Revised List of the North American Freshwater Planarians (Platyhelminthes: Tricladida: Paludicola)

ROMAN KENK

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*Secretary*  
Smithsonian Institution
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Roman Kenk
ABSTRACT

Kenk, Roman. Revised List of the North American Freshwater Planarians (Platyhelminthes: Tricladida: Paludicola). Smithsonian Contributions to Zoology, number 476, 10 pages, 1989.—A list of the species and subspecies of freshwater triclads of North America, including the West Indies, is presented, arranged in taxonomical order. For each taxon, the valid name, existing synonyms, known distribution, and pertinent morphological literature are given. An appendix lists the specific and subspecific names in alphabetical order.

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Revised List of the North American Freshwater Planarians (Platyhelminthes: Tricladida: Paludicola)

Roman Kenk

Introduction
In 1972 I published a review of the freshwater planarians of North America north of Mexico, comprising 56 species and subspecies known at that time (Kenk, 1972). In the meantime the study of this animal group has proceeded at a rapid pace. Some of the taxa previously considered to be doubtful have been resolved, and additional species have been discovered and described. The present list does not repeat all the information given in the previous review, but intends to point out the necessary changes and to supply the recent additions to the North American fauna. It also extends the geographic area previously covered to include all the West Indies (Greater and Lesser Antilles) and all continental America north of the Isthmus of Panama.

Similar reviews of the freshwater triclads have been published recently for other areas of the globe: for Africa by Young (1976) and for Europe by Dahm and Gourbault (1978).

The following data are given for each species in the present list: the accepted name, synonyms when first used in the literature, known area of occurrence, and the principal descriptive literature that is helpful for the identification of the species. Purely distributional, ecological, physiological, or karyological records are omitted. Much of the information in this list is contained also in the first review (Kenk, 1972) and in the Index of Genera and Species of the World (Kenk, 1974). It is repeated here to make the list more useful to students of this group of flatworms.

List of Freshwater Triclads
Order Tricladida
Suborder Paludicola

Family Dugesiidae
Genus Cura Strand, 1942

1. Cura foremanii (Girard, 1852)

Dugesia foremanii Girard, 1852
Planaria foremanii.—Stimpson, 1857
Planaria simplissima.—Curtis, 1900
Planaria lugubris.—Morgan, 1901 [not O. Schmidt, 1861]
Curtisia simplissima.—Graff, 1916
Curtisia foremanii.—Kenk, 1930
Dugesia (Cura) foremanii.—Ball, 1974
?Dugesia gonocephala.—Pearl, 1903 [not Dugès, 1830]
?Dugesia modesta Girard, 1893

Eastern and central North America.

Genus Dugesia Girard, 1850
Subgenus Girardia, 1850

2. Dugesia (G.) tigrina (Girard, 1850)

Planaria maculata Leidy, 1847 [not Fabricius, 1826, not Darwin, 1844]
Planaria tigrina Girard, 1850
Dugesia maculata.—Girard, 1851
Phagocata tigrina.—Diesing, 1862
Planaria lata Sivickis, 1923
Euplanaria maculata.—Kenk, 1930
Euplanaria lata.—Kenk, 1930
Euplanaria novangliae Hyman, 1931
Euplanaria tigrina.—Kenk, 1935
?Euplanaria microbursalis Hyman, 1931
?Dugesia microbursalis.—Hyman, 1939

United States, southern Canada, Mexico.
3. *Dugesia (G.) dorotocephala* (Woodworth, 1897)
- *Planaria dorotocephala* Woodworth, 1897
- *Planaria agilis* Stringer, 1909
- *Euplanaria dorotocephala*—Kenk, 1930
- *Euplanaria agilis*—Kenk, 1930
- *Euplanaria philadelphica* Hyman, 1931
- *Dugesia agilis*—Hyman, 1939
- *Dugesia diabolis* Hyman, 1956

United States, southern Canada, Mexico.

4. *Dugesia (G.) arizonensis* Kenk, 1975
- Arizona.
Kenk, 1975a.

5. *Dugesia (G.) jenkinsae* Benazzi and Gourbault, 1977
- Texas.

- *Cura azteca* Benazzi and Giannini, 1971
- *Dugesia (Cura) azteca*—Ball, 1974

United States.

Here possibly also *D. barbarae*.
Mexico.

Possibly identical with *D. typhlomexicana*.
Mexico.

- *Dugesia lugubris*.

- *Dugesia fawcetti* Ball and Gourbault, 1975
- *Phagocata virilis* Kenk, 1977
- *Phagocata bulbosa* Kenk, 1970

11. *Dugesia (G.) festai* (Borelli, 1898)
- *Planaria festae* Borelli, 1898
- *Dugesia festai*—Hyman, 1939
- *Dugesia festai*—Marcus, 1946

Widely distributed in South America, but occurs also in Curacao.

12. *Dugesia (G.) aurita* (Kennel, 1888)
- *Planaria aurita* Kennel, 1888
Species inquirenda.
Trinidad.


13. *Dugesia (G.) arimana* Hyman, 1957
Lesser Antilles (Trinidad, Saint Vincent, Santa Lucia).
Hyman, 1957:2-4; Ball, 1971:3-9; Kawakatsu and Mitchell, 1984d.

Lesser Antilles (Guadeloupe, Dominica, Martinique).
Gourbault, 1980.

15. *Dugesia (G.) antillana* Kenk, 1941
Puerto Rico.
Kenk, 1941; Ball, 1971:9; Codreanu and Balcesco, 1973:77–78.

16. *Dugesia (G.) cubana* Codreanu and Balcesco, 1973
Cuba.

Subgenus *Schmidtea* Ball, 1974

Family Planariidae

Genus *Phagocata* Leidy, 1847

A detailed classification of this large and polymorphic genus, distributed over the entire northern hemisphere, has not been worked out (see Ball and Reynoldson, 1981:82).

18. *Phagocata velata* (Stringer, 1909)
- *Planaria velata* Stringer, 1909
- *Fonticola velata*—Kenk, 1930
- *Phagocata gracilis monopharyngea* Hyman, 1948
- *Fonticola gracilis monopharyngea*—Ball, 1969
- *Phagocata monopharyngea*—Kenk, 1970
- *Phagocata vernalis* Kenk, 1944, in part
- *Fonticola vernalis*—Ball, 1969, in part

Eastern and midcentral United States and Canada.

19. *Phagocata fawcetti* Ball and Gourbault, 1975
California.
Ball and Gourbault 1975.

Maryland.

North Carolina and Maryland.

22. *Phagocata crenophila* Carpenter, 1969
Utah, California, New Mexico, and Nevada(?).

*Phagocata nivea tahoena* Kawakatsu, 1968
California and Nevada (Lake Tahoe).

Nevada.
Kenk, 1982.

25. *Phagocata oregonensis* Hyman, 1963
*Fonticola oregonensis.*—Ball, 1969
Oregon and Washington.

26. *Phagocata nivea* Kenk, 1953
*Phagocata nivea nivea.*—Kawakatsu, 1968
*Fonticola nivea nivea.*—Ball, 1969
Alaska.

27. *Phagocata morgani morgani* (Stevens and Boring, 1906)
*Planaria truncata* Leidy [not Abildgaard, 1789]
*Dendrocoelum truncatum.*—Girard, 1893
*Fonticola morgani.*—Hyman, 1931
*Planaria morgani Stevens and Boring, 1906*
*Fonticola morgani.*—Castle and Hyman, 1934
?*Dendrocoelum superbum* Girard, 1850
?*Galeoceps palph superba.*—Stimpson, 1857
?*Phagocata cavernicola* Hyman, 1954
?*Fonticola cavernicola.*—Ball, 1969
Eastern half of the United States and Canada, also introduced to California.

28. *Phagocata morgani polyelis* (Kenk, 1935)
*Fonticola morgani polyelis.* Kenk, 1935
Virginia and Ontario.

North Carolina.

West Virginia.

North Carolina.
Kenk, 1979a, 1979b:94.

32. *Phagocata carolinensis* Kenk, 1979
North Carolina.

33. *Phagocata pygmaea* Kenk, 1987
North Carolina.

34. *Phagocata procera* Kenk, 1984
North Carolina.

35. *Phagocata bursaperforata* Darlington, 1959
*Fonticola bursaperforata.*—Ball, 1969
Georgia and Alabama.

Tennessee.

37. *Phagocata gracilis* (Haldeman, 1840)
*Planaria gracilis* Haldeman, 1840
*Phagocata gracilis.*—Leidy, 1847
*Euplanaria gracilis.*—Ken, 1930
*Fonticola gracilis.*—Castle and Hyman, 1934
*Phagocata subterranea* Hyman, 1937
*Fonticola subterranea.*—Ball, 1969
Eastern United States north to Maryland, west to Missouri.

38. *Phagocata woodworthi* Hyman, 1937
*Phagocata gracilis woodworthi* Hyman, 1951
*Fonticola gracilis woodworthi.*—Ball, 1969
Northeastern United States south to Maryland, eastern Canada as far west as Ontario.

Florida, Louisiana, Mississippi.

Genus *Hymanella* Castle, 1941

40. *Hymanella retenuova* Castle, 1941
*Phagocata vernalis* Kenk, 1944, in part
Eastern and midwestern United States and Ontario.
Genus *Paraplanaria* Ball and Gourbault, 1978

41. *Paraplanaria dactyligera* (Kenk, 1935)
   *Planaria dactyligera* Kenk, 1935
   *Planaria dactyligera dactyligera*.—Kenk, 1969
   *Planaria dactyligera musculosa* Kenk, 1969

   The subspecies *musculosa* shows transitions to the nominate subspecies without geographic differentiation, and should therefore be withdrawn. Eastern United States (Virginia, Maryland, Tennessee, North Carolina, Louisiana).


42. *Paraplanaria occulta* (Kenk, 1969)
   *Planaria occulta* Kenk, 1969
   Virginia.


Genus *Polycelis* Ehrenberg, 1831

Subgenus *Polycelis* Ehrenberg, 1831

43. *Polycelis (P.) coronata coronata* (Girard, 1891)
   *Phagocata coronata* Girard, 1891
   *Polycelis borealis* Kenk, 1953
   *Polycelis coronata borealis* Kenk, 1972

   The species or subspecies *borealis* is not clearly separated from *P. coronata*, as many transitional forms exist. I therefore combine the two species, retaining the older name *coronata*. Western United States (Wyoming, Utah, Montana, New Mexico, Washington, Oregon, Alaska, Idaho) and Canada (Alberta).


44. *Polycelis (P.) coronata monticola* Kenk and Hampton, 1982
   *Polycelis monticola* Kenk and Hampton, 1982
   California and Nevada.

   Kenk and Hampton, 1982

45. *Polycelis (P.) coronata brevipenis* Kenk, 1972
   *Polycelis coronata* Hyman, 1931

   South Dakota and Colorado.


   Subgenus *Seidlia* Zabusov, 1911

46. *Polycelis (S.) sierrensis* Kenk, 1973
   California and Nevada.


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Family *Dendrocoelidae*

Subfamily *Kenkiinae*

Genus *Sphalloplana* Beauchamp, 1931

Subgenus *Sphalloplana* Beauchamp, 1931

47. *Sphalloplana (Sph.) percoeca* (Packard, 1879)
   *Dendrocoelum percoecum* Packard, 1879
   *Fonticola percoeca*.—Hyman, 1931
   *Fonticola percoeca*.—Hyman, 1935
   *Sphalloplana alabamensis* Hyman, 1945

   Kentucky, Alabama, Tennessee, and West Virginia.


48. *Sphalloplana (Sph.) georgiana* Hyman, 1954

   Somewhat problematic species. Georgia.


49. *Sphalloplana (Sph.) evaginata* Kenk, 1977

   Missouri.


50. *Sphalloplana (Sph.) kansensis* Hyman, 1945

   Species not well defined. Kansas.


51. *Sphalloplana (Sph.) californica* Kenk, 1977

   California.


52. *Sphalloplana (Sph.) culveri* Kenk, 1977

   West Virginia.


53. *Sphalloplana (Sph.) consimilis* Kenk, 1977

   Virginia and Tennessee.

   Kenk, 1977b:11–12.

54. *Sphalloplana (Sph.) subtilis* Kenk, 1977

   Virginia (now possibly extinct).


   Subgenus *Speophila* Hyman, 1937

55. *Sphalloplana (Sp.) virginiana* Hyman, 1945

   Species inquirenda. Virginia.


56. *Sphalloplana (Sp.) holsingeri* Kenk, 1977

   Virginia (now possibly extinct).

57. *Sphalloplana (Sp.) weingartneri* Kenk, 1970
   Indiana.
58. *Sphalloplana (Sp.) buchanani* (Hyman, 1937)
   *Speophila buchanani* Hyman, 1937
   Kentucky.
59. *Sphalloplana (Sp.) pricei* (Hyman, 1937)
   *Speophila pricei* Hyman, 1937
   Pennsylvania.
60. *Sphalloplana (Sp.) hubrichti* (Hyman, 1945)
   *Speophila hubrichti* Hyman, 1945
   Missouri and Illinois.
61. *Sphalloplana (Sp.) chandleri* Kenk, 1977
   Tennessee, Indiana, Virginia.
62. *Sphalloplana (Sp.) hypogea* Kenk, 1984
   Virginia.
63. *Sphalloplana (Sp.) hoffmasteri* (Hyman, 1954)
   *Speophila hoffmasteri* Hyman, 1954
   *Macrocotyla hoffmasteri.*—Kenk, 1975
   Kenkia hoffmasteri.
   —Kawakatsu and Mitchell, 1981
   The pharyngeal musculature does not quite conform with
   that of the genus *Kenkia*, which places the species back
   into the genus *Sphalloplana*. West Virginia and Maryland.
Subgenus *Polypharyngea* Carpenter, 1971
64. *Sphalloplana (P.) mohri* Hyman, 1938
   *Speophila mohri* Mitchell, 1968
   *Sphalloplana sloani* Mitchell, 1968
   *Sphalloplana zschichi* Mitchell, 1968
   *Sphalloplana reddelli* Mitchell, 1968
   Texas.
Genus *Kenkia* Hyman, 1937
65. *Kenkia rhynchida* Hyman, 1937
   Oregon.
66. *Kenkia glandulosa* (Hyman, 1956)
   *Macrocutyla glandulosa* Hyman, 1956
   Missouri.
67. *Kenkia lewisi* (Kenk, 1975)
   *Macrocutyla lewisi* Kenk, 1975
   Missouri.
Subfamily DENDROCOELINAE
Genus *Dendrocoelopsis* Kenk, 1930
68. *Dendrocoelopsis vaginata* Hyman, 1935
   Western United States (Montana, Oregon, Washington).
69. *Dendrocoelopsis piriformis* Kenk, 1953
   Alaska and western Canada.
70. *Dendrocoelopsis alaskensis* Kenk, 1953
   Alaska.
71. *Dendrocoelopsis hymanae* Kawakatsu, 1968
   California and Nevada (Lake Tahoe).
72. *Dendrocoelopsis americana* (Hyman, 1939)
   *Sorocelis americana* Hyman, 1939
   Oklahoma, Arkansas, Texas, Missouri.
Genus *Procotyla* Leidy, 1857
73. *Procotyla fluviatilis* Leidy, 1857
   *Dendrocoelum lacteum.*—misidentified by early American authors
   *Dendrocoelum graffi* Wilhelmi, 1909
   *Dendrocoelum pulcherrimum* Girard, 1850
   *Oligocelis pulcherrima.*—Stimpson, 1857
   *Procotyla leidyi* Girard, 1893
   Eastern and midwestern United States and Canada.
74. *Procotyla typhlops* Kenk, 1935
   Virginia, Maryland, Florida.
Genus *Rectocephala* Hyman, 1953
75. *Rectocephala exotica* Hyman, 1953
   *Bdellocephala exotica.*—Kenk, 1972

Species Incertae Sedis

76. Planaria fissipara Kennel, 1888

Not Recognizable Species

77. Hydrolimax bruneus Girard, 1891
This may be a triclads. Pennsylvania (Fairmount Park, Philadelphia).

78. Planaria fuliginosa Leidy, 1851
Planaria (Typhlolepta?) fuliginosa Leidy, 1851
Anocelis fuliginosa—Stimpson, 1857
Typhloplan(a?) fuliginosa.—Leuckart, 1854

79. Planaria simplex Woodworth, 1896
Lake Michigan.

80. Planaria unionicola Woodworth, 1897
### Appendix

**Names of Species and Subspecies**

(includes valid names and synonyms; numbers refer to numbered paragraphs in text)

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