

## Catalogue of type specimens of fishes in the Zoologisches Forschungsmuseum Alexander Koenig, Bonn

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**Abstract.** Here we provide a checklist of type specimens housed in the fish collection of the Zoologisches Forschungsmuseum Alexander Koenig, Bonn (ZFMK). The catalogue includes type locality and sampling data, lists type material of the taxa represented in ZFMK deposited in other collections, provides remarks on the current status of the material, and covers the relevant bibliography. In total, 126 species are represented, 80 of these by holo- or lectotypes.

**Key Words.** Type specimens, taxonomy, fish, ichthyology, type catalogue, ZFMK Bonn.

### INTRODUCTION

The ichthyology section of the Zoologisches Forschungsmuseum Alexander Koenig was founded in 1954, and currently contains more than 41,000 fish specimens representing > 1500 species. The latter number is however based on the current state of ongoing digitalization, and is most likely a rather serious underestimation of the collection's inventories. Among other material, the collection contains material collected by the museum founder A. Koenig since 1879, specimens obtained from South America by the institute's first fish curator K. H. Lüling, collections of Indian fish from marine and brackish habitats collected by G. A. von Maydell in the 1950s, and important collections of freshwater fish from Central Vietnam collected by J. Freyhof and colleagues at the beginning of the last decade. The name-bearing types in the ichthyology section partially reflect the collection focus, composed in prominent parts by e.g. Asian loaches, South American characins, and catfishes from both regions. The ZFMK collection also houses substantial numbers of killifish types from Africa and South America, most designated either by L. Seegers or R. Sonnenberg.

The present type catalogue includes, besides of taxon names and collection references, in brief some crucial data from the original descriptions and the current status at time of publication; these include also additional type material housed in other collections.

### MATERIAL AND METHODS

The order of fish families in the present catalogue widely follows Eschmeyer's (1998) "Catalog of Fishes". Within families, species appear in alphabetical order of the genus as used in the original description. If not stated otherwise, taxon names are valid as originally published, widely based on the online database of the "Catalog of Fishes" (<http://research.calacademy.org/ichthyology/catalog/fishcatmain.asp>) in November 2010. The original reference is provided in brief for each single taxon. As far as available in the description, the present catalogue includes besides of collection numbers also data on size, sex, locality (in increasing order, i.e. from habitat data to country name), coordinates, collection date and collector(s). In addition, we included for fish taxa represented by types in ZFMK also the relevant data of other type material, including collection and number (if available), and in most cases the same relevant data as outlined above. If not stated otherwise, size data refer to mm standard length. Numbers in parentheses following collection numbers refer to the number of specimen in the respective series or lot. Data on sex refer to the composition of individuals as originally published; specific data describing the amount of males and females within certain series are not included. As far as possible, locality data were translated to English; coordinates are provided as they appear in the original description.

**Abbreviations for museum collections used:**

AM = Albany Museum, Grahamstown, Zambia  
 AMNH = American Museum of Natural History, New York, USA  
 AM PF = Albany Museum, Grahamstown, Zambia  
 ANSP = Academy of Natural Sciences, Philadelphia, USA  
 BM = British Museum (Natural History), London, UK  
 BMNH = Natural History Museum (formerly British Museum (Natural History)), London, UK  
 CAS = California Academy of Sciences, San Francisco, USA  
 CAZ = Collection Axel Zarske, Dresden, Germany  
 CENAREST = Research station in Batoke, Cameroon  
 CIRA UTB = Centro de Investigación de Recursos Acuáticos, Universidad Técnica del Beni, Trinidad, Bolivia  
 CMK = Collection Maurice Kottelat, Cornol, Switzerland  
 FMNH = Field Museum of Natural History, Chicago, USA  
 INPA = Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil  
 IRET = Institut de Recherche en Ecologie Tropicale, Libreville, Gabon  
 IRSNB = Institut royal des Sciences naturelles de Belgique, Bruxelles, Belgium  
 IBTS = Taxonomy Research Group, Research Centres in Biology Field, University of Bucharest, Tr. Savulescu, Bucharest, Romania (formerly: ISBB)  
 IZUA = Instituto de Zoología, Universidad Austral de Chile, Valdivia, Chile  
 KU = Museum of Natural History, Lawrence, Kansas, USA  
 MCP = Pontificia Universidade Católica do Rio Grande do Sul, Museu de Ciências e Tecnologia, Rio Grande do Sul, Porto Alegre, Brazil  
 MCZ = Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA  
 MGAB = Muzeul de Istorie Naturala "Grigore Antipa", Bucharest, Romania  
 MHNG = Muséum d'Histoire naturelle de Genève, Geneva, Switzerland  
 MNHN(P) = Muséum national d'Histoire naturelle, Paris, France  
 MNHNC = Museo Nacional de Historia Natural, Santiago, Chile  
 MRAC = Musée Royal de l'Afrique Centrale, Tervuren, Belgium  
 MTD = Staatliche Naturhistorische Sammlungen, Museum für Tierkunde, Dresden, Germany  
 MTD F = Staatliche Naturhistorische Sammlungen, Museum für Tierkunde, Dresden, Germany  
 MZUSP = Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil  
 NHMW = Naturhistorisches Museum, Vienna, Austria  
 NMW = Naturhistorisches Museum Wien, Vienna, Austria

NRM = Naturhistoriska riksmuseet, Stockholm, Sweden  
 RMNH = Rijksmuseum van Natuurlijke Historie, now Naturalis - National Natuurhistorisch Museum, Leiden, the Netherlands  
 RUSI = J.L.B. Smith Institute of Ichthyology, Grahamstown, South Africa  
 SMF = Senckenberg Museum, Frankfurt/Main, Germany  
 UMMZ = Museum of Zoology, University of Michigan, Ann Arbor, USA  
 USNM = National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA  
 ZFMK = Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany  
 ZMA = Zoologisch Museum, Universiteit van Amsterdam, the Netherlands  
 ZMB = Zoologisches Museum der Humboldt-Universität, Berlin, Germany  
 ZMH = Zoologisches Museum Hamburg, Germany  
 ZMM = Zoological Museum, Moscow State University, Moscow, Russia  
 ZRC = Zoological Reference Collection, National University of Singapore, Singapore  
 ZSM = Zoologische Staatssammlung, Munich, Germany

**KNERIIDAE**

*Kueria rukwaeusis* Seegers, 1995  
 Ichthyol Explor Freshwaters 6: 109

Paratypes: ZFMK 17477–17491 (15), 28.0–45.5 mm, 32 km northwest of Tunduma on road to Sumbawanga, affluent of the Momba River, Chiwanda River at Chiwanda, western Lake Rukwa drainage, Mbeya Region, western Tanzania, 09°10'S 32°34'E, 29 Jul 1992, U. Renninger & L. Seegers.

Type material in other collections: Holotype: ZMB 32352, male, 50.1 mm, same data as ZFMK 17477–17491; Paratypes: ZMB 32353 (3), 33.7–52.9 mm, same data as holotype; ZMB 32354 (5), 32.7–62.3 mm, same locality, 30 Jun 1989, U. Renninger & L. Seegers; ZMH 8400 (11), 19.4–42.6 mm, small brook, crossing road from Tunduma to Sumbawanga 58 km northwest of Tunduma, western Lake Rukwa drainage, Mbeya Region, western Tanzania, 30 Jul 1989, U. Renninger & L. Seegers; ZMB 32355 (2), 46.0–51.5 mm; BMNH 1993.3.29: 7–10 (4), 27.0–38.3 mm, same locality, 27 Jul 1991, U. Renninger & L. Seegers; MRAC 93-38-P-1–11 (11), 21.0–52.3 mm, same locality, 29 Jul 1992, L. Seegers; ZMH 8501 (11), 22.5–63.0 mm, Sau River at Kisumba, 20 km south of Sumbawanga on road to Mbala, Kalambo drainage, Rukwa Region, western Tanzania, 24 Jul 1993, L. Seegers; BMNH 1993.3.29: 1–6 (6), 17.8–36.7 mm, Luiche River, some km north of Sumbawanga near junction Sum-



bawanga-Mbala and Sumbawanga-Mpanda, western Lake Rukwa drainage, Rukwa Region, western Tanzania, 2 Jul 1989, U. Renninger & L. Seegers; MRAC 93-38-P-12 (1), 34.0 mm, Mfwizi River, 110 km north of Sumbawanga on road to Mpanda, northwestern Lake Rukwa drainage, Rukwa Region, western Tanzania, 2 Jul 1989, U. Renninger & L. Seegers; MRAC 191042 (1), 39.9 mm, Saisi River at Lumi confluence, western Lake Rukwa drainage, Mbala distr., northern Zambia, 15 Oct 1967, H. Matthes; MRAC 93-38-P-13–27 (15), 17.5–61.1 mm, Sau River at Kisumba, 20 km south of Sumbawanga on road to Mbala, Kalambo drainage, Tanganyika basin, Rukwa Region, western Tanzania, 24 Jul 1993, L. Seegers; MRAC 93-38-P-28–38 (11), 17.0–35.0 mm, Pala River, 55 km south of Sumbawanga at the road to Mbala, Kalambo drainage, Tanganyika basin, Rukwa Region, western Tanzania, 24 Jul 1993, L. Seegers; MRAC 93-38-P-39–46 (8), 21.2–29.0 mm, Kanye River, 61 km south of Sumbawanga on road to Mbala, Kalambo drainage, Tanganyika basin, Rukwa Region, western Tanzania, 24 Jul 1993, L. Seegers; MRAC 93-38-P-47–49 (3), 23.9–29.0 mm, brook, 5 km north of the Tanzania/Zambia border on road from Mbala to Sumbawanga, Kalambo drainage, Tanganyika basin, Rukwa Region, western Tanzania, 24 Jul 1993, L. Seegers; RUSI uncat. (26), 16.9–35.4 mm, brook, Luiche affluent, at the road from Muze to Sumbawanga, 4 km before reaching the main road from Mpanda to Sumbawanga at Ntendo, Lake Rukwa drainage, Rukwa Region, western Tanzania, 23 Jul 1993, L. Seegers; RUSI 50340 (2), 48.5–52.4 mm, Mfwizi River, 142 km south of Mpanda on road from Mpanda to Sumbawanga, Lake Rukwa drainage, Rukwa Region, western Tanzania, 6 Jul 1994, L. Seegers; ZMA 109763 (2), 32.9–36.0 mm, Mwandwisi brook near Chipanda, Lake Rukwa drainage, Abercorn-District (=Mbala), northern Zambia, 30 Jul 1966, H. Matthes; ZMA 109764 (11), 14.2–23.3 mm, Mwaa-Rivulet near Kawimbi, Lake Rukwa drainage, Abercorn-District (=Mbala), northern Zambia, 5 Jul 1966, H. Matthes; ZMA 109765 (437), 17.0–45.2 mm, Lumi River near Kawimbi, Lake Rukwa drainage, Abercorn-District (=Mbala), northern Zambia, 30 Jul 1966, H. Matthes.

## CYPRINIDAE

*Rashora rubrodorsalis* Donoso-Büchner & Schmidt, 1997  
Z Fischk 4: 90

Paratypes: ZFMK 18459–18460 (2), Cha Am, 208/209 km main road 4, Thailand, Nov 1989, R. Donoso-Büchner; ZFMK 18461 (1), Cha Am/Hua Hin, 212 km main road 4, Thailand, Nov 1989, A. Waser.

Type material in other collections: Holotype: ZMB 32549, same data as ZFMK 18459–18460; Paratypes: ZMB 32550–32551, same data as ZFMK 18461; ZMB 32420–32422 (3), Nam Ngum Dam reservoir, 20 km northeast of Vientiane, Laos, K. Lung & J. Töpfer [no collection date provided].

*Tanichthys micagemmae* Freyhof & Herder, 2001  
Ichthyol Explor Freshwaters 12: 216

Holotype: ZFMK 39098, 18.8 mm, stream Bau Dung, a tributary of River Ben Hai, Quang Binh Prov., Vietnam, 17°07'24"N 106°58'12"E, 5 Apr 2000, J. Freyhof & F. Herder.

Paratypes: ZFMK 39099–39118 (20), 13.4–23.1 mm, same data as holotype.

## BALITORIDAE

*Hemimyzon eddyonuroides* Freyhof & Herder, 2002  
Ichthyol Explor Freshwaters 13: 54

Holotype: ZFMK 22136, 41.7 mm, River Pako about 50 km north of Kontum, Kontum Prov., Vietnam, 14°39.60'N 107°46.98'E, 22 Feb 1999, J. Freyhof & D. V. Serov.

Paratypes: ZFMK 22137–22146 (10), 32.6–42.1 mm, same data as holotype.

Type material in other collections: CMK 16011 (4), 38.1–41.5 mm, same data as holotype.

*Nemacheilus banar* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 135

Holotype: ZFMK 28588, 65.8 mm, middle River Pako about 50 km north of Kontum, Kontum Prov., Vietnam, 14°36.60'N 107°46.98'E, 22 Feb 1999, J. Freyhof & D. Serov.

Paratypes: ZFMK 26528–26589 (60), 22.1–77.7 mm, same data as holotype; ZFMK 26274–26278 (5), 38.1–43.4 mm, River Dakabla at Kontum, Kontum Prov., Vietnam, 14°20.73'N 108°00.03'E, 20 Feb 1999, J. Freyhof & D. Serov; ZFMK 26322–26324 (3), 38.4–42.4 mm, River Dakpne 30 km northeast of Kontum, Kontum Prov., Vietnam, 14°30.35'N 108°14.92'E, 20 Feb 1999, J. Freyhof & D. Serov; ZFMK 28647, Stream Pako 15 km west of Kontum, Kontum Prov., Vietnam, 14°23.23'N 107°54.15'E, 23 Feb 1999, J. Freyhof & D. Serov; ZFMK 26590, 64.5 mm, Stream Iasia 25 west of Kontum, Kon-

tum Prov., Vietnam, 14°23.63'N 107°48.64'E, J. Freyhof & D. Serov; ZFMK 26591-26592 (2), 69.6-80.4 mm, River Ba at An Khe, Gia Lai Prov., Vietnam, 13°57.23'N 108°39.15'E, 24 Feb 1999, J. Freyhof & D. Serov.

Type material in other collections: CMK 16009 (5), 34.1-68.5 mm, same data as holotype.

*Neuacheilus cleopatra* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 138

Holotype: ZFMK 27155, 68.9 mm, River Sol near Plao Ganong, about 60 km south of Pleiku, Province Gia Lai, Vietnam, 13°31.82'N 108°18.63'E, 19 Feb 1999, J. Freyhof & D. Serov.

Paratypes: ZFMK 20656-26081 (25), 38.4-75.3 mm, same data as holotype.

Type material in other collections: CMK 16023 (3), 44.2-60.8 mm, same data as holotype.

*Schistura antennata* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 140

Holotype: ZFMK 27934, 73.6 mm, stream at Son Kim, Ha Tinh, Prov., Vietnam, 18°24.25'N 105°11.10'E, 11 Apr 2000, J. Freyhof, F. Herder & D. Serov.

Paratypes: ZFMK 27935-27941 (7), 33.7-70.3 mm, same data as holotype;

Remarks: Additional type material in other collections: CMK 16673 (3), 50.8-66.5 mm, same data as holotype.

*Schistura bachmaensis* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 143

Holotype: ZFMK 27942, 44.3 mm, Stream Suoi Voi Strom at Thua Luu, 55 km south of Hue, Thua Thien Hue Prov., Vietnam, 16°14.58'N 107°59.39'E, 19 Mar 2000, J. Freyhof, F. Herder & D. Serov.

Paratype: ZFMK 27942 (1), 49.0 mm, same data as holotype.

Type material in other collections: CMK 16674 (1), 56.6 mm, same data as holotype.

*Schistura carbouaria* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 145

Holotype: ZFMK 26593, 57.3 mm, stream Khe Vin An at Nam Dong village about 40 km south of Hue, Thua Thien Hue Prov., Vietnam, 16°11.58'N 107°43.76'E, 15 Mar 1999, J. Freyhof & D. Serov.

Paratypes: ZFMK 26594-26653 (60), 25.8-58.5 mm, same data as holotype; ZFMK 26654-26664 (11), 48.8-60.8 mm, River Rao Nho at Hong Ha village about 50 km west of Hue, Thua Thien Hue Prov., Vietnam, 16°17.35'N 107°21.59'E, 16 Mar 1999, J. Freyhof & D. Serov; ZFMK 26665-26669 (5), 48.1-50.6 mm, stream Mau about 30 km west of Hue, Thua Thien Hue Prov., Vietnam, 16°19.97'N 107°25.29'E, 16 Mar 1999, J. Freyhof & D. Serov.

*Schistura dalatensis* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 150

Holotype: ZFMK 23906, 87.2 mm, River Dai Tan about 30 km south of Da Lat, Lam Dong Prov., Vietnam, 11°46.64'N 108°19.28'E, 21 Jan 1999, J. Freyhof & D. Serov.

Paratypes: ZFMK 23641-23652 (12), 29.8-49.1 mm, small stream running to River Da Dung south of Da Lat, Prov. Lam Dong, Vietnam, 11°46.86'N 108°25.04'E, 19 Jan 1999, J. Freyhof & D. Serov; ZFMK 23759-23761 (3), 41.7-48.0 mm, River Da Dung 25 km south of Da Lat, Lam Dong Prov., Vietnam, 11°45.48'N 108°23.78'E, 21 Jan 1999, J. Freyhof & D. Serov.

Type material in other collections: CMK 15999 (8), 30.8-51.8 mm, 11°46.86'N 108°25.04'E, same data as ZFMK 23641-23652.

*Schistura huoungensis* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 155

Holotype: ZFMK 26810, 57.2 mm, stream Keh Vinh An at Nam Dong village about 40 km south of Hue, Thua Thien Hue Prov., Vietnam, 16°11.58'N 107°43.76'E, 15 Mar 1999, J. Freyhof & D. Serov.

Paratypes: ZFMK 26811-26826 (16), 28.2-55.5 mm, same data as holotype; ZFMK 26827-26848 (22), 30.8-56.9 mm, River Rao Nho at Hong Ha village about 50 km west of Hue, Thua Thien Prov., Vietnam, 16°17.35'N 107°21.59'E, 16 Mar 1999, J. Freyhof & D. Serov; ZFMK 26670-26672 (3), 51.0-54.5 mm, stream Mau about 30 km west of Hue, Thua Thien Hue Prov., Vietnam, 16°19.97'N 107°25.29'E, 16 Mar 1999, J. Freyhof & D. Serov; ZFMK 38460-38678 (19), stream running to River Huong, 40 km west of highway No. 1, Thua



Thien Hue Prov., Vietnam, 16°06.81'N 107°38.81'E, 19 Mar 2000, J. Freyhof, F. Herder & D. Serov.

Type material in other collections: CMK 16014 (4), 47.7–51.9 mm, same data as ZFMK 26811–26826.

*Schistura kontumensis* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 160

Holotype: ZFMK 26687, 55.2 mm, stream lasia about 25 km west of Kontum, Kontum Prov., Vietnam, 14°23.63'N 107°48.64'E, 23 Feb 1999, J. Freyhof & D. Serov.

Paratypes: ZFMK 26688–26747 (60), 23.0–55.0 mm, same data as holotype.

Type material in other collections: ZSM 28869 (12), 39.7–51.4 mm, same data as holotype.

*Schistura naamboensis* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 163

Holotype: ZFMK 24094, 55.3 mm, small stream at Ea Nuol about 20 km northwest of Buon Ma Thout, Dac Lac Prov., Vietnam, 12°41.58'N 107°57.74'E, 26 Jan 1999, J. Freyhof & D. Serov.

Paratypes: ZFMK 24095–24177 (83), 30.5–60.8 mm, same data as holotype.

*Schistura psittacula* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 170

Holotype: ZFMK 27015, 63.1 mm, middle River Cam Lo about 20 km west of Dong Ha, Quang Tri Prov., Vietnam, 16°47.00'N 106°53.86'E, 14 Mar 1999, J. Freyhof & D. Serov.

Paratypes: ZFMK 27016–27110 (95), 18.9–62.1 mm, same data as holotype; ZFMK 38371–38400 (30), 22.3–63.8 mm, stream running to River Cam Lo, 25 km west of Dong Ha, Quang Tri Prov, Vietnam, 16°45.71'N 106°51.63'E, 18 Mar 2000, J. Freyhof, F. Herder & D. Serov.

Type material in other collections: ZSM 28867 (10), 37.3–56.4 mm, same data as holotype; CMK 16013 (10), 32.1–55.9 mm, same data as holotype.

*Schistura sokolovi* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 172

Holotype: ZFMK 27116, 67.7 mm, River Azun about 30 km east of Pleiku, a confluent to River Ba, Gia Lai Prov., Vietnam, 14°02.34'N 108°21.07'E, 24 Feb 1999, J. Freyhof & D. Serov.

Paratypes: ZFMK 27117–27122 (6), 55.8–67.0 mm, same data as holotype; ZFMK 27123–27149 (27), 32.0–95.3 mm, stream at Kon Ha Nung about 50 km north of An Khe, a confluent to River Ba, Gia Lai Prov, Vietnam, 14°20.45'N 108°34.81'E, 25 Feb 1999, J. Freyhof & D. Serov.

Type material in other collections: ZSM 28868 (6), 40.4–88.1 mm, same data as ZFMK 27123–27149; CMK 16012 (5), 45.8–87.6 mm, same data as ZFMK 27123–27149.

*Schistura susannae* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 179

Holotype: ZFMK 28382, 44.5 mm, stream Mong Mo south of Hai Van Pass at national highway No. 1, Quang Nam Danang Prov., Vietnam, 16°09.67'N 108°07.73'E, 14 Mar 2000, J. Freyhof, F. Herder & D. Serov.

Paratypes: ZFMK 28383–28412 (30), 16.7–51.8 mm, same data as holotype.

Type material in other collections: CMK 16333 (6), 32.8–42.6 mm, same data as holotype.

*Schistura thanho* Freyhof & Serov, 2001  
Ichthyol Explor Freshwaters 12: 182

Holotype: ZFMK 21047, 76.9 mm, River Vinh Thanh, about 65 km northwest Quy Nhon, Binh Dinh Prov., Vietnam, 14°16.19'N 108°45.69'E, 23 Mar 1999, J. Freyhof & D. Serov.

Paratypes: ZFMK 21048–21069 (22), 36.7–82.5 mm, same data as holotype; ZFMK 21074 (1), 42.8 mm, stream Xem, a confluent to River Vinh Tanh, about 50 km northwest of Quy Nhon, Binh Dinh Prov, Vietnam, 14°05.00'N 108°47.01'E, 23 Mar 1999, J. Freyhof & D. Serov.

Type material in other collections: CMK 16019 (3), 43.1–70.8 mm, same data as holotype.

*Schistura yersini* Freyhof & Serov, 2001  
Ihthyol Explor Freshwaters 12: 186

Holotype: ZFMK 23579, 63.2 mm, small stream running to River Da Dung south of Da Lat, Lam Dong Prov., Vietnam, 11°46.86'N 108°25.04'E, 19 Jan 1999, J. Freyhof & D. V. Serov.

Paratypes: ZFMK 23580–23640 (45), 29.6–65.0 mm, same data as holotype; ZFMK 23576–23577 (2), 30.9–31.3 mm, stream Suoi Vang north of Da Lat, Lam Dong Prov., Vietnam, 11°59.53'N 108°21.95'E, 19 Jan 1999, J. Freyhof & D. V. Serov; ZFMK 23661–23684 (24), 30.7–58.5 mm, stream running to River Dai Tan south of Da Lat, Lam Dong Prov., Vietnam, 11°46.26'N 108°19.16'E, 20 Jan 1999, J. Freyhof & D. V. Serov; ZFMK 23687–23752 (66), 24.5–50.3 mm, River Dai Tan at Lam Ha village south of Da Lat, Lam Dong Prov., Vietnam, 11°47.49'N 108°14.12'E, 20 Jan 1999, J. Freyhof & D. V. Serov; ZFMK 23753–23758 (6), 32.2–53.4 mm, River Da Dung 25 km south of Da Lat, Lam Dong Prov., Vietnam, 11°45.48' 108°23.78'E, 21 Jan 1999, J. Freyhof & D. V. Serov; ZFMK 23762–23905 (144), 29.2–60.3 mm, River Dai Tan about 30 km south of Da Lat, Lam Dong Prov., Vietnam, 11°46.64' 108°19.28'E, 21 Jan 1999, J. Freyhof & D. V. Serov.

Type material in other collections: CMK 15998 (16), 29.2–59.2 mm, same data as holotype.

*Sewellia albisuera* Freyhof, 2003  
Ihthyol Expor Freshwaters 14: 226

Holotype: ZFMK 32913, 44.3 mm, River Thu Bon about 16 km west of Than My, Quang Nam Da Nang Prov., Vietnam, 15°40.33'N 107°48.45'W, 12 Mar 2000, J. Freyhof & D. Serov.

Paratypes: ZFMK 32910–32912 (3), 38.7–52.4 mm, same data as holotype.

Type material in other collections: AMNH 231609 (10), 33.8–64.0 mm, River Nuae Ta at waterfall, Try My district, Quang Nam Da Nang Prov., Vietnam, 29 Mar 1999, M. L. J. Stiassny, R. A. Arrindell et al.; AMNH 231611 (3), 34.1–40.2 mm, River Tranh, Try My district, Quang Nam Da Nang Prov., Vietnam, 4 Apr 1999, M. L. J. Stiassny, R. A. Arrindell et al.; AMNH 231616 (2), 56.0–57.4 mm, River Nuae Ta, Try My district, Quang Nam Da Nang Prov., Vietnam, 29 Mar 1999, M. L. J. Stiassny, R. A. Arrindell et al.; AMNH 231622 (1), 39.7 mm, River Nam Nin, Try My district, Quang Nam Da Nang Prov., Vietnam, 3 Apr 1999, M. L. J. Stiassny, R. A. Arrindell et al.

*Sewellia breviventralis* Freyhof & Serov, 2000  
Ihthyol Expor Freshwaters 11: 231

Holotype: ZFMK 20955, 50.7 mm, River Pako about 50 km north of Kontum, Kontum Prov., Vietnam, 14°39'60"N 107°46'98"E, 22 Feb 1999, J. Freyhof & D. V. Serov.

Paratypes: ZFMK 20956–20961 (6), 37.8–50.1 mm, same data as holotype.

*Sewellia marmorata* Serov, 1996  
Vop Ikhtiol 36: 273

Paratypes: ZFMK 18543–18544 (2), Kon Ha Nung, Vietnam, 13°57'N 107°32'E, 25 Jan 1991, D. Serov.

Type material in other collections: Holotype: ZMM P-19760, same data as ZFMK 18543–18544; Paratypes: ZMM P-19761 (11), same data as ZFMK 18543–18544.

*Sewellia patella* Freyhof & Serov, 2000  
Ihthyol Expor Freshwaters 11: 235

Holotype: ZFMK 20962, 36.8 mm, stream Azun about 30 km east of Pleiku, Gia Lai Prov., Vietnam, 14°02'34"N 108°21'07"E, 24 Feb 1999, J. Freyhof & D. V. Serov.

Paratypes: ZFMK 20963–20980 (18), 21.6–48.2 mm, same data as holotype; ZFMK 20981–20986 (6), 30.9–43.6 mm, River Dakpne 30 km northeast of Kontum, Kontum Prov., Vietnam, 14°30'35"N 108°13'92"E, 21 Feb 1999, J. Freyhof & D. V. Serov; ZFMK 20988–20989 (2), 34.7–40.2 mm, stream near Buon Loi village, Gia Lai Prov., Vietnam, 14°14'93"N 10°35'20"E, 25 Feb 1999, J. Freyhof & D. V. Serov.

## HEMIODONTIDAE

*Pterohemiodus luelingi* Géry, 1962  
Bonn zool Beitr 12: 332

Holotype: ZFMK 1226, (ex MKI 59-60/QC/12), Quisto Cocha, 15 km west of Iquitos, Perú, 1 May 1959, K. H. Lüling

Paratype: ZFMK 1227, (ex MKI 59-60/QC/13), same data as ZFMK 1226.

Type material in other collections: Paratype: MHNG 2150.6 (ex Géry M.202.3), same data as holotype.



Current status: Synonym of *Hemiodus atranalis* Fowler, 1940 (Langeani in Reis et al. 2003: 98).

## LEBIASINIDAE

*Pyrrhulina zigzag* Zarske & Géry, 1997

Das Aquarium 31 (No. 336): 14

Paratypes: ZFMK 19909–19912 (4), 21.2–25.6 mm, Yarina Cocha, Río Ucayali, Perú, 8 Aug 1974, K. H. Lüling.

Type material in other collections: Holotype: MTD F 17705, creek on road from Campo Verde to Nueva Requena, Perú, 28 Aug 1996, P. Debold, K. Schade, I. Seidel, H. Windhorst, S. Wlach & A. Zarske; Paratypes: MTD F 10963–10966 (4), Cocha Nazareth, tributary stream of Río Ucayali close by Requena, Perú, 18 Sep 1979, H.-J. Franke; MTD F 10967–10969 (3), brook at the Carretera Central, 21 km from Pucallpa, Perú, 21 Aug 1981, H.-J. Franke; MTD F 17247–17254 (8), same data as holotype; MTD F 17318–17333 (16), at Quebrada Manatai, Perú, 28 Aug 1996, P. Debold, K. Schade, I. Seidel, H. Windhorst, S. Wlach & A. Zarske; MTD F 17414–17425 (13), Tierra Roja, 30 Aug 1996, P. Debold, K. Schade, I. Seidel, H. Windhorst, S. Wlach & A. Zarske; MTD F 17660–17663 (4), km 34 of the street Pucallpa-Campo Verde, Perú, 28 Aug 1996, P. Debold, K. Schade, I. Seidel, H. Windhorst, S. Wlach & A. Zarske; Additional paratypes at ZMB, ZMA, MHNG, and private collection of Géry [no collection numbers provided].

## CHARACIDAE

*Aphyocharacidium bolivianum* Géry, 1973

Beitr neotrop Fauna 8: 101.

Holotype ZFMK 2933, brook between upper Río Chaparé and Río Chimoré, Río Mamoré drainage, eastern of Todos Santos, Central Bolivia, 9 Oct 1966, K. H. Lüling.

Type material in other collections: Paratypes: ZSM [no number provided] (1), same data as holotype; ZSM [no number provided] (1), Arroyo Chichigambo, near Espíritu upper Yacuma, Río Mamoré drainage, north of Río Chaparé, 15 Aug 1955, K. P. Baumert [both paratypes currently not in ZSM; at least one inventoried at MHNG as MHNG 2232.073; to be returned].

*Astyanax villwocki* Zarske & Géry, 1999

Mitt Hamb Zool Mus Inst 96: 199

Paratype: ZFMK 20781, 43.4 mm, Chaparé-Chimoré, Bolivia, 1968, K. H. Lüling.

Bonn zoological Bulletin 59: 109–136

Type material in other collections: Holotype: MTD F 22400, 113.8 mm, Río Pacal, Río Pachitca basin, Departamento Ucayali, Perú, Sep 1973, W. Villwock; Paratypes: ZMH 9175 (2), 55.0–55.8 mm, same data as holotype; MTD F 22116 (1), 100.3 mm, same data as holotype, private collection of J. Géry 1022.1 (1), same data as holotype; MTD F 17737–17741 (5), 32.9–59.4 mm, San Alejandro on the Carretera Federico Basadre (km 111), Dept. Ucayali, Perú, 31 Aug–2 Sep 1996, A. Zarske et al.; MTD F 17614–17615 (2), 42.6–47.0 mm, pond on km 25 of the road Campoverde-Tournavista, Dept. Ucayali, Perú, 30 Aug 1996, A. Zarske et al.; MNHN 1999–0318 to 0320 (3), 40.0–46.3 mm, Chapare-Coni, Bolivia, 1982, G. Loubens & L. Lauzanne; MNHN 1999–0321 to 0323 (3), 41.1–46.0 mm, Río San Juanito, Dept. Beni, Bolivia, 13 Jul 1982, G. Loubens; private collection of J. Géry 1022.2–3 (2), 38.6–51.5 mm, Río San Juanito, Dept. Beni, Bolivia, 13 Jul 1982, G. Loubens; MHNG 2603.17 (1), 94.1 mm, Bosque Nacional von Humboldt, middle Río Catilona, 86 km from Pucallpa, Dept. Ucayali, Perú, 31 May 1977, P. de Rham; MHNG 2603.18 (6), 29.3–43.8 mm, Bosque Nacional von Humboldt, Dept. Ucayali, Perú, 24 Jun 1978 [no collector provided].

*Bryconamericus guyanensis* Zarske, Le Bail & Géry, 2010

Vertebrate Zoology 60: 4

Paratypes: ZFMK 41764–41773 (10), 27.9–39.2 mm, crique Eau Claire at 7 km of Saül, Mana, French Guyana, 3 Jun 1983, Duranton & Demarty.

Type material in other collections: Holotype: MNHN 2010–0036, 43.2 mm, same data as ZFMK 41764–41773; Paratypes: MTD F 31932–31936 (5), 18.7–30.1 mm, Bas Maroni, crique Balatée, French Guyana, 9 Oct 1979, P. Planquette (lot 1); MNHN 2010–0037 (2), 23.4–38.1 mm, Village Antecume Pata, Haut Maroni, French Guyana, 15 Dec 1985, P. Planquette & P.-Y. Le Bail; 15.12.1985 (lot 2); MNHN 2010–0038 (12), 33.8–46.8 mm, crique Eau Claire at 7 km of Saül, Mana, French Guyana, 3 Jun 1983, Duranton & Demarty (lot 3); MTD F 31937–31949 (13), 31.8–43.1 mm, same data as ZFMK 41764–41773; MHNG 2722.008 (10), 31.6–41.0 mm, same data as ZFMK 41764–41773; ZMB 33936 (10), 31.0–41.4 mm, same data as ZFMK 41764–41773; MTD F 31950–31951 (2), 27.3–33.5 mm, Saut Ananas, crique No. 3, French Guyana, 04°06'04"N 53°31'23"W, 22 Sept 1995, P.-Y. Le Bail, P. Planquette & P. Keith (lot 4); MTD F 31988–31993 (6), 21.4–7.9 mm, Saut Ananas, French Guyana 1957, Géry; MNHN 2010–0039 (14), 24.2–42.3 mm, Saut Capiaie, French Guyana, 04°05'39"N 53°31'31"W, 24 Sept 1995, P.-Y. Le Bail, P. Planquette & P. Keith (lot 5); IRSNB 21735 (9), 36.2–56.7 mm,

Crique Colon, affluent de la Crique Léopard, near Citron, French Guyana, 04°44'19"N 53°57'33"W, 13 Nov 1982, P. Planquette & P.-Y. Le Bail.

*Characidium heinianum* Zarske & Géry, 2001  
Zool Abh Mus Tierk Dresden 51: 231 Figs 1–3

Paratypes: ZFMK 39131–39135 (5), Río Iourupuru, tributary stream of Río Mamoré, near the cross of the river with the road Ramón, about 73 km north of Trinidad, Dep. Beni, Bolivia, 14°12'53.8"S 64°56'26.8"W, 14–15 Jun 2000, A Zarske, G. Hein, T. Tonoki & J. Zapata.

Type material in other collections: Holotype: MTD F 24825, same data as ZFMK 39131–39135; Paratypes: MTD F 24826–24830 (5); MTD F 24831–24832 (2), alizarin preparation, same data as ZFMK 39131–39135; MTD F 24826–24830 (5), same data as ZFMK 39131–39135; CIRA-UTB 968 a–c (5), same data as ZFMK 39131–39135; ZMB 33236 (5); ZSM 29465–29469 (5), same data as ZFMK 39131–39135; MHNG 24831–32 (2), same data as ZFMK 39131–39135; MHNG 2618.90 (5), same data as ZFMK 39131–39135; Private collection Géry 1043.1–5.2001 (5), same data as ZFMK 39131–39135; CAZ 361 (5), same data as ZFMK 39131–39135.

*Cheirodon luelingi* Géry, 1964  
Beitr neotrop Fauna 4: 19

Holotype: ZFMK 1417, small creek between Caño Yarina and Zapote Cocha, lower Río Pacaya, Perú, 29 Sep 1959, K. H. Lüling.

Paratype: ZFMK 1418, same data as holotype.

Type material in other collections: Paratypes: MHNG 2150.16–17 (2), same data as holotype.

*Hasemanianus crenuchoides* Zarske & Géry, 1999  
Spixiana 22: 91

Paratypes: ZFMK 20543–20547 (5), 28.6–31.88 mm, Corrego Planaltina upper Rio Sao Bartolomeu, northeast of Brasilia, Distrito Federal, Goias, Brazil, Aug 1965, H. Schultz.

Type material in other collections: Holotype: MZUSP 52732, male, 65.8 mm, same data as ZFMK 20543–20547; ZSM 22656 (55), same data as ZFMK 20543–20547; MTD F 21538–21545 (8), therefrom 3 alizarin preparations, same data as ZFMK 20543–20547; private collec-

tion of J. Géry 1010.1–5 (5), same data as ZFMK 20543–20547; MHNG 2594.44 (5), same data as ZFMK 20543–20547; ZMB 23959 (5), same data as ZFMK 20543–20547.

*Hemigrammus luelingi* Géry, 1964  
Beitr neotrop Fauna 4: 7

Holotype: ZFMK 1304, small creek between Caño Yarina and Zapote Cocha, lower Río Pacaya, Perú, 29 Sep 1959, K. H. Lüling.

Paratype: ZFMK 1305, same data as holotype.

Type material in other collections: Paratypes: MHNG 2150.14–15 (2).

*Hyphessobrycon gracilior* Géry, 1964  
Beitr neotrop Fauna 4: 12

Holotype: ZFMK 1329, small creek between Caño Yarina and Zapote Cocha, lower Río Pacaya, Perú, 29 Sep 1959, K. H. Lüling.

Paratype: ZFMK 1330, same data as holotype.

Type material in other collections: Paratypes: MHNG 2150.12–13 (2).

*Hyphessobrycon guarani* Mahnert & Géry, 1987  
Bonn zool Beitr 38: 307

Paratypes: ZFMK 15521–15523 (3), Monte Carlo, Misiones Alto Paraná, Argentina, Sep 1979, K. H. Lüling.

Type material in other collections: Holotype: MHNG 2366.99, 30.0 mm, Río Alto Paraná at Puerto Bertoni, Paraguay, 13 Nov 1982, P. Berner, C. Dlouhy & V. Mahnert; Paratypes: MHNG 2366.100 (77), 17.9–30.5 mm, therefrom 6 alizarin preparations, same data as holotype; MHNG 2367.1 (34), Pirapyta, Lago Itaipu, Alto Paraná, 19 Feb 1984, C. Dlouhy; MHNG 2367.2 (41), Itabo, Lago Itaipu, 19 Oct 1984, C. Dlouhy; MHNG 2367.3 (1), same data as ZFMK 15521–15523.

*Hyphessobrycon nigricinctus* Zarske & Géry, 2004  
Zool Abh Mus Tierk Dresden 54: 33, Figs 1–3

Paratype: ZFMK 39847 (1), 27.4 mm, Import bred specimen out off Río Reducto, tributary stream of Río Manuripi, near the city Alegría, Madre de Dios, Perú, ded Apr 2004, P. & M. Hoffmann.



Type material in other collections: Holotype: MTD F 28465 (1), 32.8 mm, import specimen, same data as ZFMK 39847; Paratypes: MTD F 28457–28459 (3), 29.5–32.7 mm, import specimens, same data as ZFMK 39847, 19 Jul 2004, R. Numrich; Private collection of J. Géry, 1065.1.2004 (1), same data as ZFMK 39847.

***Hyphessobrycon pando*** Hein, 2009

Bull Fish Biol 10: 2

Holotype: ZFMK 41452, 35.4 mm, Río Manuripi, near to Puerto Cardenas, Departamento Pando, Bolivia, 11°20.083'S 67°44.576'W, 12 May 2001, G. Hein, H. Längert, J. Zapata & A. Zarske.

Paratypes: ZFMK 41453–41456 (4), 27.4–36.7 mm, same data as holotype.

Type material in other collections: CIRA-UTB 973 a–c (3), 29.3–32.0 mm, same data as holotype; MTD F 30756–30758 (3), 28.3–30.0 mm, same data as holotype.

Remarks: Additional material: ZFMK 41457–41459 (3), same data as holotype, cleared and stained. Date in reference “31.12.2008”, but printed in 2009.

***Hyphessobrycon procerus*** Mahnert & Géry, 1987

Bonn zool Beitr 38: 311

Paratypes: ZFMK 15518–15519 (2), Río Guayraugua, Depto. Caaguazú, Paraguay.

Type material in other collections: Holotype: MHNG 2385.68, male, 32.9 mm; Paratypes: MHNG 2385.69 (28), therefrom 2 alizarin preparations; MNHN 1988-0468 (2); MZUSP 45714 [ex MHNG 2385.69] (2); USNM 290841 [ex MHNG 2385.69] (3).

***Hyphessobrycon tenuis*** Géry, 1964

Beitr neotrop Fauna 4: 10

Holotype: ZFMK 1327, small creek between Caño Yarina and Zapote Cocha, lower Río Pacaya, Perú, 29 Sep 1959, K. H. Lüling.

Paratype: ZFMK 1328, same data as holotype.

Type material in other collections: Paratypes: MHNG 2150.8–11 (4), same data as holotype; ZMA 113.853 (1), same data as holotype; ANSP 139708 (1), same data as holotype.

***Knodus borki*** Zarske, 2008

Vertebrate Zoology 58: 160

Paratype: ZFMK 41480 (1), 29.46 mm, near Iquitos, Perú, specimen from commercial import, 2008, D. Bork don.

Type material in other collections: Holotype: MTD F 31357, 33.99 mm, same data as ZFMK 41480; Paratypes: MTD F 31358–31362 (5), 29.74–33.13 mm, same data as ZFMK 41480; NMW 95153 (1), 30.76 mm, same data as ZFMK 41480; MHNG 27098.085 (1), 29.37 mm, same data as ZFMK 41480; ZMB 33872 (1), 31.55 mm, same data as ZFMK 41480.

***Moenkhausia margitae*** Zarske & Géry, 2001

Zool Abh Mus Tierk Dresden 51: 7, Figs 1–2

Paratype: ZFMK 26448 (1), Campo Verde, Ucayali, Perú, 3 Sep 1978, K. H. Lüling.

Type material in other collections: Holotype: MTD F 17256, Quebrada on road Campo Verde-Nueva Requena (about half way), Ucayali, Perú; Paratypes: MTD F 17257–17258 (2), same data as ZFMK 26448; MHNG 2610.01, Bosque Nacional A. von Humboldt, Carretera Central 86 km from Pucallpa in direction to Lima, Ucayali, Perú (No. 13), 29 May 1977, P. de Rham; MHNG 2610.02 (16) (No. 14), same data as MHNG 2610.01; MHNG 2610.03 (13) (No. 14), same data as MHNG 2610.01; MHNG 2610.04 (13) (No. 15), same data as MHNG 2610.01; private collection of J. Géry 1029.1–3.2000 (3), 37.2–52.0 mm, waters at km marker 85 of the road from Puerto Inca to Tingo Maria, Ucayali, Perú, 9 Aug 1985, Staeck & Linke; private collection of J. Géry 1029.4.2000 (1), 44.0 mm, Río Neshuya, 60 km southeast of Pucallpa, Ucayali, Perú, Feb 1984, Lombart.

***Oxybrycon parvulus*** Géry, 1964

Beitr neotrop Fauna 4: 16

Holotype: ZFMK 1331, small creek between Caño Yarina and Zapote Cocha, lower Río Pacaya, Perú, 29 Sep 1959, K. H. Lüling.

Paratypes: ZFMK 1332–1357 (26), same data as holotype.

Type material in other collections: Paratypes: MHNG 2150.18–27 (10); ZMA 113.861 (2); ANSP 139709 (1); all same data as holotype.

Remarks: Type species of *Oxybrycon* Géry, 1964.

*Petitella georgiae* Géry & Boutière, 1964

Vie et Milieu Supl 17: 474

Paratype: ZFMK 1419, muddy bank of the Amazon River, upstream of Iquitos, Distr. Loreto, Perú, Dec 1959, K. H. Lüling.

Type material in other collections: Holotype: MHNG 2150.28. (ex J. Géry collection M.314,1), male, near Lagunas, lower Río Huallaga, Distr. Loreto, Perú, beginning of 1959, V. Manuel; Paratypes: MHNG 2150.29–64 (37), same data as holotype; MHNG 2150 6588 (31), near Iquitos, Distr. Loreto, Perú, beginning 1960, collector unknown; ZSM 26332 (3), same data as holotype; MNHNP 1980–1447 (2), Distr. Loreto, Perú, 24 Feb 1961, P. Piron.

*Piabarchus torrenticola* Mahnert & Géry, 1988

Rev fr Aquariol 15: 3

Paratype: ZFMK 15520 (ex MHNG 2385.72) (1), Salto Pirareta, Cordillera, Paraguay, 12 Nov 1985, C. Dlouhy, Cl. Vaucher & V. Mahnert.

Type material in other collections: Holotype MHNG 2385.70, 45.7 mm, Salto Pirareta, 21 Mar 1985, C. Dlouhy, F. Baud, & V. Mahnert; Paratypes: MHNG 2385 72 (59), same data as ZFMK 15520; MHNG 2385.73 (4), smaller tributary stream running in Río Piribebuy, 10 km south of Tobati, Prov. Cordillera, 19 May 1985, C. Dlouhy, F. Baud & V. Mahnert; MHNG 2385.74, Mountain stream (afflux) running into Lago Ypacaraí, Prov. Cordillera, ded. H. Bleher.

*Serrasalmus sanchezi* Géry, 1964

Beitr neotrop Fauna 4: 27

Holotype: ZFMK 1216, Caño Yarina, Río Pacaya, creek in lower Río Ucayali, Perú, 31 Aug 1959, K. H. Lüling.

Paratype: ZFMK 1217, same data as ZFMK 1216.

Type material in other collections: Paratype: MHNG 2150.7, same data as ZFMK 1216.

*Tucanoichthys tucano* Géry & Römer, 1997

Aqua, J Ichthy Aquat Biol. 2: 66 Figs 1, 5–6

Paratypes: ZFMK 18585–19589 (5), brook draining to Igarape Yavuari river, tributary stream of river Uaupés, upper river Negro, Amazonas, Brazil, 0°14'31"N 68°03'48"W, May 1996, U. Römer et al.

Type material in other collections: Holotype: MZUSP 51322 (10); MHNG 2588.41 (3); MTD F 18469–7; SMF 28208 (1); all same data as ZFMK 18585–19589.

*Tyttobrycon dorsimaculatus* Géry, 1973

Beitr neotrop Fauna 8: 118.

Holotype: ZFMK 2916, male, 19 mm, “Hoffmann-lagoon”, Río Chaparé (tributary of Río Mamoré), lower Todos Santos, Central Bolivia, about 16°45'S 65°07'W, 7 Oct 1966, K. H. Lüling.

Paratypes: ZFMK 2624 (1), 12 mm, same data as holotype; ZFMK 2952–2956 (5), small specimens, Río Chaparé, ravine 4 km below Todos Santos, 8 Oct 1966, K. H. Lüling; ZFMK 2960–2962 (3), ravine 6 km below San Francisco on the Río Chipiriri, Mamoré-system, Central Bolivia, 3 Oct 1966, K. H. Lüling; ZFMK 2963–2979 (18), stagnant arm of the Río Chipiriri 1.5 km below San Francisco, Mamoré-system, Central Bolivia, 4 Oct 1966, K. H. Lüling.

Type material in other collections: Paratypes: private collection of J. Géry [no collection numbers provided] (28).

*Tyttobrycon spinosus* Géry, 1973

Beitr neotrop Fauna 8: 121 Figs 23–26

Holotype: ZFMK 3000, brook between Río Chaparé and Río Chimoré, Río Mamoré system, east of Todos Santos, Central Bolivia, 9 Oct 1966, K. H. Lüling.

Paratype: ZFMK 1420 (1), same data as holotype.

Type material in other collections: Paratypes: Private collection J. Géry [no collection numbers provided] (2), same data as holotype.

**DIPLOMYSTIDAE***Diplomystes camposensis* Arratia, 1987

Bonn zool Mon 24: 45

Paratypes: ZFMK 14800 (1), 39°44'34"S 72°30'56"W, Río San Pedro close to Taco 3, Chile, 14 Dec 1985, K. Busse; ZFMK 14801–14805 (5), 39°46'34"S 72°27'10"W, Lago Riñihue (Desagüe), Prov. Valdivia, Chile, Jan 1986, K. Busse.

Type material in other collections: Holotype: IZUA 3302, 169.6 mm, Lago Riñihue, 2 Oct 1983, A. Arriagada & A. Klink; Paratypes: IZUA 3303 (2), Lago Riñihue, 4 Nov



1975; IZUA 2807 (1), Lago Riñihue (IZUA-material probably destroyed in the blaze of 2008); SMF 7579 (1), Río Valdivia, 11 Dec 1964, H. Campos; MCZ 54388 (1), Río San Pedro near Los Lagos, Prov. Valdivia, 22 Mar 1979, G. Arratia; CAS 55428 (2), Lago Riñihue, 16 Mar 1979, C. Eigenmann; KU 19210 (1) (flare example), Río San Pedro near Purey, 19 Feb 1967, G. Arratia & H. Diaz; KU 19209 (3), Río San Pedro near Los Lagos, Feb 1976, G. Arratia & H. Diaz; KU 19257 (1), Río Curalelfú, Los Lagos, Feb 1976, G. Arratia & H. Diaz; private collection of G. Arratia 110276, 120276, 130276, 140276 (5) (flare examples), Río San Pedro, G. Arratia; private collection of G. Arratia 111285 (1), Río San Pedro near confluence of Quinchilca, 10 Dec 1985, K. Busse; private collection of G. Arratia 011986 a (2), Desagüe Lago Riñihue, Jan 1986, K. Busse; private collection of G. Arratia 011986 b (3), Lago Riñihue, Jan 1986.

## BAGRIDAE

*Bagrus koenigi* Pietschmann, 1932

Zool Anz 100: 92

Holotype: ZFMK (1899) 209, Nile, upper Egypt, 1899, A. Koenig.

Current status: Synonym of *Bagrus docmak* Forskål, 1775 (Risch 1986: 11)

*Pseudobagrus nubilosus* Ng & Freyhof, 2007

Ichthyol Explor Freshwaters 18: 10, Fig. 1; 9–26

Paratypes: ZFMK 31245–31246 (2), 43.9–49.0 mm, 14°12'37.2"N 108°45'42.6"E, Nuoc Choc stream, a tributary of Song Vinh Tranh, about 60 km northwest of Qui Nhon, Binh Dinh Prov., Vietnam, 23 Mar 1999, J. Freyhof & D. V. Serov.

Type material in other collections: Holotype: UMMZ 246370, 48.5 mm, same data as ZFMK 31245–31246; Paratypes: UMMZ 246320 (2), 49.0–50.8 mm, same data as ZFMK 31245–31246.

*Pseudouyustus sobrinus* Ng & Freyhof, 2005

Copeia 2005:745

Holotype: ZFMK 27167, 63.2 mm, 12°53'05"N 109°23'70"E, stream about 15 km south of Tuy Hoa Phu Yen Prov., Vietnam, 26 Feb 1999, J. Freyhof & D. V. Serov.

Paratypes: ZFMK 24068–24073 (6), 38.3–59.0 mm, Crong Hang (stream) near the village of M'Drac, about 60 km west of Ninh Hoa, tributary of Song Ba, Dac Lac Prov., Vietnam, 12°46'10"N 108°42'76"E, 28 Jan 1999, J. Freyhof & D. V. Serov; ZFMK 24166 (1), 86.3 mm, market of Azun Pa, Gia Lai Prov., 30 Apr 2000, J. Freyhof, F. Herder & D. V. Serov; ZFMK 27168–27183 (17), 30.6–79.8 mm, same data as holotype; ZFMK 27184–27185 (2), 38.0–42.5 mm, stream about 30 km west of Tuy Hoa, Phu Yen Prov., Vietnam, 13°03'08"N 109°05'00"E, 2 Mar 1999, J. Freyhof & D. V. Serov.

Type material in other collections: UMMZ 245016 (3), 46.3–47.8 mm; ZRC 49172 (2), 42.6–52.5 mm; all same data as ZFMK 27184–27185.

## AMPHILIIDAE

*Leptoglanis wamiensis* Seegers, 1989

Aquar Terrar Z 42: 285

Holotype: ZFMK 15899, Kisangata creek, tributary of the Wami river at Mvumi, 32 km southwest of Kidete on the Kimamba-Kilosa road, Morogoro, Tanzania, 3 Jan 1989, B. Kilian & L. Seegers.

Paratypes: ZFMK 15900–15902 (3), same data as holotype.

Current status: Synonym of *Zaireichthys rotundiceps* Hilgendorf, 1905 (Ferraris 2007: 29)

## AKYSIDAE

*Akysis clavulus* Ng & Freyhof, 2003

Ichthyol Explor Freshwaters 14: 312

Holotype: ZFMK 27159, about 10 km west of Ninh Hoa, Song Duc My, Khanh Hoa Prov., Vietnam, 12°32'22"N 109°01'38"E, 10 Feb 1999, J. Freyhof & D. V. Serov.

Paratypes: ZFMK 25506–25516 (11), 23.8–31.0 mm, same data as holotype; ZFMK 223265 (1), stream near Kanh Vinh about 34 km from Nha Trang, tributary stream of Song Cai, 12°16'42"N 107°54'56"E, 17 Dec 1998, J. Freyhof & D. V. Serov; ZFMK 27506–27509 (4), 25.5–31.4 mm, stream near grave of Yersin, about 20 km south of Nha Trang in a tributary stream of Song Cai, 12°10'73"N 103°04'10"E, 13 Feb 1999, J. Freyhof & D. V. Serov; ZFMK 27156–27158 (3), 21.2–28.0 mm, and ZFMK 27160–27165 (6), 25.0–27.7 mm, stream Giang May, about 30 km south of Nha Trang, a tributary of Song Cai, Khanh Hoa Prov., Vietnam, 12°12'12"N

108°55'48"E, May 2000, J. Freyhof, F. Herder & D. V. Serov.

Type material in other collections: Paratypes: UMMZ 238018 (1), 35.0 mm; ZRC 46177 (3), 26.8–30.0 mm; all same data as ZFMK 27159.

## SISORIDAE

*Glyptothorax filicatus* Ng & Freyhof, 2008  
Zootaxa 1873: 12

Holotype: ZFMK 34398, 83.3 mm, 12 km east of A Luoi, stream draining to Se Sap River, Thua Thien Hue province, Vietnam, 16°20.57'N 107°9.41'E, 20 Mar 2000, J. Freyhof, F. Herder & D. Serov.

Paratype: ZFMK 34399 (1), 91.9 mm, same data as holotype.

Type material in other collections: Paratype: UMMZ 245668 (1), 69.0 mm, same data as holotype.

*Glyptothorax strabonis* Ng & Freyhof, 2008  
Zootaxa 1873: 16

Paratypes: ZFMK 35285–35286 (2), 84.0–95.5 mm, market in Phong Nha, Quang Binh province, Vietnam, 7 Apr 2000, J. Freyhof, F. Herder & D. Serov.

Type material in other collections: Holotype: UMMZ 245669, 80.1 mm, same data as ZFMK 35285–35286.

*Oreoglanis infulatus* Ng & Freyhof, 2001  
J Fish Biol 59: 1165; Figs 1–3

Holotype: ZFMK 35719, 76.1 mm, stream at Son Kima, tributary of Song Lam, Ha Tinh Prov., Vietnam, 18°24'25"N 105°11'10"E, 11 Apr 1999, J. Freyhof, F. Herder & D. V. Serov.

Paratypes: ZFMK 35720–35725 (6), 40.3–72.4 mm.

Type material in other collections: Paratypes: UMMZ 238025 (6), same data as ZFMK 35719.

## HEPTAPTERIDAE

*Imparfinis pseudonemacheir* Mees & Cala, 1989  
Proc konink nederl Akad Wetensch C 92: 388

Paratypes: ZFMK 17818–17819 (2), at the street of Pucallpa to Tournavista, Distr. Loreto, Perú, 3 Sep 1978, K. H. Lüling.

Type material in other collections: Holotype and paratypes: RMNH 30489 (3) (largest specimen is the holotype); Río Tucuragua near Caicara, Bolívar, Venezuela, 25 Mar 1986, B. Román; RMNH 30487 (4), Río Guayuriba (Puerto López), Meta, Colombia, 20 Feb 1972, P. Cala; ICN-NHM 1403 (4), same data as RMNH 30487.

## CALLICHTHYIDAE

*Corydoras lacerdai* Hieronimus, 1995  
Z Fischk 3: 110

Paratypes: ZFMK 18551, 33.6 mm; ZFMK 18552, 27.8 mm; ZFMK 18553–18556 (4), 21.0–26.0 mm; all Rio Ribeira da Terra Firme between Canavieiras and Ilheus, Brazil, 1 Jan 1993, M. T. C. Lacerda, S. S. Valério & D. Byron.

Type material in other collections: Holotype: MZUSP 47682, female, 33.6 mm; Paratypes: MZUSP 47683 (1), 33.0 mm and MZUSP 47684 (1), male, 25.2 mm; MZUSP without number (12), 14–23 mm; ZMA 121.255 (4), private collection of Hieronimus (4); all same data as ZFMK 18551.

*Corydoras pinheiroi* Dinkelmeyer, 1995  
Aquarist aktuell 3: 60

Paratypes: ZFMK 18499, 18500, 18540–18542 (5), tributary stream of Rio Ribeirão, near the village of Guajará-Mirim, Est. Rondônia, Brazil, 3 Oct 1994, M. T. C. Lacerda, Y. Nakamura & V. Alvez.

Type material in other collections: Holotype: MZUSP 48099, male, 57.0 mm; Paratypes: ZMA 121.269 (3); all same data as ZFMK 18499, 18500, 18540–18542.

*Corydoras sarareensis* Dinkelmeyer, 1995  
Aquarist aktuell 3: 61

Paratypes: ZFMK 18504–18506 (3), Rio Sararé, right hand side tributary stream of Rio Guaporé, Est. Mato Grosso, Brazil, 1994, M. T. C. Lacerda.

Type material in other collections: Holotype: MZUSP 48100, male, 43.8 mm; Paratypes: ZMA 121.268 (4); all same data as ZFMK 18504–18506.



*Corydoras seussi* Dinkelmeyer, 1996  
Aqu aktuell 1996: 25

Paratypes: ZFMK 18628–18653 (26), small side stream at Rio Pacas Novos, side branch of Rio Mamoré near Guajar-Mirim, Est. Rodônia, Brazil, Sep 1999 (date of shipment), T. C. Lacerda.

Type material in other collections: Holotype: MZUSP 49322, female, 60.8 mm; Paratypes: MZUSP 49323 (10); ZMA 121.570 (10); all same data as ZFMK 18628–18653.

*Corydoras similis* Hieronimus, 1991  
Z Fischkunde 1: 41

Holotype: ZFMK 16400, 35.3 mm, near the city of Ariqumes, a tributary of Rio Madeira, federal state of Rondonia, Brazil, commercial import.

Paratypes: ZMA 120.746, same data as ZFMK 16400.

#### LORICARIIDAE

*Ancistrus pirareta* Muller, 1989  
Rev Suisse Zool 96: 891

Paratypes: ZFMK 16281–16282 (2), Salto Pirareta, Piri-bebuy, Afflux of Río Tebicuary-mi, Cordillera, Paraguay, 21–23 Mar 1985, F. Baud, C. Dlouhy & V. Mahnert.

Type material in other collections: Holotype: MHNG 2450.10, male, 82.3 mm, same data as ZFMK 16281–16282; Paratypes: MHNG 2268.56 (78) (2 of these are alizarin preparations), MCP (2) [no number provided], USNM 307765 (2), ZMA 120.329 (5) and ZSM 27592 (2).

*Ancistrus piriformis* Muller, 1989  
Rev Suisse Zool 96: 887

Paratypes: ZFMK 16279–16280 (2), Rio Acaray beneath the barrier lake, Alto Paraná, Paraguay, 15 May 1982, C. Dlouhy.

Type material in other collections: Holotype: MHNG 2450.11, male, 80.8 mm, same data as ZFMK 16279–16280; Paratypes: MHNG. 2268.58–59 (88), (2 of these are alizarin preparations), same sampling locality as ZFMK 16279–16280; MCP (2), USNM 307766 (2), ZMA 120.328 (5) and ZSM (2); all same data as ZFMK 16279–16280; MHNG 2160.25 (1), 52.7 mm and 2268.20 (1), 72.5 mm, 7 Oct 1980.

Bonn zoological Bulletin 59: 109–136

*Pseudohemiodon (Planiloricaria) cryptodon* Isbrücker, 1971

Bonn zool Beitr 21: 278

Holotype: ZFMK 1865 (ex ZFMK I/66/1717), Río Uca-yali near Pucallpa, Perú, Sep–Oct 1966, K. H. Lüling.

Remarks: Type species of the subgenus *Planiloricaria* Isbrücker, 1971.

Current status: Valid as *Planiloricaria cryptodon* Isbrücker, 1971 (Isbrücker 1980).

#### GALAXIIDAE

*Brachygalaxias gothei* Busse, 1982

Bonn zool Beitr 33: 72

Holotype: ZFMK 11110, male, Fundo Porvencir, Talca, Chile, 9 Nov 1981, K. H. Gothe & K. Busse.

Paratypes: ZFMK 11111–11130, 11137–11158 (42), same data as holotype.

Type material in other collections: Additional paratypes in the collections of BM 1982.11.10: 865–866 (2) (ex ZFMK 11131–11132); IZUA 2721 (2) (ex ZFMK 11133–11134); MNHNC P6.055–P6.056 (2) (ex ZFMK 11135–11136).

*Galaxias bullocki* Regan, 1908

Ann Mag nat Hist London 8: 372

Paralectotypes: ZFMK 12911 (1), male, Maquehue near Temuco, Chile, 6 Apr 1907, D. S. Bullock; ZFMK 12912 (1), female, same data as ZFMK 12911. Both specimens ex BMNH.

Type material in other collections: Lectotype: BMNH 1968.9.16.1, female, same data as ZFMK 12911; Paralectotypes: BMNH 1968.9.16.2–47, same data as ZFMK 12911 (design. Busse 1984, Bonn zool Mon 19: 217).

Current status: Valid as *Brachygalaxias bullocki* (Regan, 1908) (McDowall 1971: 60).

#### SALMONIDAE

*Coregonus fontanae* Schulz & Freyhof, 2003

Ichthyol Explor Freshwaters 14: 212

Holotype: ZFMK 22805, 118.8 mm, Lake Stechlin, Brandenburg, Germany, 53°09'N 13°04'E, 23 Apr 2001, M. Schulz.

Paratypes: ZFMK 22806–22820 (15), 98.3–118.6 mm, same data as holotype.

Type material in other collections: Paratypes: ZMB 33328 (20), 90.0–125.9 mm, same data as holotype.

## NOTHOBRANCHIIDAE

*Aphyosemion (Mesoaphyosemion) etsamense* Sonnenberg & Blum, 2005  
Bonn zool Beitr 53: 213

Holotype: ZFMK 39832, male, 32.4 mm, small river at the village Etsam I crossing the road N5 from Medoneu to Kougouleu, western slopes of the Monts de Cristal, Gabon, 0°46'34.1"N 10°24'03"E, 29 Jul 2002, T. Blum, G. Fleck & R. Sonnenberg.

Paratypes: ZFMK 39833–39842 (10), same data as holotype; ZFMK 39843 (1), male, north of the village Assok, Gabon, 0°43'36.9"N 10°21'58.1"E, 11 Sept 2002, T. Blum & P. Sewer; ZFMK 39844–39846, same locality as holotype, Aug 1999, preserved after approximately 2 years in aquarium, F. Bitter, T. Blum & P. Sewer.

Type material in other collections: MRAC A4-42-P-1-4, same data as holotype; IRET (2), same data as holotype.

*Callopanchax sidibe* Sonnenberg & Busch, 2010  
Bonn zoll Bull 57: 6

Holotype: ZFMK 41613, male, 58.2 mm, small river and adjacent pools and ditches in a secondary forest, close to the small village Bombokoré, about 3 km from the closest larger village Fandi, Kindia region, Guinée maritime, Guinea, 9°32.71'N 13°14.51'W, 25 Oct 2008, E. Busch & B. Wiese.

Paratypes: ZFMK 41614–41615 (2), 47.0 (male)–55.4 (female) mm, same data as holotype; ZFMK 41616–41628 (13), 39.0–58.9 mm, same data as holotype.

Type material in other collections: Paratypes: MRAC 2010-02-P-1-5 (5), 46.3–59.9 mm, same data as holotype.

*Chromaphyosemion koungueense* Sonnenberg, 2007  
Zootaxa 1591: 7

Holotype: ZFMK 39949, male, 24.3 mm, river Koungué, a small river in the forest near the village Koungué Ndonga at the road from Edea to Dizangue and Ndonga, Cameroon, 03°48'36.9"N 09°55'03.9"E, 4 Jan 2000, U. Kämpf, R. Sonnenberg & A. Tränkner.

Paratypes: ZFMK 39950–39955 (6), same data as holotype; ZFMK 39956–39957 (2), males, small creek crossing the road Mbambou to Mouanko, some kilometers in oil palm plantation in direction Mouanko, Cameroon, 03°42'48.8"N 09°51'28.2"E, 2003, H. Kullmann & M. Völker; ZFMK 39958–39959 (2), males, near the road from Edea to Kribi, Cameroon, 03°32'28.9"N 10°05'12.1"E, 6 Jan 2000, E. U. Kämpf, R. Sonnenberg & A. Tränkner; ZFMK 39960–39964 (5), small creek crossing the road from Edea to Kribi near the village Koukoué, Cameroon, 03°43'18.1"N 10°06'26.9"E, 14 Dec 2001, H. Kullmann, B. Misof & R. Sonnenberg; ZFMK 39965–39969 (5), small creek near the road Edea to Kribi, Cameroon, 03°36'29.2"N 10°06'26.2"E, 14 Dec 2001, H. Kullmann, B. Misof & R. Sonnenberg.

Type material in other collections: CENAREST (2), same collection data as ZFMK 39960–39964.

*Chromaphyosemion melinoeides*, Sonnenberg, 2007  
Zootaxa 1591: 16

Holotype: ZFMK 40000, male, 25.1 mm, the first stream crossing the road from Kribi to Ebolowa after the village Akok in direction Ebolowa, Cameroon, 02°47'30.4"N 10°17'00.0"E, 17 Jan 2000, U. Kämpf, R. Sonnenberg & A. Tränkner.

Paratypes: ZFMK 39987–39988 (2), same data as holotype; ZFMK 39989–39997 (10), near the village Fenda at the road from Kribi to Ebolowa, Cameroon, 02°49'02.7"N 10°22'50.6"E, 17 Jan 2000, U. Kämpf, R. Sonnenberg & A. Tränkner; ZFMK 39998–39999 (2), males, small creek Mintang near the village Fenda on the road from Kribi to Ebolowa, Cameroon, 02°49'36.0"N 10°22'39.0"E, 8 Jan 1998, W. Eberl, U. Kämpf & A. Kliesch; ZFMK 40001–40003 (3), small creek crossing the road from Kribi to Ebolowa, near the village Njabilobé, Cameroon, 7 Jan 1998, W. Eberl, U. Kämpf, A. Kliesch; ZFMK 40004 (1), male, road from Kribi to Ebolowa, east of Akok, Cameroon, 02°47'56.2"N 10°18'55.3"E, 17 Jan 2000, U. Kämpf, R. Sonnenberg & A. Tränkner.

Type material in other collections: CENAREST, Batoke, Cameroon (1), male, same data as ZFMK 39998–39999;



CENAREST, Batoke, Cameroon (1), female, same data as ZFMK 40004.

*Chromaphyosemion omega* Sonnenberg, 2007  
Zootaxa 1591: 12

Holotype: ZFMK 39970, male, 31.3 mm, small river Ngo Njock near the village Ndog Nyang, old road from Edea to Douala, Cameroon, 03°59'12.4"N 10°05'50.3"E, 5 Jan 2000, U. Kämpf, R. Sonnenberg & A. Tränkner.

Paratypes: ZFMK 39971–39980 (10), same data as holotype; ZFMK 39981–39986 (7), creek crossing the old road from Edea to Douala, near Bonepoupa, Cameroon, 04°06'30.1"N 10°01'12.6"E, 9 Oct 2001, H. Kullmann, B. Misof & R. Sonnenberg.

Type material in other collections: CENAREST, Batoke, Cameroon (1), male, same data as holotype; CENAREST, Batoke, Cameroon (1), female, same data as ZFMK 39981–39986.

*Episemion krystallinoron* Sonnenberg et al. 2006  
Zootaxa 1361: 6

Holotype: ZFMK 39942, male, 27.9 mm, river near village of Nkinèn, crossing the road N5 from Médouneu to Kougouleu, northern part of the Monts de Cristal, Gabon, 0°58'06.3"N 10°41'33.5"E, 29 Jul 2002, T. Blum, G. Fleek & R. Sonnenberg.

Paratypes: ZFMK 39943–39945 (3), same data as holotype; ZFMK 39948 (1), male, same data as holotype; ZFMK 39946–39947 (2), river near Médouneu, at road N5, northern part of the Monts de Cristal, Gabon, 1°00'06.0"N 10°45'50.9"E, 24 Aug 1999, T. Blum, F. Bitter & P. Sewer.

Type material in other collections: MRAC 2006-09-P-1 (1), male, same data as holotype; IRET (uncat.) (1), male, same data as holotype.

*Fundulopanchax kamdemi* Akum, Sonnenberg, Zee & Wildekamp, 2007  
Zootaxa 1532: 43

Paratypes: ZFMK 39900–39917 (18), small forest stream emptying in swampy pools, Korup Nationalpark, Cameroon, 05°00'20"N 08°47'01"E, Dec 2001, C. Akum; ZFMK 39918–39931 (14), juv., same data as ZFMK 39900–39917.

Type material in other collections: Holotype: MRAC A2-003-P-0001, male, small pools under forest cover, Korup Nationalpark, Cameroon, 05°05'N 08°52'E, 12 Jan 2001, G. Chiambeng; Paratypes: MRAC A2-003-P-0002–0003 (2), males, same data as holotype; MRAC 92-144-P-0384–0386 (3), 40.5–47.3 mm, west of science camp, Korup Nationalpark, Cameroon, 05°05'N 08°52'E; 19 Dec 1992, A. Kamdem Toham; IRAD Research Station Batoke, Limbe, Cameroon (4), small forest stream emptying in swampy pools, Korup Nationalpark, Cameroon, Dec 2001, C. Akum.

*Nimbapanchax leucopterygius* Sonnenberg & Busch, 2009  
Zootaxa 2294: 11

Holotype: ZFMK 41481, male, 43.6 mm, Forêt Classée de Dieke, southeastern Guinea, 7°28.70'N 8°50.45'W, 16 May 2006, E. Busch & B. Wiese.

Paratypes: ZFMK 41482–41483 (2), females, same data as holotype.

Type material in other collections: MRAC 73-39-P-1897–1904 (8), N'zerekore, Guinea, Nov 1963–Feb 1964, H. Olsen; MRAC 75-26-P-01–04 (4) Salayea, Liberia, 7°37'N 9°30'W, 1971, E. Roloff; MRAC 81-19-P-114–116 (3), rivierte buitcn Déoulé, zijrivierte van de Kilo op secundaire weg van Man naar Biankouma (rivulet near Déoulé, small tributary of the Kilo River, on secondary road from Man to Biankouma), Cote d'Ivoire, 24 Jul 1980, H. De Breuyn.

Remarks: Type species of *Nimbapanchax* Sonnenberg & Busch, 2009

*Nimbapanchax melanopterygius* Sonnenberg & Busch, 2009  
Zootaxa 2294: 14

Holotype: ZFMK 41484, male, 42.9 mm, Cavally River, southeastern Guinea, 7°41.83'N 8°26.48'W, 15 May 2006, E. Busch & B. Wiese.

Paratypes: ZFMK 41485–41487 (3), females, same data as holotype; ZFMK 41488–41493 (6), near Kementa in the Konkere river, southeastern Guinea, 7°43.83'N 8°26.49'W, 15 May 2006, E. Busch & B. Wiese.

Type material in other collections: MRAC 2008-16-P-1–4 (4), same data as ZFMK 41488–41493; ZSM 37485 (4), same data as ZFMK 41488–41493.

*Nothobranchius kafuensis* Wildekamp & Rosenstock, 1989

Aquar Terrar Z 42: 417

Holotype: ZFMK 13951, male, 50.2 mm, seasonal pool in Kafue National Park, 5 km south of Chunga-camp, 100 m from Kafue River, Zambia, 26°00'E 15°03'S, 20 Feb 1983, K. Oestergaard.

Paratype: ZFMK 13952 (1), female, 36.0 mm, same data as holotype.

Type material in other collections: Paratypes: MRAC 89-07-P-1 (1), male, 43.8 mm, same data as holotype; AM PF 1542 (5), males, seasonal pool of Kafue river system, Kafue National Park, Zambia, 25°45'E 16°10'S, G. Bell-Cross.

*Nothobranchius huekei* Seegers, 1984

Aquar Terrar Z 37: 250

Holotype: ZFMK 13551, male, 40.4 mm, bridge across Mbezi at road to Kibiti, about 40 km south of Dar es Salaam, East Tanzania, Jan 1983, L. Seegers & H. J. Wischmann.

Paratypes: ZFMK 13552, female, 27.8 mm, same data as holotype; ZFMK 13553–13556 (4), 22.8–27.0 mm, F1 aquarium bred.

Type material in other collections: Paratypes: BMNH 1984.3.22.1–2 (2), 27.1–29.0 mm, same data as holotype.

*Nothobranchius rubripinnis* Seegers, 1986

Aquar Terrar Z 39: 19

Holotype: ZFMK 13941, male, 26.8 mm, bridge across Mbezi at road to Kibiti, about 40 km south of Dar es Salaam, East Tanzania, Jan 1983, L. Seegers & H. J. Wischmann.

Paratypes: ZFMK 13942–13946 (5), 19.3–29.6 mm, same data as holotype; ZFMK 13947–13949 (3), females, 21.7–24.1 mm, few hundred meters northeast of River Mbemkuru at road from Lindi to Kilwa, East Tanzania, 30 Jun 1985 [label in conflict with original description, showing same collection data as holotype].

Type material in other collections: Paratypes: ZMB 31546–31547 (4), 22.0–26.9 mm, same data as holotype; NRM (4), 21.2–27.1 mm, same data as holotype; MRAC KTZ 85/28 (4), 21.7–25.2 mm, few hundred meters north of River Mbemkuru at road from Lindi to Kilwa, East Tanzania, 30 Jun 1985, [no collector provided].

Bonn zoological Bulletin 59: 109–136

*Paranothobranchius ocellatus* Seegers, 1985

J. Deutsche Killifisch Gem, Suppl 1: 47

Holotype: ZFMK 13927 (but see below), male, 50.0 mm, swamp between Mtanza and northern entrance of Selous Game Reserve, north of Rufiji, East Tanzania, 31 Dec 1980, G. Eggers, C. Kasselmann & L. Seegers.

Remarks: The author has received collection number ZFMK 13927 prior to description and deposition of the specimen in Bonn. ZFMK did however not receive the specimen so far; deposition of the holotype has accordingly not taken place. Type species of *Paranothobranchius*.

Current status: Valid as *Nothobranchius ocellatus* (Seegers, 1985) (Lazara 2001: 225).

*Roloffia banforensis* Seegers, 1982

Aquar Terrar Z 35: 449

Holotype: ZFMK 12155, male, 26.8 mm, Comoé drainage, 15 km north of Banfora, 85 km southwest of Bobo Dioulasso, Obervolta, Oct 1980, B. Bauer.

Paratypes: ZFMK 12156–12162 (7), same data as holotype.

Type material in other collections: Paratypes: MNHN 60-131 (7), road from Banfora to Sindou, Obervolta, 9 Nov 1959, J. Arnoult & d'Auberton; SMF 17679–17681 (3), 21.0–36.2 mm, aquarium bred.

Current status: Valid as *Scriptaphyosemion banforensis* (Seegers, 1982) (Lazara 2001: 289).

## RIVULIDAE

*Cynolebias pantanalensis* Seegers, 1988

Aquar Terrar Z 41: 31

Holotype: ZFMK 15534, male, 21.6 mm, close to road Transpantaneira between Poconé and Corumbá (Mato Grosso), about 45 km south of Poconé, drainage of Rio Sararé and Rio Paraguai, Mato Grosso, Brazil, about 56°50'W 16°43'S, 1 Aug 1987, W. Staack et al.

Paratypes: ZFMK 15535–15541 (7), 23.9–26.1 mm, same data as holotype; ZFMK 15542, female, 24.1 mm, small inlet of Rio Cuiabá, about 5 km north of Porto Cercado at road Poconé to Porto Cercado, Brazil, about 56°23'W 16°33'S, 30 Mar 1986, W. Staack.



Type material in other collections: Paratypes: MZUSP [no collection number provided] (4), 17.2–20.4 mm, same data as holotype.

Current status: Synonym of *Plesiolebias glaucopterus* Costa & Lacerda, 1988 (Costa 1991: 375).

***Pterolebias rubrocaudatus*** Seegers, 1984  
Bonn zool Beitr 35: 243

Holotype: ZFMK 13413, male, 31.5 mm, Río Tambopata area, 7 km from Puerto Maldonado, Río Madre de Dios drainage, Southeast Perú, 25–28 Apr 1981, K. Elgner & E. Lenkenhoff.

Paratype: ZFMK 13414, female, 29.4 mm, same data as holotype.

Current status: Valid as *Aphyolebias rubrocaudatus* (Seegers, 1984) (Costa 1998: 78).

***Pterolebias staECKi*** Seegers, 1987  
Aquat Terrar Z 40: 202

Holotype: ZFMK 14597, male, 52.7 mm, swampy lagoon of Lago Janahuacá, south of Río Amazonas, not far upstream of confluent with Río Negro, southwest of Manaus, Brazil, about 60°16'W 3°25'S, 20 Mar 1986, W. Staack.

Paratypes: ZFMK 14598, female, 40.8 mm, same data as holotype; ZFMK 14599–14601 (3), 30.5–41.2 mm, same data as holotype.

Type material in other collections: MZUSP [no collection number provided] (2), 39.1–33.5 mm, aquarium bred.

Current status: Valid as *Moema staECKi* (Seegers, 1987) (Costa 1993: 623).

***Pterolebias wischmanni*** Seegers, 1983  
J Deutsche Killifisch-Gemeinschaft 15: 68

Holotype: ZFMK 11534, male, Ucayali drainage 120 km south of Pucallpa, Perú, Jul 1981 (preserved Feb 1982), H. J. Wischmann & H. Fries.

Paratypes: ZFMK 11535–1536 (2), females, same data as holotype.

Type material in other collections: Paratypes: BM 1983.6.9.2–82 (3), males, aquarium bred of holotype and a paratype.

Bonn zoological Bulletin 59: 109–136

Current status: Valid as *Aphyolebias wischmanni* (Seegers, 1983) (Costa 1998: 78).

***Rivulichthys luelingi*** Meinken, 1969  
Bonn zool Beitr 20: 423

Holotype: ZFMK 2091, male, 36.0 mm, hollow closeby Río Chaperé, about 4 km from village Todos Santos, East Bolivia, 8 Oct 1966, K. H. Lüling.

Paratypes ZFMK 2092–2095 (11), same data as holotype.

Current status: Synonym of *Pterolebias longipinnis* Garman, 1895 (Thomerson 1984: 528).

***Rivulus bolivianus*** Seegers, 1988  
Bonn zool Beitr 39: 173

Holotype: ZFMK 14602, male, 24.1 mm, lagoon “Suarez”, Río Mamoré drainage, about 4 km southeast of Trinidad, Bolivia, 24 Aug 1985, H. Linke & W. Staack.

Paratypes: ZFMK 14603–14609 (7), same data as holotype.

Current status: Synonym of *Rivulus beniensis* Myers, 1927 (Costa in Reis et al. 2003: 534).

***Rivulus caudomarginatus*** Seegers, 1984  
Zool Beitr 28: 307

Holotype: ZFMK 12848, male, Greta Funda, south of Rio de Janeiro, Brazil, Jul–Aug 1981, R. A. Ferreira.

Paratypes: ZFMK 12849 (1), female, same data as holotype; ZFMK 12850–12854 (5), males, aquarium bred; ZFMK 12855–12859 (5), females, aquarium bred.

Type material in other collections: Paratypes: SMF 17864 (4), aquarium bred; BM 1983.6.9. 16–19 (4), aquarium bred; ZMA 119096 (4), aquarium bred; ZMB 31349(4), aquarium bred; MZUSP [no number published] (4), aquarium bred.

Current status: Valid as *Kryptolebias caudomarginatus* (Seegers, 1984) (Costa 2004: 107).

***Rivulus derhami* Fels & Huber, 1985**

Rev fr Aquariol 12: 33

Paratypes: ZFMK 2071–2090 (20), Universidad Agraria de Tingo María, Perú, May 1966, K. H. Lüling; ZFMK 7813 a (66), same locality as ZFMK 2071–2090, 28 Apr 1972, K. H. Lüling.

Type material in other collections: Holotype: MNHN 1985–577, male, 38.5 mm, area of the Universidad Agraria de Tingo María, Perú, 23 Aug 1981, P. de Rham; Paratypes: MNHN 1985–578 (2), females, same data as holotype; MNHN 1985–579 (9), same data as holotype; MNHN 1985–580 (5) aquarium bred, stock collected by Lüling; MNHN 1985–581 (4), 3 km east of Tingo María, 18 Oct 1976, A. C. Radda; MNHN 1985–582 (6), aquarium bred, stock collected by P. de Rham.

***Rivulus erberi* Berkenkamp, 1989**

Das Aquarium 23 (No. 238): 211

Paratypes ZFMK 14820–14822 (3), 35.0–39.4 mm, 7 km east of Coca (= Puerto Francisco Orellana), near Río Napo, Napo Prov., East Ecuador, 4°30'00"S 76°54'00"W, 8 Mar 1983, H. Heinemann, H. Heidt & K. Wilke.

Type material in other collections: Holotype: SMF 18432, male, 40.2 mm, same data as ZFMK 14820–14822; Paratypes: SMF 18433, 26.7–35.0 mm, same data as ZFMK 14820–14822; MHNG 22281.04 (2), 19.4–35.0 mm, same data as ZFMK 14820–14822.

***Rivulus lueliugi* Seegers, 1984**

Zool Beitr 28: 264

Holotype: ZFMK 11671, male, near Rio Pirai at Joinville, Southeast Brazil, 25 Oct 1982, K. H. Lüling.

Paratypes: ZFMK 11672, female, 20 km southwest of Joinville, Southeast Brazil, 22 Sept 1980, K. H. Lüling; ZFMK 11673–11682 (10), same locality as holotype, 10 Oct 1980.

Type material in other collections: Paratypes: SMF 17585 (9), same data as holotype; ZMB 31347 (3), same data as holotype; BM, 1983.6.9. 14–15 (2), same data as holotype.

**POECILIDAE*****Aplocheilichthys maculatus lacustris* Seegers, 1984**

Rev Zool afr 98: 76

Holotype: ZFMK 12323, male, Kibiti, about 140 km south of Dar es Salaam, Tanzania, 26 Dec 1981, L. Seegers & W. Claßen.

Paratypes: ZFMK 12324–12326 (3), same locality as holotype, 31 Dec 1980, L. Seegers, C. Kasselmann & G. Eggers; ZFMK 12327–12334 (8), same locality, 26 Dec 1981, L. Seegers & W. Claßen, fixed Aug 1982.

Type material in other collections: Paratypes: SMF 17689 (4), males, and SMF 17690 (1), female, aquarium bred, fixed in Aug 1982; MRAC 83-21-P-1-4 (4), males and MRAC 83-21-P-5 (1), female, aquarium bred, fixed in Aug 1982; ZMB 31319 (4), aquarium bred, fixed in Oct 1982.

Current status: Valid as *Lacustricola lacustris* (Seegers, 1984) (Huber 1999: 58).

**ADRIANICHTHYIDAE*****Oryzias hadiatyae* Herder & Chapuis, 2010**

Raffles Bull Zool 58: 271

Paratypes: ZFMK 41540–41550 (11), 31.6–40.3 mm, Lake Masapi, southern shore between 2°50.837'S 121°21.116'E and the lake's outlet, approx. 600 m westwards of this position, Larona drainage, South Sulawesi Province, Sulawesi, Indonesia, 15–16 Apr 2004, F. Herder, J. Pfaender, J. Schwarzer & R. K. Hadiaty.

Type material in other collections: Holotype: MZB 18491, 34.2 mm, male, same data as ZFMK 41540–41550; Paratypes: MZB 18492–18506 (15), 22.5–44.6 mm, same data as ZFMK 41540–41550; ZSM 39760–39766 (7), 28.4–43.7 mm, same data as ZFMK 41540–41550; ZRC 51984 (4) 28–46.1 mm, same data as ZFMK 41540–41550.

**CICHLIDAE*****Aequidens patricki* Kullander, 1984**

Rev fr Aquariol 11: 2

Paratypes: ZFMK 10766–10767 (2), males, 97.7–104.5 mm, tributary of Río Pachitea, Quebrada Pacal, near Panguana, basin of Río Pachitea, dept. Huanuco, Perú, about 09°37'S 74°56'W, 11 Sep 1976, K. H. Lüling; ZFMK



10769 (1), sex indet., 37.6 mm, Quebrada near Panguana, basin of Río Pachitea, about 09°37'S 74°56'W, 10 Sep 1976, K. H. Lüling; ZFMK 10770–10771 (2), juv., 17.9–20.2 mm, tributary of Río Lullapichis, basin of Río Pachitea, Sira mountains; 17 Sep 1976, A. Hanrieder & W. Foersch; all dept. Huánuco, Perú.

Type material in other collections: Holotype: MHNG 2163.93 (1), female, 116.2 mm, small brook from a drying pool, along the road from Pucallpa to Tingo Maria, 15 km west of the village of Aguaytía, tributary of Río Aguaytía, Coronel Portillo Prov., depto. Ucayali, Perú, about 09°02'S 75°31'W, 24 Aug 1981, P. de Rham, H. Nijssen, H. J. Franke & C. Villanueva; Paratypes: NRM A82/1976376.3458 (1), female, 93.8 mm (former number ZFMK 10768), same data as ZFMK 10766–10767; additional paratypes in following collections: IRSNB 700 (1); MHNG 2163.94 (1); NRM 17760[ex A82/1976376.3458]; ZMH 6427 (1), 6435 (2) (see Kullander 1986: 383).

*Apistogramma arua* Römer & Warzel, 1998  
Aqua J Ichth and Aquat Biol 3: 46

Paratypes: ZFMK 18599 (1), female, 34.3 mm, same data as holotype, A. Krüger, F. Warzel, M. Loew & R. Zgoraniak; ZFMK 18601 (1), male, 34.5 mm; ZFMK 18605 (1), female, 11.6 mm, 2.5 km upstream of the village of Aruá in a small right-bank affluent of Río Aruá, Pará State, Brazil, 14 Sep 1995, A. Krüger, F. Warzel, M. Loew & R. Zgoraniak [specimens 18601 and 18605 were preserved in Oct 1995 after keeping in aquaria].

Type material in other collections: Holotype: MZUSP uncat., male, 44.4 mm, about 2.5 km upstream of the village of Aruá in a small right-bank affluent of Río Aruá, tributary of Río Arapiúns, Pará State, Brazil, about 02°39'27"S 55°43'24"W, 14 Sep 1995, A. Krüger & F. Warzel [preserved in May 1996 after keeping in aquaria].

*Apistogramma baenschi* Römer, Soares & Wöhler, 2004  
Das Aquarium 38 (No. 422): 16

Paratypes: ZFMK 39828–39831 (4), tributary of Río Shanushi, lower Río Hualaga system, Perú, near 6°03'S 77°53'W, Mar 2003, J. Melgar.

Type material in other collections: Holotype: MTD F 26965, same data as ZFMK 39828–39829. Paratypes: CAS 219381–86 (6), 219388–92 (5); MTD F 26964 (1), F 28102–08 (7), F 28109–14 (6); SMF 29765a–b (2), 29765c–d (2).

*Apistogramma eumotus* Kullander, 1981  
Bonn zool Beitr 32: 183.

Holotype: ZFMK 10772, male, 49.9 mm, way to Aguayta near Pucallpa, Perú, 3 Sep 1978, K. H. Lüling.

Paratypes: ZFMK 10773, female; ZFMK 10774, juv., same data as holotype.

Type material in other collections: Paratypes: BM 1913.7.30: 56–57 (2), sex indet., Río Ucayali, Perú, no date, Mounsey; MCZ 15807 (2), Tabatinga Solimoes, East Amazon river system, Sep–Oct 1865, Thayer-Expedition: D. Bourget; MHNG 1583.50, female, Jenaro Herrera, Río Ucayali-system, distr. Loreto, Perú, 18 Oct 1977, P. de Rahm; NRM 1971365: 3057, female, Lago Matamata, distr. Loreto, Perú, 10 Oct 1971, T. Hongslo; NRM 1976312: 0914–0923 (10), “Caño Comprido”, San Sebastián, Río Yavarí, distr. Loreto, Perú, 27 Jul 1976, T. Hongslo; NRM 1876311: 1164–1168 (5), 26 Jul 1976, same data as previous specimens.

*Apistogramma linkei* Koslowski, 1985  
Bonn zool Beitr 36: 151

Holotype: ZFMK 13323, male, 36.9 mm, northwest of Santa Cruz, Bolivia, [type locality unclear]; Original description and label: In lagoons along the road between the villages Portachuelo and Bellavista, 76 km northwest of Santa Cruz, Bolivia, about 68°25'W 16°20'S, small water bodies along the road and small and low watercourse which crosses the road and lagoon at the road 2 km eastern of the village Japacani at Río Japacani, northwest of Santa Cruz, Bolivia, about 68°50'W 16°15'S, Jul 1983, H. Linke & W. Staeck.

Paratypes: ZFMK 13324–13327 (4), 24.9–28.6 mm; ZFMK 13328–13362 (35), all same data as holotype; ZFMK 13320–13322 (3), 18.5–27.0 mm, in a course of a stream 4 km in front of Okinawa, west of Montero Guabira in direction to Río Grande, about 62°50'W 17°12'S, Jul 1983, H. Linke & W. Staeck; ZFMK 13363–13367 (5), 21.1–30.3 mm; ZFMK 13368–13393 (26), 16.0–24.4 mm, in lagoons and backwater along the road from Trinidad to west, about 1 km in front of the village of Pto. Amacen at the Río Mamoré, Bolivia, about 64°58'W 14°53'S, 11 Jul 1983, H. Linke & W. Staeck; ZFMK 13394–13399 (6), 21.5–27.0 mm, in lagoons and remains of river water at the road from Trinidad to east, about 10 km in direction to Peroto, east of the town Trinidad, Bolivia, about 64°48'W 14°49'S, 12 Jul 1983, H. Linke & W. Staeck; ZFMK 2268–2273 (6), pond like backwater, 1.5 km downstream of San Francisco, Río Chipiriri, Bolivia, 4 Oct 1966, K. H. Lüling; ZFMK 2303

(1), 25.2 mm, brook between Río Chaparé and Río Mamoré, Bolivia, 9 Oct 1966, K. H. Lüling & A. Meyer.

Type material in other collections: Paratypes: MZUSP 28726 (8), 17.7–25.7 mm; NRM A 83/1983273.3046 (7), 16.3–34.7 mm, all same data as holotype; BMNH 1985, 1. 28 (5), 20.1–23.9 mm; IRSNB 724 (6), 18.6–25.0 mm; NRM A 83/1983281.3054 (7), 16.3–25.1 mm; ZMA 119.629 (6), 18.6–23.7 mm, all west of the town Trinidad, in lagoons and backwater along the road from Trinidad to west, 1 km in front of Pto. Amacen at the Río Mamoré, Bolivia, about 64°58'W 14°53'S, 11 Jul 1983, H. Linke & W. Staeck; NRM A 84/1983166/3061 (3), 19.7–27.2 mm, Laguna Suarez, near Trinidad, Río Mamoré system, depto. Beni, Bolivia, 23 Apr 1983, G. Loubens & L. Lauzanne; NRM A 84/1982118.3062 (5), 27.6–42.1 mm, Arroyo San Juan, near Trinidad, depto. Beni, Río Mamoré system, Bolivia, Mar 1982, G. Loubens & L. Lauzanne; IRSNB 695 (former IRSNB 19.975) (1), female, 25.6 mm, tributary to the Río San Miguel, Río Surucusi, road from Ascensión, 14 km north of Limón, Río Guaporé system, depto. Santa Cruz, Bolivia, 9 Nov 1977, J.-P. Gosse.

*Apistogramma luelingi* Kullander, 1976  
Bonn zool Beitr 27: 259

Holotype: ZFMK 2283, male, 26.4 mm, downstream of Todos Santos, Bolivia, 3 Oct 1966, K. H. Lüling & A. Meyer.

Paratypes: ZFMK 2284–2291 (8), 18.2–29.0 mm, same data as holotype.

*Apistogramma martini* Römer, Hahn, Römer, Soares & Wöhler, 2003  
Das Aquarium 37 (No. 406): 15

Paratypes: ZFMK 39412–39421 (10), small tributary of the Río Nanay near the village of Alvarenga (formerly Puerto Alianza), distr. Santa María, Maynas Prov. (formerly Iquitos), dep. Loreto, Perú, about 74°25'40''W 03°31'10''S, 19 Oct 2002, M. Mortenthaler.

Type material in other collections: Holotype: MTD F 26849 (1), female, 30.2 mm, same data as ZFMK 39412–39421; Paratypes: MTD F 26850–26858 (9); MTD F 26945–26963 (19); MTD F 26957–26958 (2); CAS 216883–87 (5), males; CAS 216878–82 (5), females; SMF 29331a–e (5), males; SMF 29332a–e (5), females; ZMB 33329–33333 (5), males; ZMB 33334–33338 (5), females; all same data as ZFMK 39412–39421.

*Apistogramma mendezi* Römer, 1994  
Aqua J Ichth and Aquat Biol 1: 5

Holotype: ZFMK 17458, male, 34.5 mm, Rio Salgado, near Barcelos do Rio Negro, Dept. Amazonas, Brazil, about 0°01'S 63°04'W, 19 Oct 1991, U. Römer.

Paratypes: ZFMK 17459 (1), female; ZFMK 17462 (1), male; 17502 (1), male; 17461 (1), male [cleared and stained], all same data as holotype, U. Römer, A. Schneider & W. Windisch; ZFMK 17460 (1), male; ZFMK 17463 (1), male; ZFMK 17501 (1), male; ZFMK 17504 (1), male, all same data as holotype; ZFMK 17503 (1), male, same locality as holotype, 22 Aug 1992, M. Geismann, S. Leissner, U. Römer & A. Schneider [ZFMK 17460, 17463, 17501, 17504 were preserved after 6 months of keeping in aquaria].

Type material in other collections: Paratypes: INPA UR 91024 (1); INPA UR 91027 (1); INPA UR 91169 (1); INPA UR 91209 (1); all same data as holotype, U. Römer, A. Schneider & W. Windisch; INPA UR 91170 (1), male; INPA UR 91172 (1), male; all same locality as holotype, 22 Aug 1992, M. Geismann, S. Leissner, U. Römer & A. Schneider; INPA UR 91205 (1); INPA UR 91217 (1); all same data as holotype [preserved after six months of keeping in aquaria].

*Apistogramma panduro* Römer, 1997  
Buntbarsche Bulletin 182: 12

Holotype: ZFMK 18610, male, 37.5 mm, small forest brooks east of Jenaro Herrera aside the road heading to the Brazilian border at kilometers 26 and 27, Rio Ucayali-system, Prov. Loreto, Perú, Jun 1996, professional collectors of exporter Jesus Victoriano Panduro Pinedo, dedicated in early June 1996 after import by Aquarium Glaser (Rodgau, Germany), preserved immediately after import by F. Schäfer and U. Römer.

Paratypes: ZFMK 18580–18582 (3), 25.6–29.5 mm; ZFMK 18609 (1), male, 43.7 mm; ZFMK 18611–18616 (6), 25.7–48.4 mm; ZFMK 18620 (1), male, 38.3 mm, all same data as holotype.

Type material in other collections: Paratypes: SMF 28206–08 a–d (6), same data as holotype.

*Apistogramma paucisquamis* Kullander & Staeck, 1988  
Cybium 12: 190

Paratypes: ZFMK 15496–15500 (5), arquipielago das Anavilhanas, small shallow bay on the right bank of Rio



Negro, Estado do Amazonas, Brazil, 27 Mar 1986, W. Staeck.

Type material in other collections: Holotype: MZUSP 36952 (1), male, same data as ZFMK 15496–15500; Paratypes: NRM A 86/1986134.3587 (15); USNM 289281 (5); MZUSP uncat. (4), all together 16.4–28.9 mm, same data as holotype; NRM A 86/1986134.3594 (5), males, 26.2–31.2 mm, baylet with small clear water creek at right bank of Río Negro, arquipiélago das Anavilhanas, Brazil, 27 Mar 1986, W. Staeck; MZUSP 28210 (57); NRM A 83/1980077.3058 (4), downstream of Rio Darã, central lake in Rio Negro, 17 Feb 1980, M. Goulding.

*Apistogramma rubrolineata* Hein, Zarske & Zapata, 2002  
Das Aquarium 36 (No. 402): 16

Paratypes: ZFMK 39241–39242 (2), 23.5–26.4 mm, near the village of Puerto Cardenas, Río Manuripi, Departamento Pando, Bolivia, about 11°20'083"S 67°44'576"W, 12 May 2001, G. Hein, H. Längert, J. Zapata & A. Zarske.

Type material in other collections: Holotype: MTD F 26 477, 40.0 mm; Paratypes: CIRA UTB 970 a–e (5), 17.0–25.7 mm; MTD F 26 478–26–486 (9), 14.5–40.0 mm; NMW 94 645–94 646 (2), 26.5–28.0 mm, all same data as ZFMK 39241–39242.

*Apistogramma similis* Staeck, 2003  
In Staeck: Cichliden Lexikon 3: 76

Paratypes: ZFMK 39800–39801 (2), forest brook at the Laguna La Brava, Río Yata system, Beni Prov., Bolivia, 2001, W. Staeck.

Type material in other collections: Holotype: MTD F 27038, 38.1 mm; Paratypes: MTD F 27039 (1); MTD F 27482–27484 (3); additional paratypes at NMW and ZMB [no collection numbers provided]; all same data as ZFMK 39800–39801.

*Apistogramma staecki* Koslowski, 1985  
Bonn zool Beitr 36: 146

Holotype: ZFMK 13400, 20.8 mm, male, in lagoons on both sides of the road, 10 km south of Trinidad in the direction of El Colegio and Loreto, Bolivia, about 64°51'W 14°57'S, 12 Jul 1983, H. Linke & W. Staeck.

Paratypes: ZFMK 13401–13404 (4), 17.7–20.8 mm, same data as holotype; ZFMK 13405–13410 (6), 19.5–20.7 mm, in lagoons with a remain of river water, about 10 km east of Trinidad in direction of Peroto, Bolivia, about 64°48'W 14°49'S, 12 Jul 1983; same collectors as holotype.

Bonn zoological Bulletin 59: 109–136

Type material in other collections: SMF 18855 a–h (8), 14.7–20.4 mm; MZUSP 28725 (2), females, 15.0–19.4 mm; NRM A 83/1983282.3053 (7), 15.7–20.9 mm, all same data as holotype.

*Apistogramma tucurni* Staeck, 2003  
In Staeck: Cichliden Lexikon 3: 112

Paratype: ZFMK 39802 (1), brook in Rio Tocantins system, at highway 150, 10 km south of Jacunda, Pará, Brazil, 1989, W. Staeck.

Type material in other collections: Holotype: MTD F 27046; Paratypes: MTD F 27047 (1); MTD F 27487–27488 (2); additional paratypes at NMW and ZMB [no collection numbers provided]; all same data as ZFMK 39802.

*Bujurquina huallagae* Kullander, 1986

In Kullander (1986): Cichlid Fishes of the Amazon River drainage of Peru. Swedish Museum of Natural History, Stockholm: 290

Paratypes: ZFMK 2152–2168 (17), lower course of Río Subte, downstream of Tingo María, about 1 km in front of the mouth into the Río Huallaga, 30 Jun 1965; ZFMK 2184–2187 (4), lower Río Monzón, 10 km upstream of Tingo María, 3 Jun 1966; ZFMK 2318 (1), brook near Tingo María, just before the hospital, 500 m in front of the mouth into the Río Huallaga, 2 Jun 1966; ZFMK 8659–8664 (6), near the hospital, Tingo María, 12 Nov 1974; ZFMK 2190 (1), left bank of Río Huallaga, opposite to Tingo María, 22 Jun 1966; all Huallaga river system, departamento Huánuco, Perú, all leg. K. H. Lüling.

Type material in other collections: Holotype: ANSP 158171 (1), male, 75.4 mm, about 0.25 miles above Río Huallaga, vicinity of Tingo María, Río Huallaga drainage system, dept. Huánuco, Perú, 30 Sep 1955, Catherwood Expedition, C. C. G. Chaplin, M. H. Hohn; additional 45 paratypes in following collections: ANSP 139109 (1), 139110 (11), 139112 (3), 139114 (5), 139116 (3), 139143 (1), 158172 (9); MHNG 2233.66 (1), 2205.01 (4), 2205.06 (4); NRM 17594 (1) (see Kullander op. cit.: 375–376).

*Cichlasoma amazonarum* Kullander, 1983

Revision of the South-American cichlid genus *Cichlasoma*. Swedish Museum of Natural History, Stockholm: 117

Paratypes: ZFMK 13451–13460 (10), brook Aguajal, Ucayali river system, 3 Sep 1978; ZFMK 2225–2230 (6), Chauahuán Cocha, Ucayali-system upstream of Pucallpa,

Aug 1966; ZFMK 2300–2301 (2), Yarina Cocha, Ucayali-system, 19 Jul 1966; ZFMK 1125–1126 (2), Caño Yarina, depto. Loreto, Perú; 31 Aug 1959; ZFMK 8655–8656 (2), between Paca Cocha and Yarina Cocha, 9 Aug 1974; ZFMK 8657–8658 (2), Quebrada near Yarina Cocha, 9 Aug 1974; ZFMK 2191–2192 (2), Yarina Cocha, 16 Jul 1966; ZFMK 2205–2211 (7), Yarina Cocha, 19 Jul 1966; ZFMK 2233 (1), Río Ucayali, opposite of Pucallpa, 12 Jul 1966; ZFMK 1118–1120 (3), bank of Amazon upstream of Iquitos, 8–16 Aug 1959; ZFMK 7802–7806 (5), Quisicocha, Amazon system, depto. Loreto, 10 May 1972; all from Perú, all leg. K. H. Lüling.

Type material in other collections: Holotype NRM (SOK) 3651, floating meadow near mouth, right bank tributary of the Río Ampiyacu, Sacarita del Tuyé, little upstreams of Pebas, Ampiyacu system, depto. Loreto, Perú, 12 Aug 1981, S. O. Kullander & A. Hogeborn; additional paratypes in following collections: ANSP, BM, FMNH, IRSNB, MCZ, MHNG, MNHNP, MZUSP, NHMW, NRM, USNM and ZMA [there are discrepancies between published numbers and museum records].

***Cichlasoma boliviense*** Kullander, 1983

Revision of the South-American cichlid genus *Cichlasoma*. Swedish Museum of Natural History, Stockholm: 165

Paratypes: ZFMK 2199 (1), downstream of Pto. San Francisco, Río Chipirí, Mamoré system, depto. Santa Cruz, Bolivia, 4 Oct 1966, K. H. Lüling; ZFMK 2275–2282 (8), and ZFMK 2299 (1), Todos Santos “Hoffmann-lagoon”, Río Chapare, Mamoré system, Bolivia, 7 Oct 1966, K. H. Lüling; ZFMK 2219–2221 (3), 4 km downstream of Todos Santos, Bolivia, 8 Oct 1966, K. H. Lüling; ZFMK 2212–2213 (2), downstream of Pto San Francisco, Bolivia, 3 Oct 1966, K. H. Lüling; ZFMK 2305–2310 (6), 4 km downstream of Todos Santos, Bolivia, 30 Sep 1966, K. H. Lüling; ZFMK 13461–13464 (4), Río Tambopata near Puerto Maldonado, Madre de Dios system, Perú, 25–28 Apr 1981, E. Lenkenhoff; ZFMK 13465 (1), Puerto Maldonado, Perú, 6 Apr 1981, E. Lenkenhoff.

Type material in other collections: Holotype: IRSNB 677 (1), male, 75.9 mm, Río Uruguaito, River Guaporé basin, tributary of Río Quizer, 13 km south of San Xavier, depto. Santa Cruz, Bolivia, 4 Nov 1977, J.-P. Gosse; additional paratypes in following collections: ANSP, BM, FMNH, IRSNB and USNM.

***Crenicichla sedentaria*** Kullander, 1986

Cichlid Fishes of the Amazon River drainage of Peru. Swedish Museum of Natural History, Stockholm: 83

Paratypes: ZFMK 2141 (1), branch of Río Huallaga near Aspúsana, 70 km downstream of Tingo María, Perú; 19 Jun 1966, K. H. Lüling; ZFMK 2142–2143 (2), Río Huallaga near Aspúsana, same data as ZFMK 2141; ZFMK 10765 (1), branch of Pacal near Panguana, Lullapichis, Pachitea, Perú, 11 Sep 1976, K. H. Lüling.

Type material in other collections: Holotype: USNM 229057 (1), probable male, 104.4 mm, near San Pedro de Longin, Río Yamushimas, Río Pachitea drainage system, depto. Pasco, Perú, 24 Jul 1981, P. Bayley. The total number of paratypes amounts to 83 specimens in the following collections: ANSP (59 in 8 lots); BMNH 1969.7.15.55 (1); 1969.7.23.4 (1); CAS 57455 (1); FMNH 84259 (2); 84268 (3); FMNH (1) [no number provided]; MCZ 48326 (1); MHNG (3 in 2 lots); NRM 12293 (2); 13577 (2); 13778 (1); USNM 229053 (1); ZMH 6443 (2).

***Neolamprologus cylindricus*** Staek & Seegers, 1986

Aquar Terrar Z 39: 448

Holotype: ZFMK 14595, 83.6 mm, Lake Tanganyika, south of the mouth of the Kalambo River, near Chipwa, Zambia, 8°38'S 31°14'E, 3 Aug 1986, W. Staek.

Paratype: ZFMK 14596 (1), 66.1 mm, same data as holotype, L. Seegers.

***Paratheraps breidohri*** Werner & Stawikowski, 1987

Aquar Terrar Z 41: 20

Holotype: ZFMK 15524, juv., 59.6 mm, Presa de Angostura, below the dam wall, Chiapas, Mexico, 16 Apr 1987, U. Werner, R. Stawikowski, E. Sosna & I. Kranz.

Paratypes: ZFMK 15525–15531 (7), 40.3–73.5 mm, same data as holotype.

Remarks: Type species of *Paratheraps* Werner & Stawikowski, 1987

Current status: Valid as *Vieja breidohri* (Werner & Stawikowski, 1987) (Burgess 2000: 50).

***Pseudocrenilabrus multicolor victoriae*** Seegers, 1990

Aquar Terrar Z 43: 100

Holotype: ZFMK 16252, male, 60.8 mm, stream which connects two marsh districts on both sides of the road Kampala-Masaka, southwest of Mpugwe, about 14 km northeast of Masaka, distr. Masaka, Southwest Uganda, about 0°36'N 31°41'E, [no collection date provided], U. Renninger & L. Seegers.



Paratypes: ZFMK 16253–16255 (3), 51.9–69.8 mm, same data as holotype; ZFMK 16256–16263 (8), 18.9–49.3 mm, way from Lake Nabugabo to Masaka, 10 km northwest of Lake Nabugabo, West Uganda, 26 Mar 1988; ZFMK 16264–16265 (2), males, 30.9–32.4 mm, stream crossing road to Kabale about 27 km west of Mbarara and 6 km east of Kabwohe, West Uganda, 26 Mar 1988; ZFMK 16266–16268 (3), 33.2–49.3 mm, near Kyenjojo, 2 km in front of the branch of the road from Fort Portal to Kampala and Hoima, West Uganda, 2 Apr 1988; ZFMK 16269–16272 (4), 26.3–41.9 mm, west of Ngogwe, road which leads south of the main street Kampala-Jinja from Mukono via Nkokonjeru to Jinja, Uganda, 5 Apr 1988; ZFMK 15313 (1), male, 30.2 mm, in Ahero in a pond west of the branch of the federal road A1 and B1 to Kisumu, Kericho and Kisii, Kenya, 1 Jan 1987, all same collectors as holotype.

Type material in other collections: Paratypes: ZMB [no collection numbers provided] (3), 52.2–63.1 mm, same data as holotype; ZMB [no collection numbers provided] (2), 44.2–62.2 mm, same data as ZFMK 16256–16263; SMF 23436 (3), 34.5–58.1 mm, same data as ZFMK 16256–16263; SMF 23437 (5), juv., 18.3–32.0 mm, same data as ZFMK 16264–16265.

*Theraps coernlens* Stawikowski & Werner, 1987  
Aquat Terrar Z 40: 499

Holotype: ZFMK 15501, 77.0 mm, little tributary to Río Mizol Há, at Francisco Madero, west of the road from Palenque to Ococingo, about 30 km south of Palenque, Mexico, 21 Apr 1987, I. Kranz, E. Sosna, R. Stawikowski & U. Werner.

Paratypes: ZFMK 15502–15505 (4), 60.5–66.6 mm, same data as holotype.

*Theraps rheophilus* Seegers & Staeck, 1985  
Aquat Terrar Z 38: 500

Holotype: ZFMK 13928 (1), probable male, 88.7 mm, Chiapas, 6 km south of Palenque, under the bridge of the road to Ococingo in Chiapas, Río Notutun, Mexico, 2 Apr 1983, L. Seegers & W. Staeck.

Paratypes: ZFMK 13929–13930 (2), 76.5–84.1 mm, same data as holotype.

Type material in other collections: Paratypes: NRM 17598 (2); NMW 81184 (2); all same data as holotype.

Current status: Synonym of *Theraps lentiginosus* Steindachner, 1864 (Kullander in Reis et al. 2003: 643).

*Tilapia eisentranti* Trewavas, 1962  
Bonn zool Beitr 13: 168

Paratypes: ZFMK 732 (1), female, Lake Barombi-ma-Mbu, Cameroon, 1954, M. Eisentraut.

Type material in other collections: Holotype, male, 65.0 mm, and paratype, female, BM 1961.10.18.11–14.

Remarks: Type species of *Konia* Trewavas, 1972.

Current status: Valid as *Konia eisentranti* (Trewavas, 1962) (Teugels 1991: 206).

*Uarn fernandezyepezi* Stawikowski, 1989  
Bonn zool Beitr 40: 21

Holotype: ZFMK 15757, 180 mm, branch of Río Atabapo, 5 km upstream of its mouth into the Río Orinoco, Venezuela, 29 Apr 1988, H. J. Köpke.

Paratype: ZFMK 15758 (1), 169 mm, same data as holotype.

## ELEOTRIDAE

*Mogurnda pulchra* Horsthemke & Staeck, 1990  
Aquat Terrar Z 43: 160

Holotype: ZFMK 16247: female, 60.3 mm, small river in the drainage basin of the Brown River, at the Hiritano Highway, 24 km north of Port Moresby, Papua New Guinea, about 09°16'S 147°14'E, Jul 1988, W. Staeck.

Paratypes: ZFMK 16248–16251 (4), 22.0–58.1 mm, same data as holotype.

## GOBIIDAE

*Knipowitschia cameliae* Nalbant & Otel, 1995  
Ocrot Nat Med Inconj Bucuresti 39: 51

Paratypes: ZFMK 22151–22152 (5), 1 adult or subadult and 4 very small specimens, small lake in sand spit, 1 km north of Portita lighthouse, between Lake Golovitsa and Black Sea, Portita, Dobrogea, Romania, 8 Jun 1994, Nalbant & Otel.

Type material in other collections: Holotype: IBTS 4587, same data as ZFMK 22151–22152; Paratypes: IBTS 4586 (30), IBTS 4588 (6), ICDD uncat. (54), MGAB uncat. (51).

Remarks: ZFMK 22151–22152 are out of IBTS 4588.

## OSPHRONEMIDAE

*Betta climacura* Vierke, 1988  
Das Aquarium 22: 336

Holotype: ZFMK 15532, male, 66 mm, small clearwater brooks about 60 air-miles southwest of Brunei, near Rampayoh, West Borneo, Jul 1983, T. Schulz.

Paratype: ZFMK 15533 (1), female, 65 mm, same data as holotype.

Current status: Synonym of *Betta akarensis* Regan, 1910 (Kottelat et al. 1993: 161).

*Betta persephone* Schaller, 1986  
Aquat Terrar Z 39: 298

Holotype: ZFMK 14226, male, Asian highway no. 2, 3 km north of Ayer Hitam, Malaysia, 20 Feb 1985, D. Schaller.

Paratypes: ZFMK 14227–14238 (12), same data as holotype.

Type material in other collections: ZMB 31614 (4); ZSM/CMK 5944 (4); same data as holotype.

*Betta tussya* Schaller, 1985  
Aquat Terrar Z 38: 350

Paratypes: ZFMK 14224–14225 (2), about 77 km south of Kuantan at the road parallel to east coast, 17 km south of Pekan, about 1 km from sea, Pahang State, Malaysia, 1984, P. Nagy; ZFMK 14195 (1), male, 16 km south of Kuantan, Malaysia, 22 Feb 1985, D. Schaller; ZFMK 14196–14207 (12), same data as ZFMK 14195; ZFMK 14208–14212 (5), same data as ZFMK 14195.

Type material in other collections: Holotype: ZRC 38451 (ex ZSM 27336); Paratypes: ZSM/CMK 5945 (5); ZSM/CMK 6345 (11); ZMB 31607 (6); ZMB 31609 (1).

Remarks: Originally the specimen ZFMK 14195 was deposited as holotype by the author in Bonn, but it cannot be identical to the specimen which was characterized as

holotype by measurements in the original description because the ZFMK specimen is smaller. Nevertheless this specimen belongs to the series of paratypes.

*Macropodus erythropterus* Freyhof & Herder, 2002  
Ichthyol Explor Freshwaters 13:162

Holotype: ZFMK 38945, 58.9 mm, stream at Quyet Tiên, Quang Binh Prov., Vietnam, 17°11.54'N 106°37.53'E, 8 Apr 2000, J. Freyhof & F. Herder.

Paratypes: ZFMK 38946–38961 (16), 23.7–57.3, same data as holotype; ZFMK 38962–38973 (12), stream at Lê Ninh, Quang Binh Prov., Vietnam, 17°14.12'N 106°37.51'E, 8 Apr 2000, J. Freyhof & F. Herder; ZFMK 35462–36465 (4), stream at Lê Ninh, Quang Binh Prov., Vietnam, 17°13.16'N 106°39.08'E, 8 Apr 2000, J. Freyhof & F. Herder.

Remarks: Winstanley & Clements (2008) were not able to follow unambiguously the diagnostic colour characters used by Freyhof & Herder (2002) for discriminating *M. erythropterus* from *M. spechti*, and suggested that *M. erythropterus* constitutes a junior synonym of *M. spechti*. As their analyses did however (i) not incorporate material from the terra typica (streams Quyet Tiên and Lê Ninh, Quang Binh Province, Vietnam), (ii) were based on only limited numbers of obviously mostly immature specimens ( $N_{\text{total}} = 22$  ex., without reference to maturity or sex;  $SL_{\text{max}} = 42.3$  mm SL; four sampling locations incorporated: AK 27598, 6 ex.; 13.7–38.0 mm SL; AK 27599, 3 ex., 19.1–26.0 mm SL; AK 27600, 3 ex., 26.0–34.1 mm SL; AK 27601, 10 ex., 26.5–42.3 mm SL; compare the sizes of specimens examined by Freyhof & Herder (2002) as listed above), and (iii) covered only locations from a part of the species distribution (only locations in the Quang Tri Province in Vietnam), we argue that this conclusion is premature. *Macropodus erythropterus* is, like many other teleost fish species, distinguished from other species of its genus mainly by colour characters present in adult specimens. As long as these are not incorporated properly in critical analyses, we consider the database for judging about species status insufficient. Hence, we suggest that *M. erythropterus* should be treated as valid species.

*Parosphromenus nanyi* Schaller, 1985  
Aquat Terrar Z 38: 302

Lectotype: ZFMK 14186, Asian highway route 18, 16 km south of Kuantan, Malaysia, 22 Feb 1985, D. Schaller.

Paralectotypes: ZFMK 14187–14191 (5), same data as lectotype.



Type material in other collections: Paralectotypes: ZMB: 31605 (2); CMK 5949 (2).

Remarks: In Sehaller's description the animals were still alive; later Sehaller deposited the ZFMK specimens as holotype and paratypes. In the original description no holotype was mentioned, so that all specimens are considered as syntypes (Sehaller & Kottelat 1990). Sehaller and Kottelat (1990), designated a lectotype, the remaining syntypes became accordingly paralectotypes.

## CHANNIIDAE

*Channa bleheri* Vierke, 1991  
Das Aquarium 25 (No. 259): 22

Holotype: ZFMK 16555, male, 109 mm, in muddy remains of pools of river beds which are dried out during the dry season, upper Diburu near Guijam, Assam, India, 12–13 Nov 1987, H. Bleher & D. Nopak.

Paratype: ZFMK 16556 (1), female, 82 mm, same data as holotype.

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