

Type locality: — River Sarno, Pompeii, Italy. *Types*, U. S. N. M., No. 28,638; *paratypes*, M. C. Z., No. 7,409.

7. *ASTACUS TORRENTIUM*.

Cancer torrentium Schrank, Fauna Boica, 1803, 3, 1 Abth., p. 247.

Astacus saxatilis Koch, Deutschlands Crustaceen, Myriapoden und Arachniden, 1835?, 7, No. 1 (Panzer and Herrich-Schäffer's Deutschlands Insecten, 140, No. 1). *Type locality*: — Bavaria, in mountain brooks of the Oberpfalz and also in the Danube under stones.

Astacus tristis Koch, Deutschlands Crustaceen, Myriapoden und Arachniden, 1835?, 7, No. 2 (Panzer and Herrich-Schäffer's Deutschlands Insecten, 140, No. 2). *Type Locality*: — Bavaria, in a mountain brook at Bodenstein, Regen River system.

Astacus longicornis Lereboullet, Mém. Soc. Sci. Nat. Strasbourg, 1858, 5, p. 2. *Type locality*: — Ill and Bruche Rivers, Alsace.

Type locality: — Bavaria, in stony streams and also in lakes, e. g. Würm-See.

8. *ASTACUS GAMBELII*.

Cambarus gambelii Girard, Proc. Acad. Nat. Sci. Philad., 1852, 6, p. 90.

Type locality: — "California." *Types*, Acad. Nat. Sci. Philad.

8a. *ASTACUS GAMBELII CONNECTENS*.

Astacus gambelii connectens Faxon, supra, p. 360.

Type locality: — Snake River, Upper Salmon Falls, Idaho. *Type*, U. S. N. M. No. 23,096; *paratype*, M. C. Z., No. 7,385.

9. *ASTACUS NIGRESCENS*.

Astacus nigrescens Stimpson, Proc. Boston Soc. Nat. Hist., Feb., 1857, 6, p. 87.

Type locality: — Neighborhood of San Francisco, Cal. *Types* probably destroyed in the Chicago fire in 1871.

9a. *ASTACUS NIGRESCENS FORTIS*.

Astacus nigrescens fortis Faxon, supra, p. 360.

Type locality: — Fall River, Fall City Mills, Shasta Co., Cal. *Type*, U. S. N. M., No. 44,404; *paratypes*, M. C. Z., No. 7,383.

10. *ASTACUS TROWBRIDGII*.

Astacus trowbridgii Stimpson, Proc. Boston Soc. Nat. Hist., Feb., 1857, 6, p. 87.

Type locality: — Columbia River above Astoria, Oregon. *Cotypes*, U. S. N. M., No. 2,080; M. C. Z., No. 3,510; Bost. Soc. Nat. Hist.; Peabody Mus. Yale Univ.

11. *ASTACUS LENIUSCULUS*.

Astacus leniusculus Dana, Crustacea U. S. Expl. Exped., 1852, 1, p. 524.

?*Astacus oregonus* Randall, Journ. Acad. Nat. Sci. Philad., 1840, 8, p. 138.

Type locality: — Columbia River. *Type* destroyed.

Type locality: — Columbia River and Puget's Sound. *Cotype*, U. S. N. M., No. 2,019, and probably No. 2,161.

12. *ASTACUS KLAMATHENSIS*.

Astacus klamathensis Stimpson, Proc. Boston Soc. Nat. Hist., Feb., 1857, 6, p. 87.

Type locality: — Klamath Lake, Oregon. *Type* probably destroyed in the Chicago fire in 1871.

CAMBAROÏDES Faxon.

CAMBAROÏDES Faxon, Proc. Amer. Acad., 1884, 20, p. 150.

1. *CAMBAROÏDES JAPONICUS*.

Astacus japonicus De Haan, Crustacea of Siebold's Fauna Japonica, 1842, p. 164.

Type locality: — Japan.

2. *CAMBAROÏDES SIMILIS*.

Astacus (Cambaroïdes) similis Koelbel, Anz. Akad. Wissensch. Wien, math.-nat. Classe, 1892, 29, p. 176; Sitzungsber., 1892, 101, pt. 1, p. 650.

Type locality: — Province of Kjöng-Kur-do, Korea.

3. *CAMBAROÏDES DAURICUS*.

Astacus dauricus Pallas, Spicilegia Zoologica, 1772, Fasc. 9, p. 81.

Astacus leptorrhinus Fischer, Bull. Soc. Imp. Moscou, 1836, 9, p. 467.

Type locality: — Dauria. *Types*, St. Petersburg Mus.¹

4. *CAMBAROÏDES SCHRENCKII*.

Astacus schrenckii Kessler, Bull. Soc. Imp. Moscou, 1874, 48, p. 361.

Type locality: — Lower Amur River Basin.

¹ *I. e.*, were there when the species was described.

CAMBARUS Erichson.

CAMBARUS Erichson, Arch. Naturgesch., 1846, **12**, 1, p. 88.

§ I. Third segment of the third pair of legs of the male furnished with hooks. First pair of abdominal appendages of the male stout, inner and outer parts closely appressed, laterally compressed, with a horny (in the first form) spine at the tip; anterior margin with a prominent shoulder near the distal end. (Subgenus PROCAMBARUS of Ortmann.)

1. CAMBARUS DIGUETI.

Cambarus digueti Bouvier, Bull. Mus. Hist. Nat. Paris, 1897, **3**, p. 225.

Cambarus carinatus Faxon, Proc. U. S. N. M., Feb. 17, 1898, **20**, p. 648.

Type locality: — Guadalajara, Mexico. *Type*, U. S. N. M., No. 17,699, 1 ♂ f. I.; *paratypes*, U. S. N. M., No. 16,085 (Ameca, State of Jalisco, Mex.), 17,707 (Hacienda de Villachuato, State of Michoacan, Mex.); M. C. Z., No. 4,338 (Ameca, Mex.).

Type locality: — Affluents of River Santiago, State of Jalisco, Mexico. *Cotypes*, Mus. Hist. Nat. Paris; U. S. N. M., No. 30,579; Carnegie Mus. Pittsburgh.

2. CAMBARUS WILLIAMSONI.

Cambarus (Procambarus) williamsoni Ortmann, Annals Carnegie Mus., 1905, **3**, p. 439.

Type locality: — Los Amates, Province of Izabal, Guatemala. *Types*, Carnegie Mus. Pittsburgh.

3. CAMBARUS PILOSIMANUS.

Cambarus (Procambarus) pilosimanus Ortmann, Proc. Washington Acad. Sci., May 3, 1906, **8**, p. 6.

Type locality: — Coche, near Coban, Guatemala. *Types*, Mus. Hist. Nat. Paris; *paratypes*, Carnegie Mus. Pittsburgh (1 ♂ f. I., 1 ♀).

4. CAMBARUS MEXICANUS.

Astacus (Cambarus) mexicanus Erichson, Arch. Naturgesch., 1846, **12**, 1, p. 99.

Cambarus aztecus Saussure, Rev. et Mag. Zool., 1857, ser. 2, **9**, p. 503. *Type locality*: — Tomatlan [State of Vera Cruz?] Mexico. *Cotypes*, Geneva Mus.; U. S. N. M., No. 20,682 (1 ♂ ex Geneva Mus.).

Cambarus ruthveni Pearse, 13th Rept. Mich. Acad. Sci., 1911, p. 110. *Type locality*: — Cuatotolapam, Canton of Acayucan, State of Vera Cruz, Mexico. *Types*, Mus. Univ. Michigan, No. 41,704, 41,705, 1 ♂, 1 ♀.

Type locality: — Mexico. *Type* seemingly lost from the Berlin Mus.

5. CAMBARUS CUBENSIS.

Astacus (Cambarus) cubensis Erichson, Arch. Naturgesch., 1846, 12, 1, p. 100.

Type locality: — Cuba. *Type*, Berlin Mus.

5a. CAMBARUS CUBENSIS CONSOBRINUS.

Cambarus cubensis consobrinus Saussure, Rev. et. Mag. Zool., 1857, ser. 2, 9, p. 101.

Type locality: — Ponds in the central part of Cuba. *Cotypes*, Geneva Mus. (2 ♂); Mus. Hist. Nat. Paris (1 ♂); Berlin Mus. (2 ♀); U. S. N. M., No. 20,684 (1 ♂ ex Geneva Mus.).

5b. CAMBARUS CUBENSIS RIVALIS.

Cambarus cubensis rivalis Faxon, Bull. M. C. Z., October, 1912, 54, p. 459.

Type locality: — San Diego de los Baños, Province of Pinar del Rio, Cuba. *Type*, M. C. Z., No. 7,406.

6. CAMBARUS ATKINSONI.

Cambarus (Procambarus) atkinsoni Ortmann, Annals Carnegie Mus., May 5, 1913, 8, p. 414.

Type locality: — Tributaries of Rio de los Indios, Los Indios, Isle of Pines. *Types*, Carnegie Mus. Pittsburgh, No. 74,924.

§ II. Third segment of third pair of legs of the male provided with hooks. First pair of abdominal legs of the male truncate, outer part closely applied to the inner and armed at the tip with from one to three horny, recurved teeth; inner part ending in a sharp spine generally directed outward. (Subgenus CAMBARUS of Ortmann, in part.)

7. CAMBARUS BOUVIERI.

Cambarus (Cambarus) bouvieri Ortmann, Ann. Sci. Nat., 1909, sér. 9, 7, p. 159.

Type locality: — Uruapan, Michoacan, Mexico. *Cotypes*, Mus. Hist. Nat. Paris (2 ♂ f. I., 1 ♀); Carnegie Mus. Pittsburgh (1 ♂ f. I.).

8. CAMBARUS SIMULANS.

Cambarus simulans Faxon, Proc. Amer. Acad., 1884, 20, p. 112.

Cambarus gallinus Cockerell and Porter, Proc. Acad. Nat. Sci. Philad., 1900,

p. 434. *Type locality*: — Gallinas River at Las Vegas, N. Mex. *Types*, U. S. N. M., No. 23,916; *paratypes*, M. C. Z., No. 7,342; Acad. Nat. Sci. Philad.

Type locality: — Dallas, Texas. *Types*, M. C. Z., No. 3,646; *paratypes*, M. C. Z., No. 3,647; U. S. N. M., No. 4,150; St. Petersburg Mus.

9. CAMBARUS GRACILIS.

Cambarus gracilis Bundy, Bull. Illinois State Lab. Nat. Hist., Dec. 1876, 1, p. 5.

Type locality: — Normal, McLean Co., Ill., and Racine, Racine Co., Wisconsin. *Cotypes*, Ill. State Lab. Nat. Hist., Urbana, Ill.; M. C. Z., No. 3,794 (Normal, Ill.), No. 3,454 (Racine, Wis.).

10. CAMBARUS HAGENIANUS.

Cambarus hagenianus Faxon, Proc. Amer. Acad., 1884, 20, p. 141.

Type locality: — Charleston, S. C. *Type*, M. C. Z., No. 232 (1 ♂ f. I.).

11. CAMBARUS ADVENA.

Cambarus advena LeConte, Proc. Acad. Nat. Sci. Philad., 1855, 7, p. 402.

Type locality: — Lower Georgia. *Cotypes*, M. C. Z., No. 3,379; Acad. Nat. Sci. Philad.

§ III. Third segment of third and fourth pairs of legs of the male furnished with a hook. First pair of abdominal appendages of male truncate, outer part closely applied to inner part and armed at the end with from one to three horny recurved teeth; inner part ending in a sharp spine which is often directed outward. (Subgen. CAMBARUS of Ortmann in part.)

12. CAMBARUS SPICULIFER.

Astacus spiculifer Le Conte, Proc. Acad. Nat. Sci. Philad., 1855, 7, p. 401.

Type locality: — Athens, Clarke Co., Georgia. *Cotypes*, M. C. Z., No. 3,376 (1 ♂ f. I.); Acad. Nat. Sci. Philad. (1 ♂ f. II); *paratypes*, M. C. Z., No. 172 (11); U. S. N. M., No. 4,962 (1 ♂); Mus. Hist. Nat. Paris (2).

13. CAMBARUS VERSUTUS.

Cambarus versutus Hagen, Mem. M. C. Z., 1870, 2, p. 51.

Type locality: — Spring Hill, Mobile Co., Ala. *Types*, M. C. Z., No. 190; *paratypes*, U. S. N. M., No. 4,963, (1 ♂); Mus. Hist. Nat. Paris (2); Australian Mus., Sydney.

14. CAMBARUS PUBESCENS.

Cambarus pubescens Faxon, Proc. Amer. Acad., 1884, 20, p. 109.

Type locality: — McBean Creek, Augusta, Georgia. *Types*, U. S. N. M., No. 3,181 (1 ♂ f. II., 1 ♀); *paratypes*, M. C. Z., No. 3,551 (2 ♀).

15. CAMBARUS ANGUSTATUS.

Cambarus angustatus LeConte, Proc. Acad. Nat. Sci. Philad., 1855, 7, p. 401.

Type locality: — Lower Georgia, in streams of clear water, between sand-hills. *Type*, Acad. Nat. Sci. Philad. (1 ♂ f. I.).

16. CAMBARUS LECONTEI.

Cambarus lecontei Hagen, Mem. M. C. Z., 1870, 2, p. 47.

Type locality: — Mobile, Ala. *Types*, M. C. Z., No. 217; *paratypes*, U. S. N. M., No. 4,958; Mus. Hist. Nat. Paris (2); Mus. Würzburg (2); Mus. St. Petersburg (2); Australian Mus., Sydney.

17. CAMBARUS BLANDINGII.

Astacus blandingii Harlan, Trans. Amer. Philos. Soc., 1830, 3, p. 464.

Type locality: — Marshes and rivulets, Southern United States [Camden, Kershaw Co., S. C.?]. *Type*, Acad. Nat. Sci. Philad. (1 ♂).

17a. CAMBARUS BLANDINGII ACUTUS.

Cambarus acutus Girard, Proc. Acad. Nat. Sci. Philad., 1852, 6, p. 91.

Cambarus acutissimus Girard, Proc. Acad. Nat. Sci. Philad., 1852, 6, p. 91.

Type locality: — Affluent of Mobile River, Kemper Co., Miss. *Type* probably destroyed in the Chicago fire in 1871; *paratypes* (?), Acad. Nat. Sci. Philad. (2).

Type locality: — Affluent of Mobile River, Kemper Co., Miss. *Type* probably destroyed in the Chicago fire in 1871.

18. CAMBARUS HAYI.

Cambarus hayi Faxon, Proc. Amer. Acad., 1884, 20, p. 108.

Type locality: — Macon, Noxubee Co., Miss. *Type*, M. C. Z., No. 3,533; *paratypes*, U. S. N. M., No. 19,752, 21,850.

19. CAMBARUS FALLAX.

Cambarus fallax Hagen, Mem. M. C. Z., 1870, 2, p. 45.

Type locality: — Florida. *Cotypes*, Boston Soc. Nat. Hist. (1 ♂ f. II., 1 ♀); M. C. Z., No. 3526 (1 ♂ f. I., 1 ♂ f. II.).

20. CAMBARUS ACHERONTIS.

Cambarus acherontis Lönnberg, Bihang K. Svenska Vet.-Akad. Handl., 1894, 20, af. 4, no. 1, p. 6.

Type locality: — Subterranean rivulet about 42 feet from surface, Lake Brantley, Orange Co., Fla.

21. CAMBARUS CLARKII.

Cambarus clarkii Girard, Proc. Acad. Nat. Sci. Philad., 1852, 6, p. 91.

Type locality: — Between San Antonio and El Paso del Norte, Texas. *Types* probably destroyed in the Chicago fire in 1871.

21a. CAMBARUS CLARKII PAENINSULANUS.

Cambarus clarkii paeninsulanus Faxon, supra, p. 369.

Type locality: — Three miles below Horse Landing, St. John's River, Florida. *Type*, M. C. Z., No. 3,530 (1 ♂, f. II.); *paratypes*, U. S. N. M., No. 28,587, 28,589; M. C. Z., No. 7,370 (Beecher Point, St. John's River, Fla.).

22. CAMBARUS TROGLODYTES.

Astacus troglodytes LeConte, Proc. Acad. Nat. Sci. Philad., 1855, 7, p. 400.

Astacus fossarum LeConte, Proc. Acad. Nat. Sci. Philad., 1855, 7, pl. 401.

Type locality: — Ditches, Lower Georgia. *Cotypes*, M. C. Z., No. 3377; Acad. Nat. Sci. Philad.

Type locality: — Rice-fields, Georgia. *Cotypes*, M. C. Z., No. 3,375 (♂, f. I.); Acad. Nat. Sci. Phila. (♂ f. I.).

23. CAMBARUS EVERMANNI.

Cambarus evermanni Faxon, Proc. U. S. Nat. Mus., May 22, 1890, 12, p. 620.

Type locality: — Escambia River, at Flomaton, Escambia Co., Ala. *Type*, M. C. Z., No. 3,834 (1 ♂ f. I.).

24. CAMBARUS VIAE-VIRIDIS.

Cambarus viae-viridis Faxon, supra, p. 370.

Type locality: — St. Francis River, Greenway, Clay Co., Arkansas. *Type*, M. C. Z., No. 7,336.

25. CAMBARUS BARBATUS.

Astacus penicillatus LeConte (nec Olivier, 1791), Proc. Acad. Nat. Sci. Philad., 1855, 7, p. 401. *Type locality*: — Lower Georgia.

Cambarus barbatus Faxon, Proc. U. S. Nat. Mus., May 22, 1890, 12, p. 621. *Type locality*: — Georgia. *Type*, M. C. Z., No. 279 (1 ♂ f. I.); *paratypes*, M. C. Z., No. 3,845, Escambia River, Flomaton, Alabama.

26. CAMBARUS WIEGMANNI.

Astacus (Cambarus) wiegmanni Erichson, Archiv Naturgesch., 1846, 12, 1, p. 99.

Type locality: — Mexico. *Type* apparently lost from the Berlin Mus.

27. CAMBARUS HINEI.

Cambarus (Cambarus) hinei Ortmann, Ohio Naturalist, Dec. 1905, 6, p. 401.

Type locality: — Near Cameron, Cameron Co., La.

28. CAMBARUS ALLENI.

Cambarus alleni Faxon, Proc. Amer. Acad., 1884, 20, p. 110.

Type locality: — St. John's River, Hawkinsville, Orange Co., Fla. *Type*, M. C. Z., No. 3,531 (1 ♂ f. l.).

29. CAMBARUS PELLUCIDUS.

Astacus pellucidus Tellkampff, Arch. Anat. Physiol. wiss. Med., 1844, p. 383.

Orconectes inermis Cope, Amer. Nat., July, 1872, 6, p. 419; 3d and 4th Ann. Rept. Geol. Surv. Indiana, 1872, p. 173. *Type locality*: — Wyandotte Cave, Indiana.

Type locality: — Mammoth Cave, Kentucky. *Type*, Berlin Mus.

29a. CAMBARUS PELLUCIDUS TESTII.

Cambarus pellucidus, var. *testii* Hay, Proc. Indiana Acad. Sci., 1891, p. 148; Proc. U. S. Nat. Mus., Sept. 28, 1893, 16, p. 285.

Type locality: — Mayfield's Cave, Monroe Co., Ind. *Types*, U. S. N. M., No. 17,702; *paratypes*, U. S. N. M., No. 19,765, 19,766, 22,431; M. C. Z., No. 7,431.

§ IV. Third segment of fourth pair of legs of male hooked. Inner and outer parts of the first pair of abdominal appendages of male closely appressed, outer part terminating in a recurved horny (in form I.) tooth; the inner part giving off a long horny (in form I.) spine at an acute angle with the axis of the limb. (Subgen. PARACAMBARUS of Ortmann.)

30. CAMBARUS PARADOXUS.

Cambarus (Paracambarus) paradoxus Ortmann, Proc. Washington Acad. Sci., May 3, 1906, 8, p. 3.

Type locality: — Sierra de Zacapoaxtla, State of Puebla, Mexico ("ruis-seaux torrentueux des montagnes, a le cañada de Tetela de Ocampo"). *Types*;

Mus. Hist. Nat. Paris (1 ♂ f. I., 1 ♂ f. II., 1 ♀); *paratypes*, Carnegie Mus. Pittsburgh; M. C. Z., No. 6,955 (1 ♂ f. I., 1 ♂ f. II., 1 ♀).

§ V. Third segment of second and third pairs of legs of male hooked. First pair of abdominal appendages of male not truncate, inner and outer parts separate and divergent for some distance from the tip; outer branch cleft into two slender teeth at the end; inner branch either acute or spatulate at the tip. (Subg. *CAMBARELLUS* of Ortmann.)

31. *CAMBARUS SHUFELDTII*.

Cambarus shufeldtii Faxon, Proc. Amer. Acad., 1884, 20, p. 134.

Type locality: — Near New Orleans, La. *Cotypes*, U. S. N. M., No. 4,860; M. C. Z., No. 3,684.

32. *CAMBARUS MONTEZUMAE*.

Cambarus montezumae Saussure, Rev. et Mag. Zool., 1857, sér. 2, 9, p. 102.

Type locality: — Swamps of the Valley of Mexico; specifically, ponds in the park of Chapultepec, Mexico. *Cotypes*, Geneva Mus.; Berlin Mus.; U. S. N. M., No. 20,683 (ex Geneva Mus.).

32a. *CAMBARUS MONTEZUMAE DUGESII*.

Cambarus montezumae dugesii Faxon, Proc. U. S. Nat. Mus., Feb. 17, 1898, 20, p. 660.

Type locality: — State of Guanajuato, Mexico. *Types*, U. S. N. M., No. 16,087; *paratypes*, M. C. Z., No. 4,339.

32b. *CAMBARUS MONTEZUMAE AREOLATUS*.

Cambarus montezumae, var. *areolata* Faxon, Mem. M. C. Z., 1885, 10, p. 123.

Type locality: — Near Parras, Cohahuila, Mexico. *Type*, M. C. Z., No. 3,650.

32c. *CAMBARUS MONTEZUMAE CHAPALANUS*.

Cambarus chapalanus Faxon, Proc. U. S. Nat. Mus., Feb. 17, 1898, 20, p. 661.

Type locality: — Lake Chapala, State of Jalisco, Mexico. *Type*, U. S. N. M., No. 17,698 (1 ♂); *paratypes*, U. S. N. M., No. 16,294 (2 ♂); M. C. Z., No. 4,777 (1 ♂).

32d. *CAMBARUS MONTEZUMAE OCCIDENTALIS*.

Cambarus montezumae occidentalis Faxon, Proc. U. S. N. M., Feb. 17, 1898, 20, p. 661.

Type locality: — Mazatlan, State of Cinaloa, Mexico. *Types*, M. C. Z., No. 3,652.

§ VI. Third segment of third pair of legs of male hooked. First pair of abdominal appendages of male (usually elongate) split into two rami, straight or somewhat recurved, and acute at the tips. (Subg. FAXONIUS of Ortmann.)

33. CAMBARUS HARRISONII.

Cambarus harrisonii Faxon, Proc. Amer. Acad., 1884, 20, p. 130.

Type locality: — Irondale, Washington Co., Mo. *Types*, M. C. Z., No. 3,586; *paratypes*, U. S. N. M., No. 25,826.

34. CAMBARUS SLOANII.

Cambarus sloanii Bundy, Bull. Illinois State Lab. Nat. Hist., Dec., 1876, 1, p. 24.

Type locality: — New Albany, Floyd Co., Ind. *Types*, M. C. Z., No. 3,806 (1 ♂ f. I., 1 ♀).

35. CAMBARUS INDIANENSIS.

Cambarus indianensis Hay, 20th Ann. Rept. Depart. Geol. & Nat. Resources Indiana, 1896, p. 494.

Type locality: — Patoka River at Patoka, Gibson Co., Ind. *Types*, U. S. N. M., No. 14,624, 2 ♂ f. I., 2 ♀; *paratypes*, M. C. Z., No. 3,859, 2 ♂ f. I., 2 ♀.

36. CAMBARUS AFFINIS.

?*Cambarus limosus* Rafinesque, Amer. Monthly Mag. & Crit. Rev., Nov. 1817, 2, p. 42. *Type locality*: — In the muddy banks of the Delaware River, near Philadelphia, Pa. (Indeterminable from the description; types not extant.)

Cambarus affinis Say, Journ. Acad. Nat. Sci. Philad., 1817, 1, p. 168.

Cambarus pealei Girard, Proc. Acad. Nat. Sci. Philad., 1852, 6, p. 87. *Type locality*: — Potomac River at Washington, D. C. *Type*, U. S. N. M., No. 2,081 (2 ♂, 2 ♀).

Type locality: — Delaware River.

37. CAMBARUS PROPINQUUS.

Cambarus propinquus Girard, Proc. Acad. Nat. Sci. Philad., 1852, 6, p. 88.

Type locality: — Garrison Creek, Sacket Harbor, Jefferson Co., N. Y., Four-mile Creek, Oswego, Oswego Co., N. Y. *Types* probably destroyed in the Chicago fire in 1871; *paratype* (?), Acad. Nat. Sci. Philad. (1 ♂).

37a. CAMBARUS PROPINQUUS SANBORNII.

Cambarus sanbornii Faxon, Proc. Amer. Acad., 1884, 20, p. 128.

Type locality:—Oberlin, Lorain Co., Ohio. *Types*, M. C. Z., No. 3,692; *paratypes*, M. C. Z., No. 3,587 (Smoky Creek, Carter Co., Ky.).

38. CAMBARUS OBSCURUS.

Cambarus obscurus Hagen, Mem. M. C. Z., 1870, 2, p. 69.

Type locality:—Genesee River, Rochester, Monroe Co., N. Y. *Cotypes*, M. C. Z., No. 181, 3,353, 3,354; U. S. N. M., No. 4,971; Mus. Hist. Nat. Paris; Würzburg Mus.; Australian Mus., Sydney.

39. CAMBARUS ERICHSONIANUS.

Cambarus erichsonianus Faxon, Proc. U. S. Nat. Mus., Feb. 17, 1898, 20, p. 659.

Type locality:—Rip Roaring Fork, five miles northwest of Greeneville, Greene Co., Tenn. *Cotypes*, U. S. N. M., No. 20,787; M. C. Z., No. 4,347.

40. CAMBARUS RUSTICUS.

Cambarus rusticus Girard, Proc. Acad. Nat. Sci. Philad., 1852, 6, p. 88.

Cambarus placidus Hagen, Mem. M. C. Z., 1870, 2, p. 65. *Type locality*:—Lebanon, Wilson Co., Tenn.; Quincy, Adams Co., Ill.; Texas. *Cotypes*, M. C. Z., No. 289, 296, 170; U. S. N. M., No. 4,966; Mus. Hist. Nat. Paris; Würzburg Mus.; Australian Mus., Sydney.

Cambarus juvenilis Hagen, Mem. M. C. Z., 1870, 2, p. 66. *Type locality*:—Little Hickman, Jessamine Co., Ky. *Cotypes*, M. C. Z., No. 213, 3,347; U. S. N. M., No. 4,967; Mus. Hist. Nat. Paris; Würzburg Mus.; Australian Mus.

Cambarus wisconsinensis Bundy, Bull. Ill. State Lab. Nat. Hist., Dec., 1876, 1, p. 4. *Type locality*:—Racine, Racine Co., Wisconsin. *Type*, M. C. Z., No. 3,448 (1 ♂ f. II).

Type locality:—Ohio River, at Cincinnati, Ohio. *Types* probably destroyed in the Chicago fire in 1871; *paratype* (?), Acad. Nat. Sci. Philad.

41. CAMBARUS FORCEPS.

Cambarus forceps Faxon, Proc. Amer. Acad., 1884, 20, p. 133.

Type locality:—Cypress Creek, Lauderdale Co., Ala. *Cotypes*, U. S. N. M., No. 4,880; M. C. Z., No. 3,582.

42. CAMBARUS NEGLECTUS.

Cambarus neglectus Faxon, Bull. Washburn College Lab. Nat. Hist., Oct. 31, 1885, 1, p. 142.

Type locality:—Mill Creek, Wabaunsee Co., Kansas. *Cotypes*, M. C. Z., No. 3,757; Mus. Washburn College, Topeka, Kans.

43. CAMBARUS SPINOSUS.

Cambarus spinosus Bundy, Proc. Acad. Nat. Sci. Philad., 1877, p. 173.

Type locality: — Etowah, Oostanaula, and Coosa Rivers, near Rome, Floyd Co., Georgia. *Cotypes*, M. C. Z., No. 3,540, 3,541 (4 ♂ f. II., 3 ♀); U. S. N. M., No. 19,779 (3 ♂ f. II., 2 ♀).

43a. CAMBARUS SPINOSUS GULIELMI.

Cambarus spinosus gulielmi Faxon, supra p. 375.

Type locality: — Near Rossville, Walker Co., Georgia. *Types*, U. S. N. M., No. 26,379; *paratypes*, M. C. Z., No. 7,448 (1 ♂ f. II., 1 ♀).

44. CAMBARUS PUTNAMI.

Cambarus putnami Faxon, Proc. Amer. Acad., 1884, 20, p. 131.

Type locality: — Bear Creek, a tributary of Green River, Grayson Springs, Grayson Co., Ky. *Types*, M. C. Z., No. 3,568; *paratypes*, M. C. Z., No. 3,569 (Green River, near Mammoth Cave, Ky.), No. 3,570 (Rocky Creek, near Grayson Springs, Ky., 1 ♂); U. S. N. M., No. 10,130 (Grayson Springs, Ky.); St. Petersburg Mus. (Green River, Ky., 1 ♂, 2 ♀).

45. CAMBARUS HYLAS.

Cambarus hylas Faxon, Proc. U. S. Nat. Mus., May 22, 1890, 12, p. 632.

Type locality: — West Fork of Black River, Reynolds Co., Mo. *Types*, M. C. Z., No. 3,858; *paratypes*, U. S. N. M., No. 25,827 (1 ♂, 1 ♀).

46. CAMBARUS MEDIUS.

Cambarus medius Faxon, Proc. Amer. Acad., 1884, 20, p. 121.

Type locality: — Irondale, Washington Co., Mo. *Types*, M. C. Z., No. 3,585 (1 ♂ f. I., 1 ♀).

47. CAMBARUS COMPRESSUS.

Cambarus compressus Faxon, Proc. Amer. Acad., 1884, 20, p. 127.

Type locality: — Second Creek, Waterloo, Lauderdale Co., Ala. *Cotypes*, U. S. N. M., No. 4,878; M. C. Z., No. 3,583.

48. CAMBARUS MEEKI.

Cambarus meeki Faxon, Proc. U. S. Nat. Mus., Feb. 17, 1898, 20, p. 657.

Type locality: — Walnut Fork of Big Piney Creek, Swain, Newton Co., Ark. *Types*, M. C. Z., No. 4,363; *paratypes*, U. S. N. M., No. 19,680; Mus. Zool. Torino.

49. CAMBARUS LONGIDIGITUS.

Cambarus longidigitus Faxon, Proc. U. S. Nat. Mus., Feb. 17, 1898, 20, p. 653.

Cambarus whitmani Steele, Univ. Cincinnati Bull., 1902, no. 10, p. 24.

Type locality: — James River, Mo.

Type locality: — Oxford Bend, White River, [Izard Co.?), Ark. *Types*, M. C. Z., No. 4,364; *paratypes*, U. S. N. M., No. 19,683.

50. CAMBARUS VIRILIS.

Cambarus virilis Hagen, Mem. M. C. Z., 1870, 2, p. 63.

Cambarus debilis Bundy, Bull. Illinois State Lab. Nat. Hist., Dec., 1876, 1, p. 24. *Type locality*: — Baraboo River, Ironton, Sauk Co., Wis. *Cotype*, M. C. Z., No. 3,449 (1 ♂ f. II.).

Cambarus couesi Streets, Bull. U. S. Geol. Surv. Terr., 1877, 3, p. 803. *Type locality*: — Red River of the North, near Pembina, Pembina Co., N. Dakota. *Cotypes*, U. S. N. M., No. 3,154; M. C. Z., No. 3,545.

Cambarus viridis Moenkhaus, Proc. Indiana Acad. Sci. for 1902, 1903, p. 111 (*per errorem vice* "virilis").

Type locality: — Lake Superior. *Types*, M. C. Z., No. 1,151; *paratypes*, M. C. Z., No. 194, 203 (Lake Superior), No. 196 (Quincy, Ill.), No. 3,342 (Lake Winnipeg), No. 3,343 (Red River of the North), No. 3,344 (Saskatchewan River); Mus. Hist. Nat. Paris (Lake Superior); Würzburg Mus. (Lake Superior); Australian Mus., Sydney.

51. CAMBARUS PILOSUS.

Cambarus pilosus Hay, Proc. U. S. Nat. Mus., Oct. 11, 1899, 22, p. 121.

Type locality: — Beloit, Mitchell Co., Kansas. *Cotypes*, U. S. N. M., No. 19,761 (6 ♂ f. II.); M. C. Z., No. 7,389 (1 ♂ f. II.).

52. CAMBARUS ALABAMENSIS.

Cambarus alabamensis Faxon, Proc. Amer. Acad., 1884, 20, p. 125.

Type locality: — Second Creek, Waterloo, Lauderdale Co., Ala. *Cotypes*, U. S. N. M., No. 4,876; M. C. Z., No. 3,565.

53. CAMBARUS NAIS.

Cambarus nais Faxon, Bull. Washburn College Lab. Nat. Hist., 1885, 1, p. 140.

Type locality: — Labette Co., Kansas. *Cotypes*, Mus. Washburn College, Topeka, Kan.; M. C. Z., No. 3,755.

54. CAMBARUS IMMUNIS.

Cambarus immunis Hagen, Mem. M. C. Z., 1870, 2, p. 71.

Cambarus signifer Herrick, 10th Ann. Rept. Geol. Surv. Minn., 1882, p. 253.

Type locality: — Grass Lake, Richfield, Hennepin Co., Minn. *Cotype*, M. C. Z., No. 3,515, (2 ♂ f. I., 1 ♀).

Type locality: — Lawn Ridge, Ill. *Types*, M. C. Z., No. 188; *paratypes*, M. C. Z., No. 3,355 (Belleville, Saint Clair Co., Ill.); Mus. Hist. Nat. Paris (Lawn Ridge, Ill., 1 ♂).

54a. CAMBARUS IMMUNIS SPINIROSTRIS.

Cambarus immunis spinirostris Faxon, Proc. Amer. Acad., 1884, 20, p. 146.

Type locality: — Creek running into the east side of Redfoot Lake, near Idlewild Hotel, Obion Co., Tennessee. *Cotypes*, U. S. N. M., No. 4,655; M. C. Z., No. 3,562.

55. CAMBARUS VALIDUS.

Cambarus validus Faxon, supra, p. 382.

Type locality: — Huntsville, Madison Co., Ala. *Type*, M. C. Z., No. 301 (1 ♂ f. I.).

56. CAMBARUS PALMERI.

Cambarus palmeri Faxon, Proc. Acad., 1884, 20, p. 124.

Type locality: — Creek running into the east side of Redfoot Lake, near Idlewild Hotel, Obion Co., Tenn. *Cotypes*, U. S. N. M., No. 4,872; M. C. Z., No. 3,564.

56a. CAMBARUS PALMERI LONGIMANUS.

Cambarus palmeri longimanus Faxon, Proc. U. S. Nat. Mus., Feb. 17, 1898, 20, p. 655.

Type locality: — Red River, Arthur City, Lamar Co., Texas. *Types*, M. C. Z., No. 7,390; *paratypes*, M. C. Z., No. 4,361, 4,362, (Goodland, and Kiamichi, Indian Terr. [now Oklahoma]); U. S. N. M., No. 19,684 (Arthur, Tex., Indian Terr.); Mus. Zool. Torino.

57. CAMBARUS DIFFICILIS.

Cambarus difficilis Faxon, Proc. U. S. Nat. Mus., Feb. 17, 1898, 20, p. 656.

Type locality: — Creek tributary to a southern branch of the Canadian River, McAlester, Pittsburg Co., Oklahoma. *Types*, M. C. Z., No. 4,359; *paratypes*, U. S. N. M., No. 19,687; Mus. Zool. Torino.

58. CAMBARUS MISSISSIPPIENSIS.

Cambarus mississippiensis Faxon, Proc. Amer. Acad., 1884, 20, p. 123.

Type locality: — Macon, Noxubee Co., Miss. *Types*, Coll. O. P. Hay; *paratype*, M. C. Z., No. 3,563 (1 ♀).

59. CAMBARUS LANCIFER.

Cambarus lancifer Hagen, Mem. M. C. Z., 1870, 2, p. 59.

Cambarus faxonii Meek, Amer. Nat., Dec. 1894, 28, p. 1042. *Type locality*: St. Francis River at Greenway and Big Bay, Arkansas. *Cotypes*, U. S. N. M., No. 19,331; M. C. Z., No. 4,220; Mus. Zool. Torino.

Type locality: — Root Pond, Miss. *Type*, M. C. Z., No. 306 (1 ♂ f. I.).

§ VII. Third segment of third pair of legs of male hooked. First pair of abdominal appendages of male short and thick, terminating in two large recurved tooth-like processes, the larger formed by the outer part of the appendage, the smaller by the inner. (Subgen. BARTONIUS of Ortmann.)

60. CAMBARUS HAMULATUS.

Orconectes hamulatus Cope and Packard, Amer. Nat., Nov. 1881, 15, p. 881.

Type locality: — Nickajack Cave, Tennessee. *Cotypes*, M. C. Z., No. 3,678 (1 ♂ f. II., 1 ♀).

61. CAMBARUS SETOSUS.

Cambarus setosus Faxon, Bull. M. C. Z., Dec. 1889, 17, p. 237.

Type locality: — Wilson's Cave, Jasper Co., Missouri. *Types*, M. C. Z., No. 4,200; *paratypes*, M. C. Z., No. 4,201, 4,202; U. S. N. M., No. 25,828.

62. CAMBARUS AYERSII.

Cambarus ayersii Steele, Univ. Cincinnati Bull., 1902, No. 10, p. 18.

Type locality: — Fisher's Cave, near Springfield, Greene Co., Missouri.

63. CAMBARUS EXTRANEUS.

Cambarus extraneus Hagen, Mem. M. C. Z., 1870, 2, p. 73.

Type locality: — Tennessee River, Tenn., near the boundary of Georgia. *Types*, M. C. Z., No. 175; *paratype*, U. S. N. M., No. 4,957.

63a. CAMBARUS EXTRANEUS GIRARDIANUS.

Cambarus girardianus Faxon, Proc. Amer. Acad., 1884, 20, p. 117.

Type locality: — Cypress Creek, Lauderdale Co., Ala. *Cotypes*, U. S. N. M., No. 4,882; M. C. Z., No. 3,560.

64. CAMBARUS JORDANI.

Cambarus jordani Faxon, Proc. Amer. Acad., 1884, 20, p. 119.

Type locality:—Etowah River, near Rome, Floyd Co., Georgia. *Type*, M. C. Z., No. 3,561 (1 ♂ f. II.).

65. CAMBARUS CORNUTUS.

Cambarus cornutus Faxon, Proc. Amer. Acad., 1884, 20, p. 120.

Type locality:—Green River near Mammoth Cave, Kentucky. *Type*, M. C. Z., No. 3,566 (1 ♂ f. I.).

66. CAMBARUS BARTONII.

Astacus bartonii Fabricius, Suppl. Entomol. Syst., 1798, p. 407.

Astacus ciliaris Rafinesque, Amer. Monthly Mag. and Crit. Rev., Nov. 1817, 2, p. 42. *Type locality*:—Brooks near Fishkill, Dutchess Co., and Newburgh, Orange Co., New York.

Astacus pusillus Rafinesque, Amer. Monthly Mag. and Crit. Rev., Nov. 1817, 2, p. 42. *Type locality*:—Brooks near Saratoga Springs, Saratoga Co., N. Y.; Lake George, N. Y.; Lake Champlain; Utica, Oneida Co., N. Y.; Oswego, Oswego Co., N. Y.

Type locality:—North America [probably neighborhood of Philadelphia, Pa.]. *Type* (fragment only), Kiel Museum.

66a. CAMBARUS BARTONII CARINIROSTRIS.

Cambarus bartonii carinirostris Hay, supra, p. 384.

Type locality:—Gandy Creek, Osceola, Randolph Co., West Virginia. *Type*, U. S. N. M., No. 23,962; *paratypes*, M. C. Z., No. 7,399.

66b. CAMBARUS BARTONII MONTANUS.

Cambarus montanus Girard, Proc. Acad. Nat. Sci. Philad., 1852, 6, p. 88.

Type locality:—Within the Alleghany ranges in Virginia, West Virginia, and Maryland; tributaries of James River, Rockbridge Co., Va.; Shenandoah River, Clarke Co., Va.; Cumberland, Allegany Co., Md.; Sulphur Spring, Greenbrier River, W. Va. *Types* probably destroyed in the Chicago fire in 1871; *paratype* (?), Acad. Nat. Sci. Philad. (1 ♂ juv., James River, Va.).

66c. CAMBARUS BARTONII ROBUSTUS.

Cambarus robustus Girard, Proc. Acad. Nat. Sci. Philad., 1852, 6, p. 90.

Type locality:—Humber River, near Toronto, Canada. *Type* probably destroyed in the Chicago fire in 1871; *paratype* (?), Acad. Nat. Sci. Philad. (1 ♂).

66d. CAMBARUS BARTONII LONGIROSTRIS.

Cambarus bartonii, var. *longirostris* Faxon, Mem. M. C. Z., Oct. 1885, 10, p. 64.

Cambarus bartonii spinirostris Faxon, Proc. U. S. Nat. Mus., May 22, 1890, 12, p. 623 (*lapsu calami pro "longirostris"*).

Type locality: — Near the boundary between western North Carolina and eastern Tennessee. *Type*, M. C. Z., No. 3,629 (1 ♂ f. II.).

66e. CAMBARUS BARTONII LONGULUS.

Cambarus longulus Girard, Proc. Acad. Nat. Sci., Philad., 1852, 6, p. 90.

Type locality: — Unknown; "its range however, is within the Middle States of the Union." *Type* probably destroyed in the Chicago fire in 1871.

66f. CAMBARUS BARTONII VETERANUS.

Cambarus bartonii veteranus Faxon, supra, p. 389.

Type locality: — Indian Creek, Baileysville, Wyoming Co., West Virginia. *Type*, U. S. N. M., No. 44,712; *paratypes*, U. S. N. M., No. 25,020; M. C. Z., No. 7,402.

66g. CAMBARUS BARTONII ASPERIMANUS.

Cambarus bartonii asperimanus Faxon, supra, p. 391.

Type locality: — Flat Creek, near Montreat, Buncombe Co., N. C. *Types*, U. S. N. M., No. 47,375 (2 ♂ f. I.).

66h. CAMBARUS BARTONII ACUMINATUS.

Cambarus acuminatus Faxon, Proc. Amer. Acad., 1884, 20, p. 113.

Type locality: — Saluda River at Farr's Mills, west of Greenville, Greenville Co., South Carolina. *Cotypes*, Butler Univ., Irvington, Ind. (1 ♂ f. II., 1 ♀); M. C. Z., No. 3,624 (1 ♀).

66i. CAMBARUS BARTONII LAEVIS.

Cambarus bartonii laevis Faxon, supra, p. 391.

Type locality: — Bloomington, Monroe Co., Indiana. *Types*, M. C. Z., No. 3,812.

66j. CAMBARUS BARTONII TENEBROSUS.

Cambarus bartonii tenebrosus Hay, Proc. U. S. Nat. Mus., Sept. 12, 1902, 25, p. 232.

Type locality: — Mammoth Cave, Kentucky. *Types*, U. S. N. M., No. 22,346.