**Checklist of the troglobiotic subterranean fishes of the world to February 2015**

**V2.1.03.02.2015**

**Introduction**

Checklist of subterranean fishes as discovered to February 2015. Generic placement and suprageneric classification follow Nelson (2006) and Eschmeyer and Fong (2011), with the following exceptions: Nemacheilidae, Balitoridae and Cobitidae follow Tang, Liu, Mayden and Xiong (2006), Slechtova, Bohlen and Tan (2007) and Kottelat (2012); Gobiiformes and Butidae follow Thacker (2009); Phreaobiidae follows data in Sulivan, Muriel-Cunha and Lundberg (2013) and Milyeringidae follows Chakrabarty, Davis and Sparks (2012) and Sparks and Chakrabarty (2012). Currently accepted name combinations are numbered and are followed by their original author and date and by revisers (if any, following International Code of Zoological Nomenclature Recommendation 51G). Other names which have been used (synonyms, previous combinations and misidentifications) are indented and follow immediately after the current name for the species. Author names and dates in [square brackets] are for taxa which have not been formally described, and identify the source with most information about that particular taxon. Except for a few cases the status of subterranean is indicated by troglomorphy.

**Notes on interstitial or psammophilic fishes**

Many invertebrates, e.g. amphipods of the genus *Niphargus*, are found in two principle types of subterranean habitats: caves and other large voids (the “millieu permiable en grande”) and in interstitial habitats in sediments where they live among the grains of the sediment (the “milleau permiable en petit”). Subterranean biology considers both of these as subterranean habitats, and animals which live their entire lives in either (or in some cases both) are all considered to be troglobionts or stygobionts. To be consistant we must also apply the same reasoning to fishes which live their entire lives within sediments. These fishes are usually though of a psammophilic, or sand-loving, but they can just as easilly be considered as interstitial, just like their invertebrate relatives. This list contains only troglobiotic species from caves and so we only include those interstitial fishes which never leave the sediment. Many are highly morphologically adapted to this habitat being thin and with reduced fins. Many also loose their eyes and melanin pigment which are the classic troglomorphic characters shown by most troglobionts. Currently only two subfamilies of the Trichomycteridae (Glanapteryginae and Sarcoglanidinae) have interstitial representatives.

**Notation is as follows:**

MG Monotypic subterranean-restricted genus.

MuG Subterranean-restricted genus with two or more species.

TLO Species known from its type locality only.

TMP Troglomorphic (and probably troglobiotic) hypogean population of a previously known, and named, epigean fish. These species exhibit some, or many, of the characteristics termed troglomorphy, i.e. they are depigmented and may have a reduction in eye size. Further work is required accurately to assess their status.

Int Species which live in interstitial habitats (also known as psammophiles)

**IUCN Red List categories and criteria**

Where a conservation assessment has been carried out, and valid IUCN Red list categories and criteria have been assigned, details are included in superscript square brackets. The notation for this is as follows:

[NE]: Not evaluated. Currently 00 subterranean fishes are in this category.

[DD]: Data defficient: Evaluated but deemed to have insufficient data to place in a category. Currently 00 subterranean fishes are in this category.

[LC]: Least concern. Currently 00 subterranean fishes are in this category.

[NT]: Near threatened. Currently 00 subterranean fishes are in this category.

[VU]: Vulnerable. Currently 00 subterranean fishes are in this category.

[EN]: Endangered. Currently 00 subterranean fishes are in this category.

[CR]: Critically endangered. Currently 00 subterranean fishes are in this category.

[EW]: Extinct in the wild. Currently no subterranean fishes are in this category.

[EX]: Extinct. Currently no subterranean fishes are in this category.

See redlist.org for full details of these categories and the criteria by which they are defined.

The version of categories and criteria under which the species was assesed are given as follows:

2.3: An early formulation published in 1994.

3.1: The currently used formulation published in 2001.

The date (year) in which the assessment was made is provided after the version number.

**Note:** For the genus *Sinocyclocheilus* (Cypriniformes: Cyprinidae) in China the lineage (clade) of each species is indicated by letters as follows: [A] *angularis* (13 species), [C] *cyphotergous* (14 species), [T] *tingi* (3 species). There are no known troglobiotic members of the fourth clade, *jii*. Information from Zhao and Zhang (2009), Romero, Zhao and Chen (2009), Chen, Luo, Xiao and Yang (2010), Zhao, Gozlan and Zhang (2011) and Zhao, Zhang and Proudlove (2015) and Yahui Zhao (pers. comm.).

DRC = Democratic Republic of Congo (formerly Zaire), Madagasc. = Madagascar, PNG = Papua New Guinea

**Order Characiformes**

**Family Characidae**

1. *Astyanax jordani* (Hubbs and Innes 1936) Buckup, 2003 [NE]  México

*Anoptichthys jordani* Hubbs and Innes 1936

*Anoptichthys antrobius* Alvarez 1946

*Anoptichthys hubbsi* Alvarez 1947

*Astyanax fasciatus* (Cuvier 1819) cave form

*Astyanax mexicanus* (De Filippi 1853) cave form

2. *Astyanax* undescribed species [Espinasa, Rivas and Espinosa Perez 2001] TLO [NE] México

3. S*tygichthys typhlops* Brittan and Bohlke 1965 MG [EN B2ab(ii,iii):3.1:2011]  Brazil

**Order Cypriniformes**

**Family Cyprinidae**

4. *Caecobarbus geertsii* Boulenger 1921 MG [VU B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv):3.1:2010] DRC

5. *Barbopsis devecchii* Di Caporiacco 1926 MG [DD:3.1:2010] Somalia

*Eilichthys microphthalmus* Pellegrin 1929

*Barbopsis stefaninii* Gianferrari 1930

*Zaccarinia stefaninii* Gianferrari 1934 *nomen nudum*

6. *Garra andruzzii* (Vinciguerra, 1924) Colli, Paglianti, Berti, Gandolfi and Tagliavini 2009 [VU D2:3.1:2010] Somalia

*Phreatichthys andruzzii* Vinciguerra 1924

7. *Garra typhlops* (Bruun and Kaiser 1944) Farashi, Kaboli, Rezaei, Naghavi, Rahimian and Coad 2014 Iran

*Iranocypris typhlops* Bruun and Kaiser 1944 TLO [VU D2:2.3:1996]

8. *Garra barreimiae* Fowler and Steinitz 1956 TMP [VU D2:2.3:1996] Oman

9. *Garra dunsirei* Banister 1987 TLO [VU D2:2.3:1996] Oman

10. *Typhlogarra widdowsoni* Trewavas 1955 MG [VU D2:2.3:1996]  Iraq

11. *Caecocypris basimi* Banister and Bunni 1980 MG TLO [VU D2:2.3:1996] Iraq

12. *Typhlobarbus nudiventris* Chu and Chen 1982 MG TLO [VU D2:2.3:1996] China

13. *Sinocyclocheilus anatirostris* Lin and Luo 1986 [VU D2:2.3:1996] [A] China

*Sinocyclocheilus guangxiensis* Zhou and Li 1998

*Sinocyclocheilus albeoguttatus* Zhou and Li 1998

14. *Sinocyclocheilus bicornutus* Wang and Liao 1997 [NE] [A] China

*Sinocyclocheilus biangularis* Wang and Liao 1996

15. *Sinocyclocheilus hyalinus* Chen and Yang 1993 TLO [VU D2:2.3:1996] [A]China

16. *Sinocyclocheilus rhinocerous* Li and Tao 1994 TLO [NE] [A] China

17. *Sinocyclocheilus furcodorsalis* Chen, Yang and Lan 1997 TLO [NE] [A] China

*Sinocyclocheilus* *tianeensis* Li, Xiao and Luo 2003

18. *Sinocyclocheilus angularis* Zheng and Wang 1990 TLO [VU D2:2.3:1996] [A] China

19. *Sinocyclocheilus tianlinensis* Zhou, Zhang and He 2004 [NE] [A] China

20. *Sinocyclocheilus tileihornes* Mao, Lu and Li 2003 [NE] [A] China

21. *Sinocyclocheilus xunlensis* Lan, Zhao and Zhang, 2004 [NE] [A] China

22. *Sinocyclocheilus aquihornes* Li and Yang 2007 [NE] [A] China

23. *Sinocyclocheilus broadihornes* Li and Mao 2007 [NE] [A] China

24. *Sinocyclocheilus flexuosdorsalis* Zhu and Zhu 2012 [NE] [A] China

25. *Sinocyclocheilus anshuiensis* Gan, Wu, Wei and Yang 2013 [NE] [A] China

26. *Sinocyclocheilus multipunctatus* Pellegrin 1931 [NE] [C] China

27. *Sinocyclocheilus cyphotergous* (Dai 1988)Kottelat and Brehier 1999 TLO [NE] [C]China

*Gibbibarbus cyphotergous* Dai 1988

28. *Sinocyclocheilus microphthalmus* Li 1989 TLO [VU D2:2.3:1996] [C] China

*Anchicyclocheilus halfibindus* Li and Lan, 1992

*Sinocyclocheilus halfibindus* (Li and Lan 1992) Wang and Chen 1998

29. *Sinocyclocheilus longibarbatus* Wang and Chen 1989 [NE] [C] China

30. *Sinocyclocheilus altishoulderus* (Li and Lan, 1992) Wang and Chen 1998 TLO [NE] [C] China

*Anchicyclocheilus altishoulderus* Li and Lan 1992

31. *Sinocyclocheilus lingyunensis* Li, Xiao, Zan, Luo and Li 2000 TLO [NE] [C] China

32. *Sinocyclocheilus luopingensis* Li and Tao 2002 [NE] [C] China

33. *Sinocyclocheilus jiuxuensis* Li and Lan 2003 [NE] [C] China

34. *Sinocyclocheilus hugeibarbus* Li and Ran 2003 [NE] [C] China

*Sinocyclocheilus liboensis* Li, Chen and Ran 2004

35. *Sinocyclocheilus brevibarbatus* Zhao, Lan and Zhang 2008 TLO [NE] [C] China

36. *Sinocyclocheilus luolouensis* Lan in Lan, Gan, Wu and Yang 2013 [NE] [C] China

37. *Sinocyclocheilus brevis* Lan and Chen 1992 [NE] [C] China

38. *Sinocyclocheilus donglanensis* Zhao, Watanabe and Zhang 2006 [NE] [C] China

39. *Sinocyclocheilus yishanensis* Li and Lan 1992 [NE] [C] China

40. *Sinocyclocheilus longifinus* Li 1996 [NE] [T] China

41. *Sinocyclocheilus anophthalmus* Chen, Chu, Luo and Wu 1988 TLO [VU D2:2.3:1996] [T] China

42. *Sinocyclocheilus maculatus* Li 2000 [NE] [T] China

43. *Poropuntius speleops* (Roberts 1991) Kottelat and Brehier 1999 [VU D2:3.1:2011] Thailand

*Barbus speleops* Roberts 1991

44. *Troglocyclocheilus khammouanensis* Kottelat and Brehier 1999 MG TLO [VU D2:3.1:2011] Laos

45. *Neolissochilus subterraneus* Vidthayanon and Kottelat 2003 TLO [VU D2:3.1:2011] Thailand

46. *Longanalus macrochirous* Li, Ran and Chen 2006 [NE] China

47. *Bangana musaei* Kottelat and Steiner 2010 [VU D2:3.1:2011] Laos

**Family Nemacheilidae**

48. *Paracobitis smithi* (Greenwood 1976) Nalbant and Bianco 1998 TLO [VU D2:2.3:1996] Iran

*Nemacheilus smithi* Greenwood 1976

*Noemacheilus smithi* Greenwood 1976

49. *Homatula posterodarsalus* (Li, Ran and Chen 2006) Hu and Zhang 2010 TLO [NE] China

*Paracobitis posterodarsalus* Li, Ran and Chen 2006

50. *Homatula maolanensis* (Li, Ran and Chen, 2006) Hu and Zhang 2010 TLO [NE] China

*Paracobitis maolanensis* Li, Ran and Chen 2006

51. *Nemacheilus troglocataractus* Kottelat and Gery 1989 TLO [CR B1ab(iii,v)+2ab(iii,v):3.1:2011] Thailand

52. *Oreonectes anophthalmus* Zheng 1981 TLO [VU D2:2.3:1996]  China

53. *Oreonectes furcocaudalis* Zhu and Cao, 1987 TLO [DD:3.1:2009] China

54. *Oreonectes translucens* Zhang, Zhao and Zhang, 2006 TLO [NE] China

55. *Oreonectes microphthalmus* Du, Chen and Yang, 2008 TLO [NE] China

56. *Oreonectes macrolepis* Huang, Du, Chen and Yang, 2009 [NE]  China

57. *Oreonectes luochengenis* Yang, Wu, Wei and Yang, 2011 TLO [NE] China

58. *Oreonectes elongatus* Tang, Zhao and Zhang, 2011 [NE] China

59. *Oreonectes acridorsalis* Lan in Lan, Gan, Wu and Yang 2013 TLO [NE] China

60. *Oreonectes barbatus* Gan in Lan, Gan, Wu and Yang 2013 TLO [NE]  China

61. *Oreonectes duanensis* Lan in Lan, Gan, Wu and Yang 2013 [NE] China

62. *Oreonectes donglanensis* Wu in Lan, Gan, Wu and Yang 2013 [NE] China

63. *Triplophysa gejiuensis* (Chu and Chen, 1979) Chen, Yang and Xu, 1992 TLO [VU D2:2.3:1996] China

*Noemacheilus gejiuensis* Chu and Chen, 1979

64. *Triplophysa xiangxiensis* (Yang, Yuan and Liao, 1986) Chen, Yang and Xu, 1992 TLO [VU D2:2.3:1996] China

*Noemacheilus xiangxiensis* Yang, Yuan and Liao, 1986

65. *Triplophysa shilinensis* Chen and Yang, 1992 TLO [NE] China

66. *Triplophysa aluensis* Li and Zhu, 2000 [NE] China

67. *Triplophysa longibarbata* (Chen, Yang, Sket and Aljancic, 1998) Du, Chen and Yang, 2008 TLO [NE] China *Paracobitis longibarbatus* Chen, Yang, Sket and Aljancic, 1998

*Nemacheilus liboensis* Ran, 2000 *nomen nudum*

*Nemacheilus liboensis* Chen, 2000 *nomen nudum*

*Oreonectes liboensis* Wang, 1991 *nomen nudum*

68. *Triplophysa tianeensis* Chen, Cui and Yang, 2004 [NE] China

69. *Triplophysa rosa* Chen and Yang, 2005 [NE] China

*Linemacheilus wulong* Wu, He and Li, 2005 *nomen nudum*

*Heminoemacheilus wulongensis* Wu, He and Li, 2007 *nomen nudum*

70. *Triplophysa qiubeiensis* Li, Yang, Chen, Tao, Qi and Han, 2008 [NE] China

71. *Triplophysa huanjiangensis* Yang, Wu and Lan, 2011 TLO [NE] China

72. *Triplophysa macrocephala* Yang, Wu and Yang, 2011 TLO [NE] China

73. *Triplophysa lihuensis* Wu, Yang and Lan, 2012 TLO [NE] China

74. *Triplophysa jiarongensis* Lin, Li and Song, 2012 TLO [NE] China

75. *Triplophysa lingyunensis* (Liao, Wang and Luo, 1997) Kottelat, 2012 [NE] China

76. *Triplophysa langpingensis* Yang in Lan, Gan, Wu and Yang 2013 [NE] China

77. *Triplophysa fengshanensis* Lan in Lan, Gan, Wu and Yang 2013 [NE] China

78. *Triplophysa dongganensis* Yang in Lan, Gan, Wu and Yang 2013 [NE] China

79. *Claea dabryi microphthalmus* (Liao and Wang, 1997) Kottelat 2010 TLO TMP [NE] China

80. *Schistura sijuensis* (Menon, 1987) Kottelat, 1990 TLO [EN B1ab(iii):3.1:2010] India

*Noemacheilus sijuensis* Menon, 1987

81. *Schistura oedipus* (Kottelat, 1988) Kottelat, 1990 [VU D2:3.1:2011] Thailand

*Nemacheilus oedipus* Kottelat, 1988

82. *Schistura jarutanini* Kottelat, 1990 TLO [VU D2:3.1:2011] Thailand

83. *Schistura kaysonei* Vidthayanon and Jaruthanin, 2002 TLO [VU D2:3.1:2011] Laos

84. *Schistura spiesi* Vidthayanon and Kottelat, 2003 TLO [DD:3.1:2009] Thailand

85. *Schistura deansmarti* Vidthayanon and Kottelat, 2003 TLO [VU D2:3.1:2011] Thailand

86. *Schistura spekuli* Kottelat, 2004 [VU D2:3.1:2011] Vietnam

87. *Schistura* *papulifera* Kottelat, Harries and Proudlove, 2007 [CR B1ab(iii)+2ab(iii):3.1:2010] India

88. *Schistura mobbsi* Kottelat and Leisher, 2012 TLO [NE] Vietnam

89. *Speonectes tiomanenesis* (Kottelat, 1990) Kottelat, 2012 MG TLO [VU D2:2.3:1996] Malaysia

*Sundoreonectes tiomanensis* Kottelat, 1990

90. *Indoreonectes evezardi* (Day, 1872) Kottelat, 1990 TLO TMP [LC, epigean populations only] India

*Noemacheilus evezardi* Day, 1872

91. *Troglocobitis starostini* (Parin, 1983) MG TLO [VU D2:2.3:2000] Turkmenia

*Noemacheilus starostini* Parin, 1983

92. *Heminoemacheilus hyalinus* Lan, Yang and Chen, 1996 [NE] China

93. *Draconectes narinosus* Kottelat, 2012 MG TLO [NE]Vietnam

**Family Balitoridae**

94. *Cryptotora* *thamicola* (Kottelat, 1988) Kottelat, 1998 MG [VU B2ab(iii);D2:3.1:2011] Thailand

*Homaloptera thamicola* Kottelat, 1988

**Family Cobitidae**

95. *Protocobitis typhlops*Yang, Chen and Lan 1994 MuGTLO [VU D2:2.3:1996] China

96. *Protocobitis polylepis* Zhu, Lu, Yang and Zhang, 2008 MuG [NE] China

97. *Protocobitis anteroventris* Lan in Lan, Gan, Wu and Yang 2013 MuG [NE] China

98. *Bibarba micoculum* [*nomen nudum* ] China

99. *Cobitis damlae* Erkahan and Ozdemir 2014 TLO [NE] Turkey

**Order Siluriformes**

**Family Ictaluridae**

100. *Trogloglanis pattersoni* Eigenmann, 1919MG [VU D2:2.3:1996]  USA

101. *Satan eurystomus* Hubbs and Bailey, 1947 MG [VU D2:2.3:1996] USA

102. *Prietella phreatophila* Carranza, 1954 MuG [EN A1ace+2ce, B1+2bc:2.3:1996] México

103. *Prietella lundbergi* Walsh and Gilbert, 1995 MuG [VU D2:3.1:2009] México

**Family Siluridae**

104. *Pterocryptis cucphuongensis* (Mai, 1978) Ng and Kottelat, 1998 TLO [NE] Vietnam

*Silurus cucphuongensis* Mai, 1978

105. *Pterocryptis buccata* Ng and Kottelat, 1998 TLO [NE] Thailand

106. *Pterocryptis* undescribed species[Clarke pers. comm. 2001] TLO [NE] China

**Family Clariidae**

107. *Uegitglanis zammaranoi* Gianferrari, 1923 MG [VU D2:3.1:2010] Somalia

*Uegitglanis zammaranoi baidoaensis* Parenzan, 1938

108. *Clarias cavernicola* Trewavas, 1936 TLO [CR B1ab(iii)+2ab(iii):3.1:2007] Namibia

109. *Horaglanis krishnai* Menon, 1950 MuG [DD:3.1:2011] India

110. *Horaglanis* *alikunhii* Babu and Nayar, 2004 MuG [DD:3.1:2011] India

111. *Horaglanis abdulkalami* Babu, 2012 MuG TLO [NE] India

**Family Heptapteridae**

112. *Pimelodella kronei* (Miranda Ribeiro, 1907) Pavan, 1946 [EN B2ab(ii,iii):3.1:2011] Brazil

*Typhlobagrus kronei* Miranda Ribeiro, 1907

*Pimelodella lateristriga* var. *kronei* Haseman, 1911

*Caecorhamdella brasiliensis* Borodin, 1927

113. *Pimelodella spelaea* Trajano, Reis and Bichuette, 2004 [NE] Brazil

114. *Rhamdia quelen urichi* (Norman, 1926) Mees, 1974 TLO [NE] Trinidad

*Caecorhamdia urichi* Norman, 1926

*Caecorhamdella urichi* (Norman, 1926) Hubbs, 1938 *lapsus calami*

115. *Rhamdia laticauda typhla* Greenfield, Greenfield, and Woods 1982 TLO [NE] Belize

116. *Rhamdia reddelli* Miller, 1984 [VU C2b,D2:2.3:1996] México

117. *Rhamdia zongolicensis* Wilkens, 1993 TLO [NE]  México

118. *Rhamdia macuspanensis* Weber and Wilkens, 1998 TLO [NE] México

119. *Rhamdia laluchensis* Weber, Allegrucci and Sbordoni, 2003 TLO [NE] Mexico

120. *Rhamdia guasarensis* DoNascimiento, Provenzano and Lundberg, 2004 [NE]  Venezuela

121. *Rhamdia enfurnada* Bichuette and Trajano, 2005 [NE] Brazil

122. *Rhamdia* undescribed species [Cordeiro pers. comm.] [NE] Brazil

123. *Rhamdiopsis krugi* Bockmann and Castro, 2010 [VU B1ab(iii):3.1:2011] Brazil

124. *Rhamdiopsis* undescribed species 2 [Trajano and Bichuette, 2007] [NE] Brazil

125. *Rhamdiopsis* undescribed species 3 [Trajano and Bichuette, 2007] [NE]  Brazil

**Family Callichthyidae**

126. *Aspidoras* *albater* [Secutti, Reis and Trajano, 2011] TMP [NE] Brazil

**Family Trichomycteridae**

127. *Trichomycterus chaberti* Durand, 1968 TLO [DD:2.3:1996]  Bolivia

128. *Trichomycterus* *itacarambiensis* Trajano and De Pinna, 1996 TLO [CR B2ab(iii,v):3.1:2011] Brazil

129. *Trichomycterus spelaeus* DoNascimiento, Villarreal and Provenzano, 2001 TLO [NE] Venezuela

130. *Trichomycterus* *sandovali* Ardila Rodriguez, 2006 [NE] Colombia

131. *Trichomycterus santanderensis* Castellanos-Morales, 2007 TLO [NE] Colombia

132. *Trichomycterus uisae* Castellanos-Morales, 2008 TLO [NE] Colombia

133. *Trichomycterus sketi* Castellanos-Morales, 2010 TLO [NE] Colombia

134. *Trichomycterus* *dali* Rizzato, Costa, Trajano and Bichuette, 2011 [VU D2:3.1:2011] Brazil

135. *Trichomycterus rubbioli* Bichuette and Rizzato, 2012 [NE] Brazil

136. *Trichomycterus* undescribed species 1 [Trajano and Bichuette, 2007] [NE] Brazil

137. *Trichomycterus* undescribed species 2 [Schultz, 1949] TLO [NE] Venezuela

138. *Ituglanis passensis* Fernandez and Bichuette, 2002 TLO [VU D1,D2:3.1:2011] Brazil

139. *Ituglanis bambui* Bichuette and Trajano, 2004 [EN B2ab(iii,v):3.1:2011] Brazil

140. *Ituglanis epikarsticus* Bichuette and Trajano, 2004 [VU D2:3.1:2011] Brazil

141. *Ituglanis ramiroi* Bichuette and Trajano, 2004 [VU D2:3.1:2011] Brazil

142. *Ituglanis* *mambai* Bichuette and Trajano, 2008 [NE]  Brazil

143. *Ituglanis boticario* Rizzato and Bichuette, 2015 [NE] Brazil

144. *Glaphyropoma* *spinosum* Bichuette, de Pinna and Trajano, 2008 TLO [VU B1ab(iii):3.1:2011] Brazil

145. *Copionodon* undescribed species [Trajano and Bichuette, 2007] [NE] Brazil

146. *Silvinichthys bortayro* Fernandez and De Pinna, 2005 [NE] Argentina

**Subfamily Glanapteryginae**

147. *Pygidianops eigenmanni* Myers, 1944 Int [NE] Brazil

148. *Pygidianops magoi* Schaefer, Provenzano, de Pinna and Baskin, 2005 Int [NE] Brazil

149. *Pygidianops cuao* Schaefer, Provenzano, de Pinna and Baskin, 2005 Int [NE] Venezuela

150. *Pygidianops amphioxus* de Pinna and Kirovsky, 2011 Int [NE] Brazil

151. *Typhlobelus ternetzi* Myers, 1944 Int [NE] Brazil

152. *Typhlobelus macromycterus* Costa and Bockmann, 1994 Int [NE] Brazil

153. *Typhlobelus guacamaya* Schaefer, Provenzano, de Pinna and Baskin, 2005 Int [NE] Venezuela

154. *Typhlobelus lundbergi* Schaefer, Provenzano, de Pinna and Baskin, 2005 Int [NE] Venezuela

155. *Typhlobelus auriculatus* de Pinna and Zuanon 2013 Int [NE] Brazil

156. *Glanapteryx anguilla* Myers, 1927 Int [NE] Brazil, Venezuela

157. *Glanapteryx niobium* de Pinna 1998 Int [NE] Brazil

*Listrura* x6 (???)

**Subfamily Sarcoglanidinae**

158. *Sarcoglanis simplex* Myers and Weitzman, 1966 Int [NE] Brazil

159. *Malacoglanis gelatinosus* Myers and Weitzman, 1966 Int [NE] Colombia

160. *Ammoglanis diaphanus* Costa, 1994 Int [NE] Brazil

161. *Ammoglanis pulex* de Pinna and Winemiller, 2000 Int [NE] Venezuela

162. *Ammoglanis amapaensis* Mattos, Costa and Gama, 2008 Int [NE] Brazil

**Family Loricariidae**

163. *Ancistrus cryptophthalmus* Reis, 1987 [EN B2ab(iii):3.1:2011] Brazil

164. *Ancistrus galani* Perez and Viloria, 1994 TLO [NE]  Venezuela

165. *Ancistrus formoso* Sabino and Trajano, 1997 [VU D2:3.1:2011] Brazil

**Family Astroblepidae**

166. *Astroblepus pholeter* Collette, 1962 TLO [NE] Ecuador

167. *Astroblepus riberae* Cardona and Guerao, 1994 TLO [NE] Peru

**Family Amblycipitidae**

168. *Xiurenbagrus dorsalis* Xiu, Yang and Zheng 2014 TLO [NE] China

**Family Phreatobiidae**

169. *Phreatobius cisternarum* Goeldi, 1905 MuG [LC:3.1:2011]  Brazil

*Heptapterus cisternarum* (Goeldi, 1905) Buckup, 1988

170. *Phreatobius dracunculus* Shibatta, Muriel-Cunha and De Pinna, 2007 MuG TLO [NE] Brazil

171. *Phreatobius sanguijuela* Fernandez, Saucedo, Carvajal and Schaefer, 2007 MuG [NE] Bolivia

172. *Phreatobius* undescribed species Muriel-Cunha et al. MuG [NE] Brazil

**Family Kryptoglanidae Britz, Kakkassery and Raghavan 2014**

173. *Kryptoglanis shajii* Vincent and Thomas, 2011 MG [NE] India

**Order Gymnotiformes**

**Family Sternopygidae**

174. *Eigenmannia vicentespelaea* Triques, 1996 TLO [VU D2:3.1:2011] Brazil

**Order Percopsiformes**

**Family Amblyopsidae**

175. *Amblyopsis spelaea* DeKay, 1842MG [VU D2:2.3:1996] USA

176. *Amblyopsis hoosieri*  Niemiller, Prejean and Chakrabarty 2014 MU [NE] USA

*Typhlichthys wyandotte* Eigenmann, 1905

177. *Troglichthys rosae* Eigenmann, 1899MG [VU D1+2:2.3:1996] USA

*Typhlichthys rosae* Eigenmann, 1898

*Amblyopsis rosae* (Eigenmann, 1898) Woods and Inger, 1957

*Amblyopsis rosae whitae* Romero, 1998 *nomen nudum*

*Amblyopsis rosae arkansasus* Romero, 1998 *nomen nudum*

178. *Typhlichthys subterraneus* Girard, 1859 MuG [VU D2:2.3:1996]  USA

*Typhlichthys osborni* Eigenmann, 1905

*Typhlichthys eigenmanni* Hubbs, 1938 *nomen nudum*

179. *Typhlichthys eigemanni* Charlton, 1933 MuG [NE] USA

180. *Typhlichthys* undescribed species lineage A [Niemiller *et. al*.] USA

181. *Typhlichthys* undescribed species lineage B [Niemiller *et. al*.] USA

182. *Typhlichthys* undescribed species [Graening, Fenolio and Slay 2011] [NE] USA

183. *Speoplatyrhinus poulsoni* Cooper and Kuehne, 1974 MG TLO [CR C2b:2.3:1996] USA

**Order Ophidiiformes**

**Family Bythitidae**

184. *Lucifuga subterranea* Poey, 1858 MuG [VU D2:2.3:1996] Cuba

*Lucifuga subterraneus* Poey, 1858

*Lucifuga teresinarum* Diaz Perez, 1988

185. *Lucifuga dentata* Poey, 1858 MuG [NE] Cuba

*Lucifuga dentatus* Poey, 1858

*Stygicola dentatus* Gill, 1863

186. *Lucifuga simile* Nalbant, 1981MuG [VU D2:2.3:1996] Cuba

187. *Lucifuga* undescribed species Lara et al., 2010 MuG [NE] Cuba

188. *Lucifuga spelaeotes* Cohen and Robins, 1970 MuG [VU A1ce, B1+2bc, D2:2.3:1996] Bahamas

189. *Lucifuga lucayana* Moller, Schwarzhans, Iliffe and Nielsen, 2006 MuG [NE] Bahamas

190. *Typhliasina pearsei* (Hubbs, 1938) Whitley, 1951 MG [VU D2:2.3:1996] México

*Typhlias pearsei* Hubbs, 1938 [Generic name preoccupied in Rotifera]

*Ogilbia pearsei* (Hubbs, 1938) Cohen and Nielson, 1978

191. *Ogilbia galapagosensis* (Poll and Leleup, 1965) Cohen and Nielson, 1978 [VU D2:3.1:2010] Galapagos

*Caecogilbia galapagosensis* Poll and Leleup, 1965

192. *Diancistrus typhlops* Nielsen, Schwarzhans and Hadiaty, 2009 [NE] Indonesia

**Order Cyprinodontiformes**

**Family Poeciliidae**

193. *Poecilia mexicana* Steindachner, 1863 TMP [NE] México

*Poecilia sphenops* Valenciennes in Cuvier and Valenciennes, 1846

*Mollienisia sphenops* (Valenciennes in Cuvier and Valenciennes, 1846) Regan, 1913

**Order Synbranchiformes**

**Family Synbranchidae**

194. *Ophisternon infernale* (Hubbs, 1938) Rosen and Greenwood, 1976 [EN A1ac+2c,B1+2c:2.3:1996] México

*Pluto infernalis* Hubbs, 1938 [Generic name preoccupied in Hymenoptera]

*Furmastix infernalis* (Hubbs, 1938) Whitley, 1957

*Synbranchus infernalis* (Hubbs, 1938) Mees, 1962

195. *Ophisternon candidum* (Mees, 1962) Rosen and Greenwood, 1976 [DD:2.3:1996] Australia

*Anomatophasma candidum* Mees, 1962

196. *Monopterus eapeni* Talwar in Talwar and Jhingran, 1992 TLO [DD:3.1:2011] India

*Monopterus indicus* Eapen, 1963

*Monopterus “indicus”* (Eapen, 1963) Rosen and Greenwood, 1976

197. *Monopterus roseni* Bailey and Gans, 1998 TLO [DD:3.1:2011] India

198. *Monopterus digressus* Gopi, 2002 [DD:3.1:2011] India

**Order Scorpaeniformes**

##### Family Cottidae

199. *Cottus specus* Adams and Burr, 2013 [NE] USA

*Cottus carolinae* species group [Burr, Adams, Krejca and Warren, 2001]

200. *Cottus “bairdii-cognatus”* complex [Espinasa and Jeffery, 2003] TLO TMP [NE] USA

**Order Gobiiformes**

**Family Gobiidae**

201. *Luciogobius pallidus* Regan, 1940 [DD:2.3:1996] Japan

202. *Luciogobius albus* Regan, 1940 [DD:2.3:1996] Japan

203. *Caecogobius cryptophthalmus* Berti and Ercolini, 1991 MG TLO [NE] Philippines

204. *Glossogobius ankaranensis* Banister, 1994 TLO [VU D2:3.1:2004] Madagasc.

205. *Glossogobius* undescribed species [Sparks and Chakrabarty 2012] [NE] Madagasc.

**Family Butidae**

206. *Oxyeleotris caeca* Allen, 1996 TLO [NE] PNG

207. *Oxyeleotris colasi* Pouyaud, Kadarusman and Hadiaty, 2013 TLO [NE] PNG

208. *Bostrychus microphthalmus* Hoese and Kottelat, 2005 TLO [NE] Indonesia

**Family Eleotridae**

209. *Eleotris* undescribed species [Myers and Donaldson, 2003] TLO [NE] Guam

**Family Milyeringidae**

210. *Milyeringa veritas* Whitley, 1945 MuG [DD:2.3:1996] Australia

211. *Milyeringa brooksi* Chakrabarty, 2010 MuG [NE] Australia

212. *Milyeringa justitia* Larson and Foster, 2013 MuG [NE] Australia

213. *Typhleotris madagascariensis* Petit, 1933 MuG [EN B1ab(i,iii)+2ab(i,iii):3.1:2004] Madagasc.

214. *Typhleotris pauliani* Arnoult, 1959 MuG [EN B1ab(i,iii)+2ab(i,iii):3.1:2004] Madagasc.

215. *Typhleotris* *mararybe* Sparks and Chakrabarty, 2012 TLO MuG [NE] Madagasc.

**Coexistence of subterranean species**

This list includes both troglobiotic species (noted as Tb) and eutroglophilic species (noted as EuT). The latter are able to live in subterranean habitats but are also found in epigean habitats. Definitions of these terms is in Sket (2008). Listed in alphabetical order of Country.

00. *Milyeringa veritas* (Tb), *Ophisternon candidum* (Tb) Australia

00. *Ancistrus cryptophthalmus* (Tb), *Ituglanis passessis* (Tb) Brazil

00. *Sinocyclocheilus furcodorsalis* (Tb), *Triplophysa tianeensis* (Tb) China

00. *Sinocyclocheilus lingyunensis* (Tb), *Sinocyclocheilus microphthalmus* (Tb), *Schistura lingyunensis* (Tb) China

00. *Sinocyclocheilus longifinus* (Tb), *Sinocyclocheilus huaningensis* (EuT) China

00. *Sinocyclocheilus hyalinis* (Tb), *Triplophysa aluensis* (Tb)China

00. *Protocobitis typhlops* (Tb), *Oreonectes translucens* (Tb*), Sinocyclocheilus macrophthalmus* (EuT) China

00. *Triplophysa macrocephala* (Tb), *Paracobitis posterodarsalus* (Tb) China

00. *Lucifuga simile* (Tb), *Lucifuga dentata* (Tb) Cuba

00. *Lucifuga subterranea* (Tb), *Luciguga dentata* (Tb) Cuba

00. *Horaglanis krishnai* (Tb), *Monopterus eapeni* (Tb) India

00. *Iranocycpris typhlops* (Tb), *Paracobitis smithi* (Tb) Iran

00. *Typhlogarra widdowsoni* (Tb), *Caecocycpris basimi* (Tb) Iraq

00. *Typhliasina pearsei* (Tb), *Ophisternon infernale* (Tb) Mexico

00. *Neolissochilus subterraneus* (Tb), *Schistura spiesi* (Tb) Thailand

00. *Cryptotora thamicola* (Tb), *Achistura oedipus* (Tb) Thailand

00. *Nemacheilus troglocataractus* (Tb), *Pterocryptis buccata* (Tb) Thailand

00. *Amblyopsis spelaea* (Tb*), Typhlichthys subterraneus* (Tb) USA

00. *Trogloglanis pattersoni* (Tb), *Satan eurystomus* (Tb) USA

00. *Typhlichthys subterraneus* (Tb), *Speoplatyrhinus poulsoni* (Tb) USA

00.

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1. Mees (1962:28), Humphreys and Adams (1991).

2. Trajano and De Souza (1994).

3.-00. Zhao and Zhang (2009), Zhao, Zhang and Proudlove (2014)

00. Nalbant (1981:189).

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**Appendix 1.**

**Species removed from checklist**

**Cyprinidae**

*Garra barreimiae wurayahi* Khalaf, 2009 TMP *nomen nudum* UAE

Not a subterranean fish.

**Nemacheilidae**

*Oreonectes retrodorsalis* Lan, Yang and Chen, 1995 China

Troglophile (Zhao, Gozlan and Zhang 2011)

*Triplophysa yunnanensis* Yang, 1990 TLO China

Troglophile (Zhao, Gozlan and Zhang 2011)

*Triplophysa nandanensis* Lan, Yang and Chen, 1995 China

Troglophile (Zhao, Gozlan and Zhang 2011)

*Triplophysa longipectoralis* Zheng, Du, Chen and Yang, 2009 TLO China

Troglophile (Zhao, Gozlan and Zhang 2011)

*Triplophysa sinensis* [Chen, Li and Yang, 2008] China

Status unknown. Probably not described.

**Clariidae**

*Horaglanis gopinathani* [Babu and Nayar, 2004] MuG [NE] *nomen nudem* India

Not described.

**Siluriformes incertae sedis**

*Phreatobius walkeri* Henderson Tarumã-mirim *nomen nudum* Mexico

Status unknown. Not described.

*Kryptoglanis anthonyi* Vincent, 2012 MuG [NE] India

Not described

*Monopterus trichurensis* [bbc.co.uk/news/science-environment-20661661#] India

Not described

All Sino below taken out on advice from Yahui

34. *Sinocyclocheilus mashanensis* Wu, Liao and Li 2010 [NE] [C] China

38. *Sinocyclocheilus yaolanensis* Zhou, Li and Hou 2009 [NE] [C] China

39. *Sinocyclocheilus jinxiensis* Zheng, Xiu and Yang 2013 [NE] [?] China

40. *Sinocyclocheilus dongtangensis* Zhou, Liu and Wang 2011 [NE] China

43. *Sinocyclocheilus gracilis* Li and Li 2014 [NE] China

44. *Sinocyclocheilus gracilicaudatus* Zhou and Zhang 2014 [NE] China