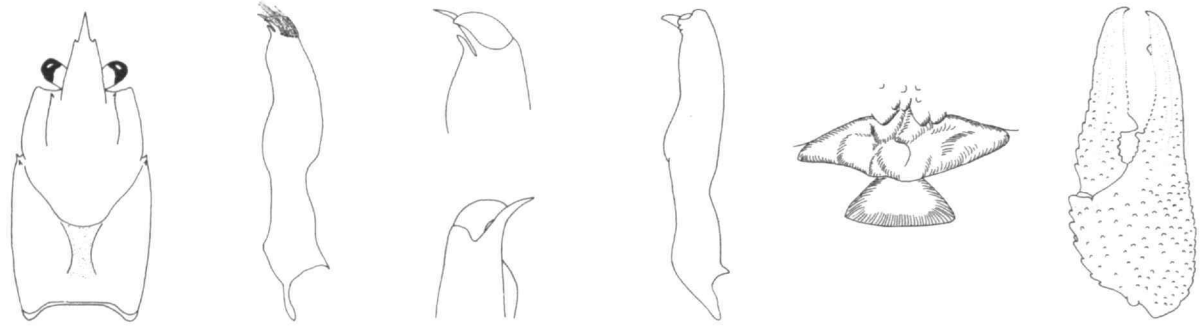


275. Procambarus (Pennides) gibbus

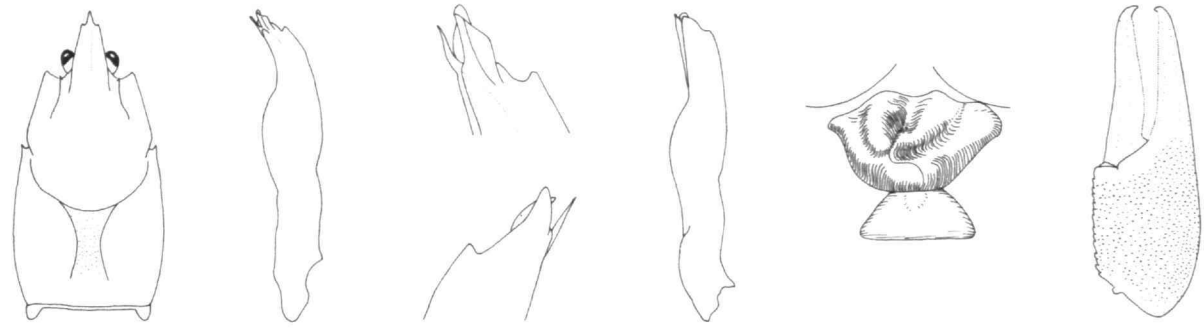
FIGURES 272–275



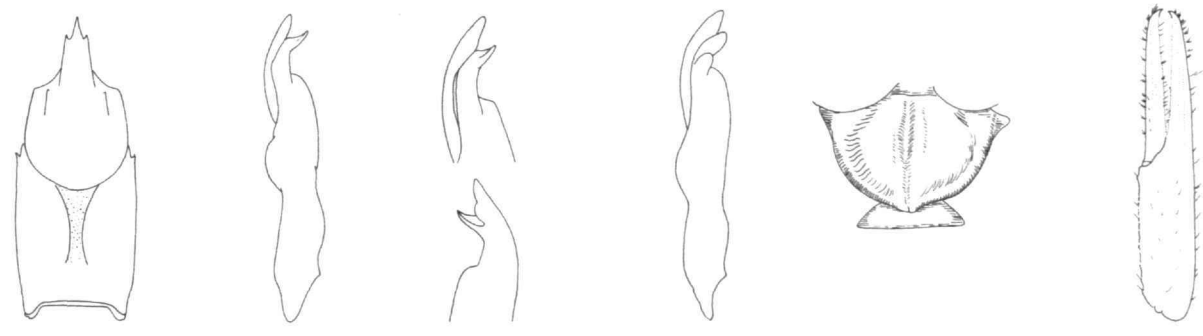
276. *Procambarus (Pennides) ouachitae*



277. *Procambarus (Pennides) raneyi*



278. *Procambarus (Procambarus) digueti*



279. *Procambarus (Remoticambarus) pecki*

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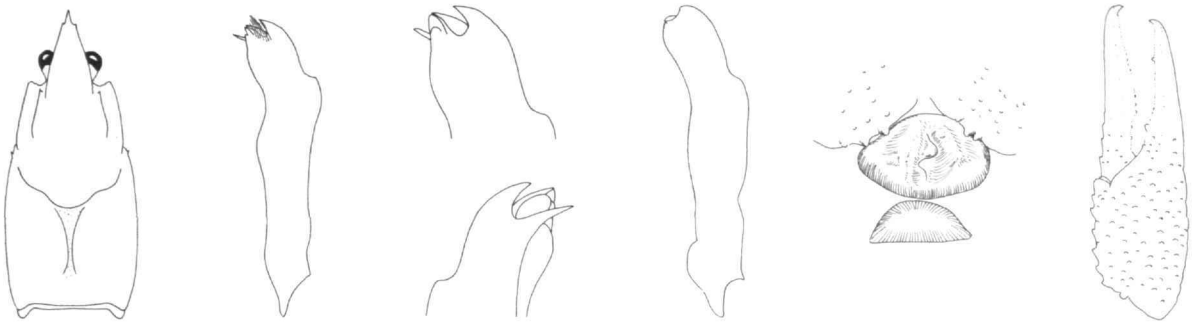
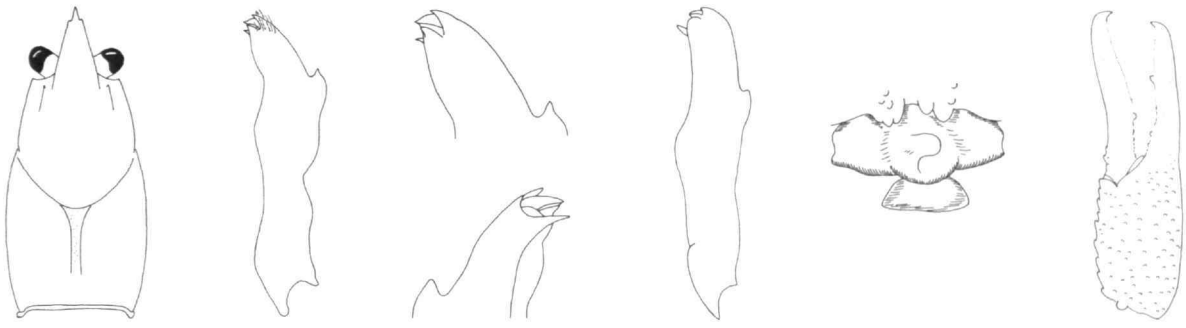
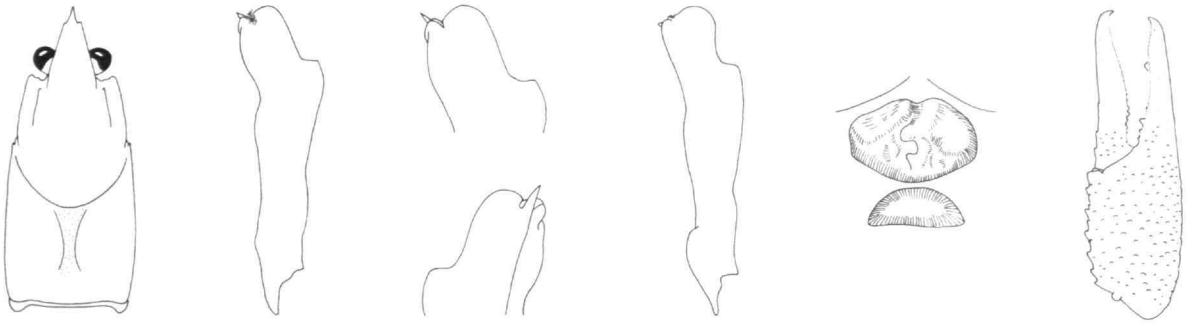


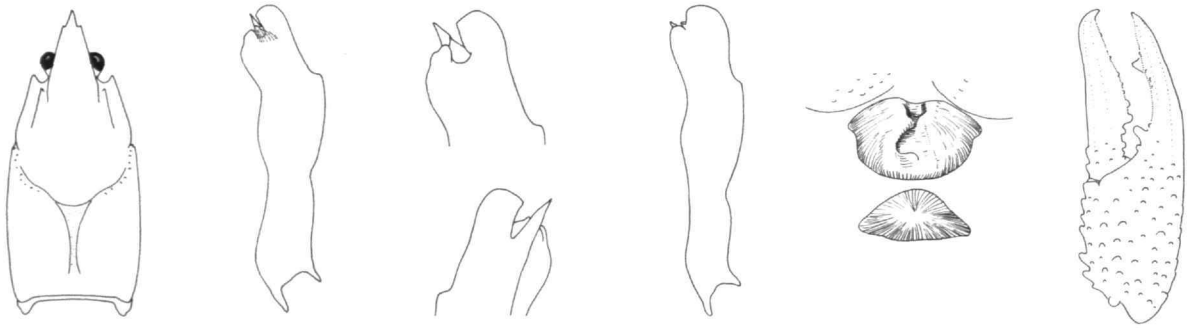
280. Procambarus (Scapulicambarus) paeninsulanus



281. Procambarus (Scapulicambarus) howellae



282. Procambarus (Scapulicambarus) okaloosae



283. Procambarus (Scapulicambarus) clarkii

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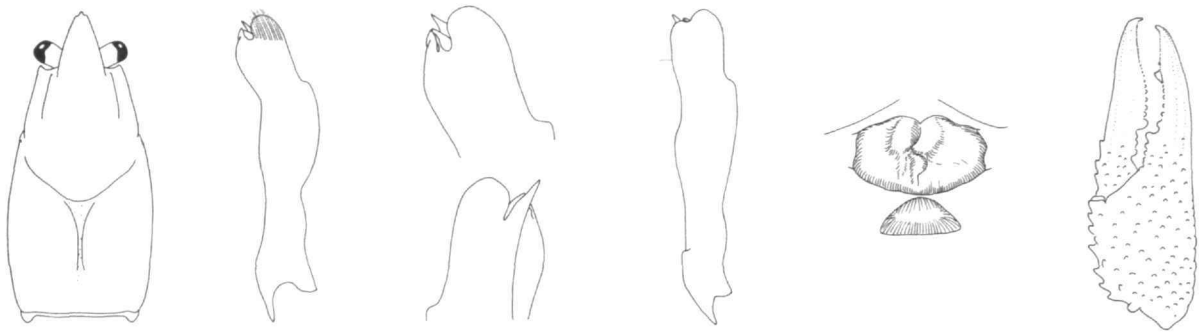
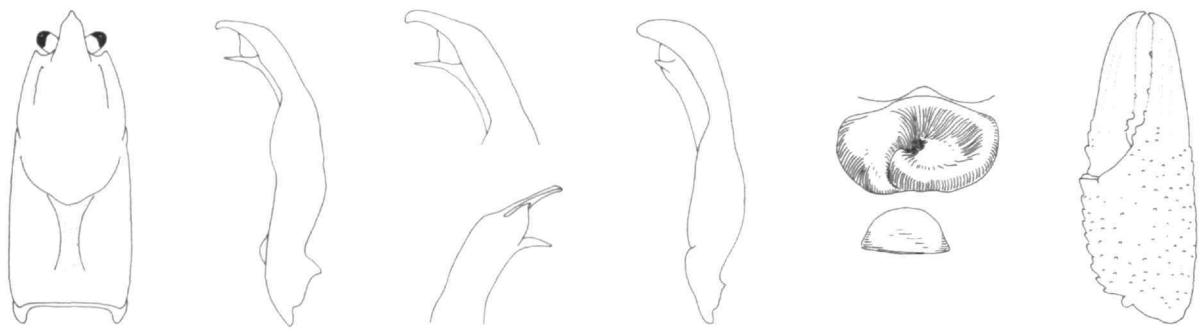
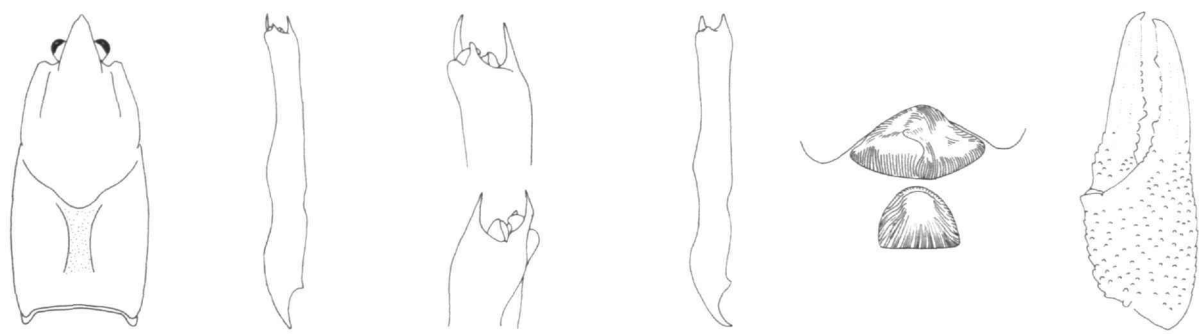


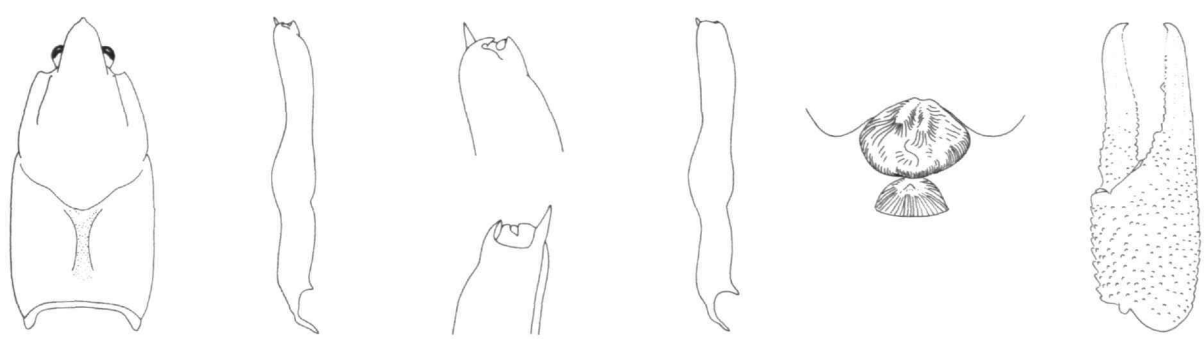
284. Procambarus (Scapulicambarus) troglodytes



285. Procambarus (Tenuicambarus) tenuis



286. Procambarus (Villalobosus) riojai



287. Procambarus (Villalobosus) hoffmanni

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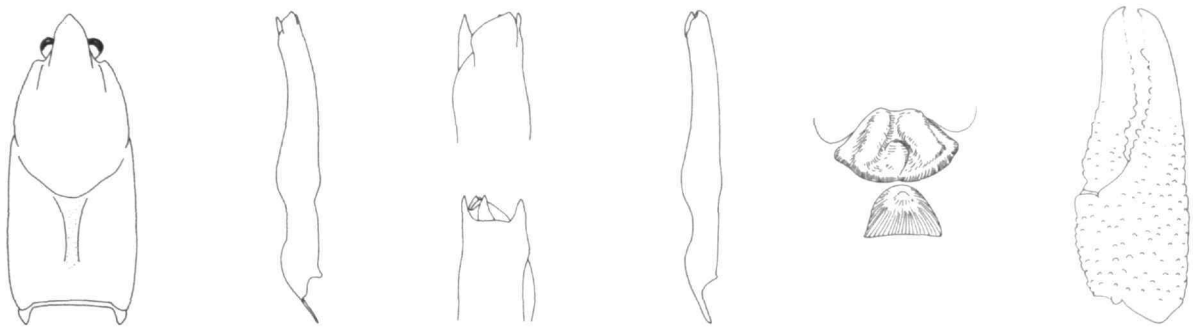
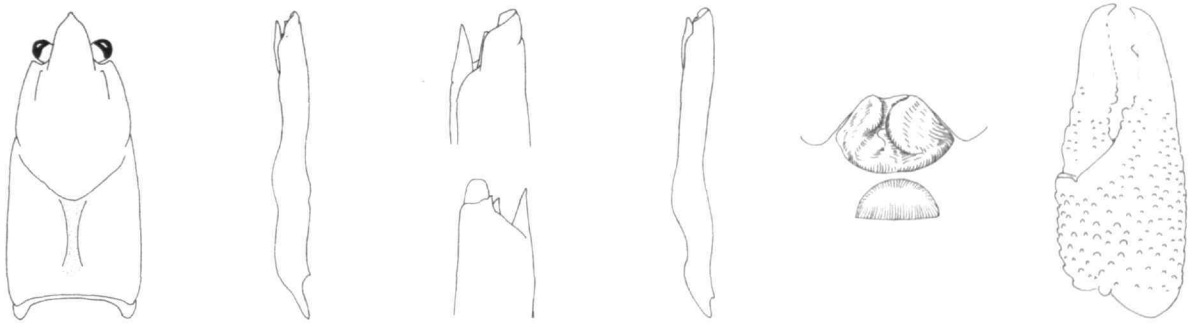
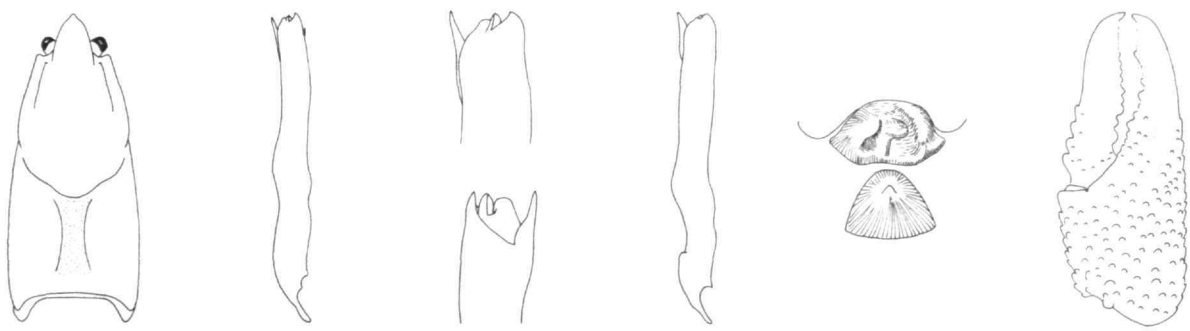


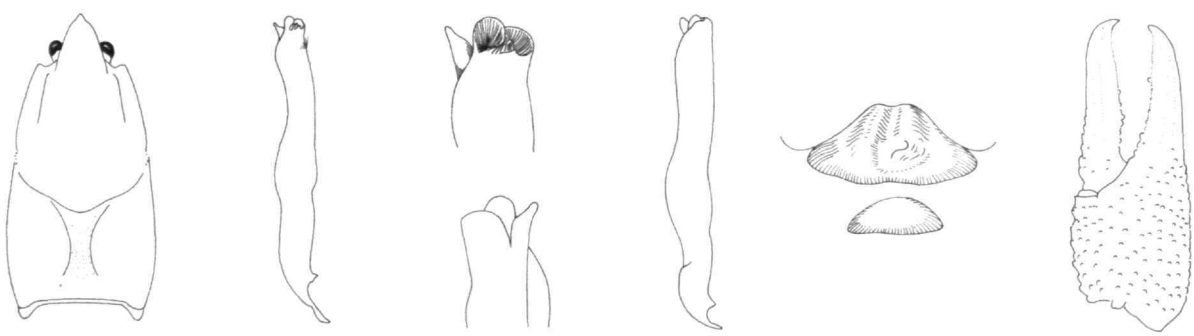
288. Procambarus (Villalobosus) erichsoni



289. Procambarus (Villalobosus) contrerasi



290. Procambarus (Villalobosus) hortonhobbsi



291. Procambarus (Villalobosus) zihuateutlensis

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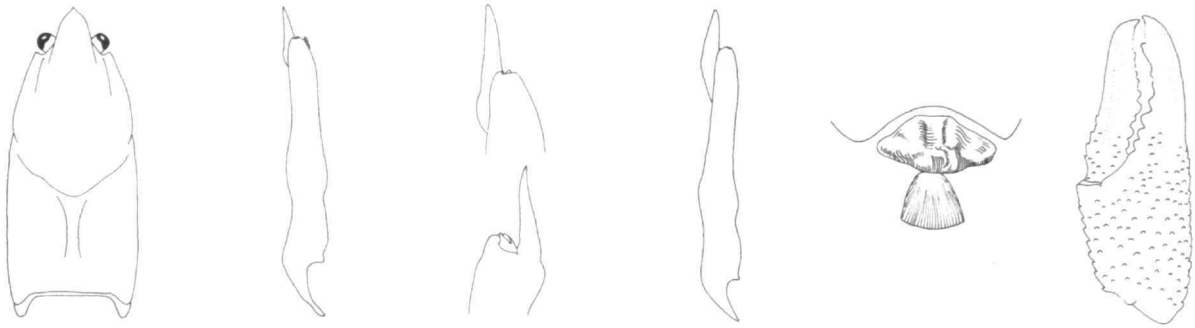
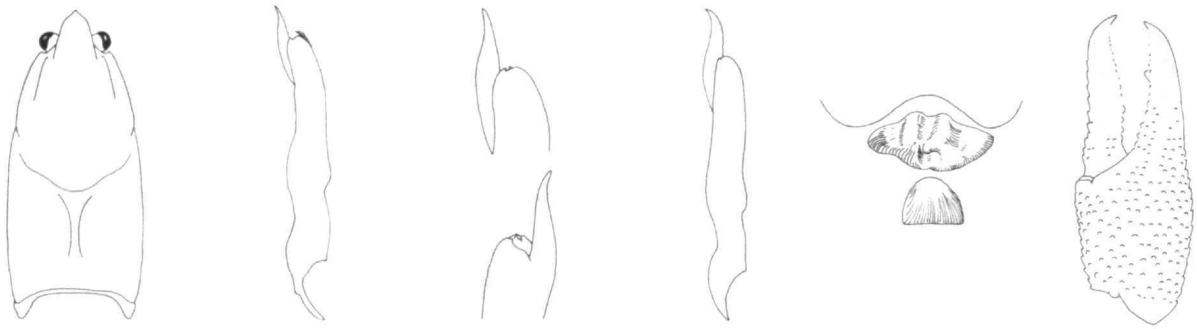
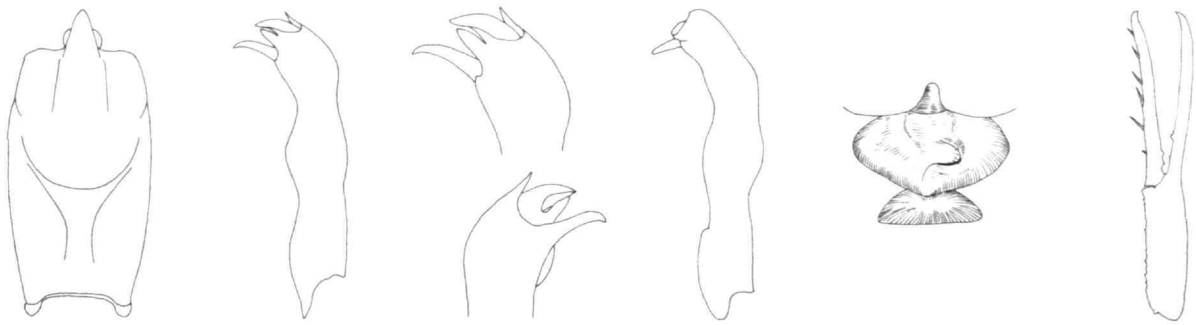


292. Procambarus (Villalobosus) teziutlanensis



293. Procambarus (Villalobosus) tlapacoyanensis



294. Troglocambarus maclanei

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(This index covers current valid names, nomina nuda, and synonyms; misspellings and combinations not presently in use are excluded)

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