

**Norstedts  
akvariebok**

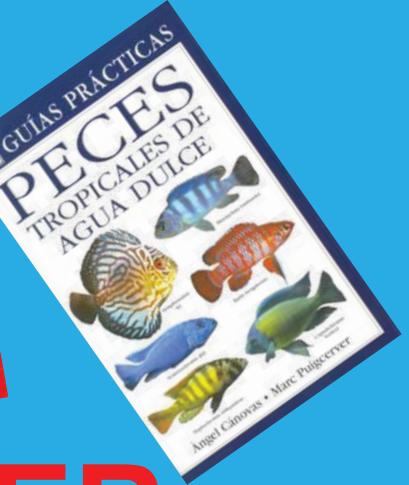
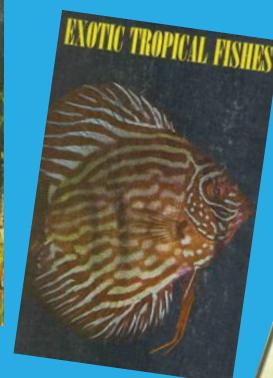
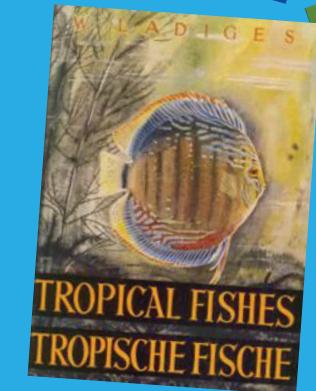
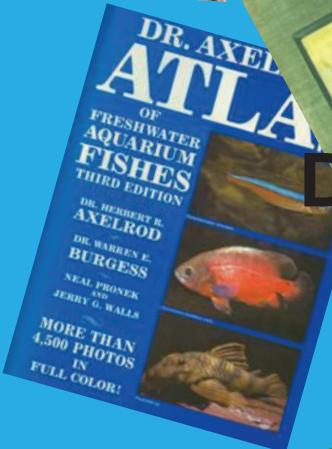
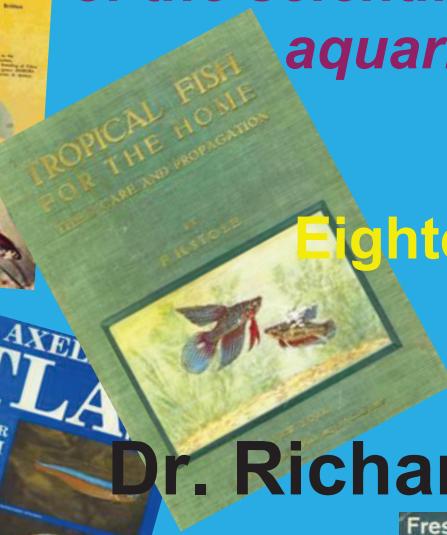
G Aurell P Jacobsson N Lindgren



# FRESHWATER FISH LIST



*an alphabetic scientific name list of the  
world's freshwater fishes and an overview  
of the scientific names used in the  
aquarium literature*



**Eighteenth edition**

**Dr. Richard van der Laan**

## Preface

During more than forty years my brother and I tried to keep up with the aquaristic literature and to stay up to date with the scientific names of the freshwater fishes. Over the years we collected many scientific and common names. With the publication of Bill Eschmeyer's *Catalog of Fishes* we could check our list and with the help of some recent regional freshwater fish checklists we could transfer our data to the present list.

Apart from the historical overview of the freshwater fishes available to the aquarium hobby during the last century (or at least the scientific names used by aquarists), it proved more and more intriguing to try to identify the described fish in question (although it was not always possible). Also keeping track of the numerous name changes (made necessary by scientific research) was a tremendous challenge.

To reach some kind of ordering, the classification of the fishes needed to be studied too. This part of the zoological science is also rapidly changing.

With the alphabetical list one can locate the currently valid scientific name, the correct spelling of that name and the position of the species in the zoological classification system. Also one can check if there has been any confusion with the name. With the references one can see the occurrence of the scientific names in the aquarium hobby during the last century.

Although the aquarium histories are different in the various countries (in 2006, the 200<sup>th</sup> anniversary of Roßmäßler, German aquarists already celebrated 150 years of keeping aquaria and freshwater fishes!), there was a somewhat simultaneous development through exchange of data and / or of aquarium fishes. Because a lot of aquarium fish descriptions and figures were copied, it has not been possible to track the occurrence of the aquarium fish species in certain countries.

I would like to thank my brother Paul van der Laan, who worked with me over such a long period of time on the "fish name problem" and of course many loving kisses to my wife Hana for caring for us during that work.

I am indebted to Harro Hieronimus for his correction of the German text and for making the publication of this work possible.

For the 14<sup>th</sup> edition I added many names of newly described species and some new citations, corrected many mistakes and updated the Dutch language bibliography. Special thanks to Herman Meeus for helping me with the Flemish aquarium history.

With the excellent books of Ad Konings I could correct the cichlid names from Lake Malawi and Lake Tanganyika. And, new in the 15<sup>th</sup> edition, I highlighted all the unknown species in red, to improve clarity.

Finally, for the 16<sup>th</sup> edition, I was able to cite the instalments of the famous work of Holly, Meinken and Rachow with the publication dates recently researched by Axel Zarske and Heinz Berkenkamp.

This updated 18<sup>th</sup> edition will be probably the last edition of the **Freshwater Fish List**. Work on the CAS Catalog of Fishes database is likely to consume all my spare time in the future.

I hope we have made a useful list for every-one who is trying to connect some aquaristic article or book reference with a scientific fish name.

Richard van der Laan, ALMERE, The Netherlands, May 2016.

## Dedication

We would like to dedicate this work to all those ichthyologists who have shared or who are sharing their knowledge with the (name-struggling) aquarists.

J. R. Norman (1931), *A History of Fishes*, p.370:

The question of nomenclature is an important one, and unfortunately there is still considerable diversity of opinion as to the correct scientific name to be applied even to our commonest food-fishes. It may well be asked why it should be necessary to give scientific names at all. The reason is that vernacular or common names, although convenient, are by no means precise, and are frequently used in a very loose manner. The same name may be given to two or more totally different fishes in different parts of the country or in various regions of the world; or, as is even more common, the same species may be known by quite different names in various localities. The name "whiting," for example, is not only applied to the well-known food-fish of the Cod family (*Gadus merlangus*), but also to various kinds of fresh-water fishes. Conversely, the following names, among others, are all used for the Sea Trout (*Salmo trutta*) in various parts of the British Isles, while the non-migratory members of this very variable species have received as many vernacular names again: Orange Fin, Black Tail, Phinock, Salmon Trout, Truff, Scurf, Sewen, Bull Trout, Grey Trout, and Round Tail. The names of Peal and Bull Trout are used in some parts of the country for the Trout (*S. trutta*), but in others to the Salmon. Another good reason for the use of scientific names is the fact that of the fifteen thousand odd species of fish known to-day probably less than half have a common name in any language. There are nearly a hundred species of Cichlids in Lake Tanganyika alone, but very few of them are distinguished by the natives under a particular name, and the same species will perhaps be given one name by one tribe and a totally different one by another. It is agreed, therefore, that, in order to obtain precision and to avoid any chance of confusion, it is necessary to give every species of fish a scientific name. In the words of Dr. Regan, the name of an animal "is a clue to all that is known or that has been recorded in literature about its structure, habits, economic importance or anything else; without the correct name we are in the dark and the conclusions we arrive at may be founded on erroneous grounds." It not infrequently happens that two

## SUMMARY

An alphabetic list with the scientific names of all known recent freshwater fish species is presented. Also listed are the English and Dutch vernacular names in use for freshwater fishes and the various English (common) names of the freshwater aquarium fishes.

The aim of this publication is six-fold:

- to list the currently valid and correctly written scientific name of every recent freshwater fish species;
- to stimulate the use of correctly written scientific names;
- to list Dutch and some frequently used English vernacular names of freshwater aquarium fishes and freshwater aquacultural fishes;
- to list some scientific names wrongly used by aquarists;
- to present some aquarium book citations;
- to present an overview of the freshwater and brackish water fishes recorded during the last century in various aquarium books.

Although many scientific names are likely to change with scientific progress, we nevertheless present the list of currently valid scientific names now. This current list can already be used for finding the currently valid names and the correct spelling of these names. Further it cites the use of the names in the aquarium literature and the list also provides an overview of the known species of freshwater fish.

We hope the freshwater fish name list will stimulate the use of correctly written scientific names and bring some stabilization in the use of common names.

## Zusammenfassung

Eine alphabetische Liste mit den wissenschaftlichen Namen aller rezenten Süßwasserfische der Welt ist zusammengestellt worden. Auch werden die vielfach verwendeten holländischen und englischen Namen erwähnt.

Diese Veröffentlichung hat einen mehrfachen Zweck, nämlich:

- das Erstellen einer Liste mit richtig geschriebenen Namen für jede rezente Süßwasserfischart;
- den Gebrauch von richtig geschriebenen wissenschaftlichen Namen zu propagieren;
- die Erwähnung vielfach verwendetener englischer und holländischer Namen von Süßwasserfischen und wirtschaftlich genutzten Süßwasserfischen;
- einige wissenschaftliche Namen, welche in der Fachliteratur falsch verwendet sind, zu erfassen;
- einige Aquaristik-Fachbuchzitate aufzulisten;
- die Präsentation einer Übersicht von Süßwasser- und Brackwasserfischarten, welche während des letzten Jahrhunderts in vielen Aquarienbüchern genannt sind.

Obwohl viele wissenschaftlichen Namen noch möglicherweise geändert werden (durch ständige Recherchen), ist es jedoch wichtig die Liste jetzt zu präsentieren. Mit dieser Liste kann man sich schon die heute gültigen Namen und die richtige Rechtschreibung dieser Namen merken. Ebenso kann man sich die Benutzung der Namen in der aquaristische Literatur ermitteln und gleichzeitig bekommt man eine Übersicht über die heute anerkannten Süßwasserfischarten der Welt.

Wir hoffen dass diese Namenliste der Süßwasserfische die richtige Schreibung der wissenschaftlichen Namen fördert und die Verwendung einigermaßen standarisierter holländischer und englischer Namen der Aquarienfische unterstützt.

## Samenvatting

Een alfabetische lijst met de wetenschappelijke namen voor alle recente zoetwatervissoorten van de wereld is opgesteld. Verder worden de veelgebruikte Nederlandse namen voor enige zoetwatervissen vermeld, alsmede enige Engelse namen van veelvoorkomende zoetwateraquariumvissen en van de, voor consumptie gekweekte, zoetwatervissen.

Het doel van deze lijst is zesvoudig:

- het vermelden van de nu geldige en juist geschreven wetenschappelijke naam voor iedere recente soort zoetwatervis;
- het gebruik van correct gespelde wetenschappelijke namen te stimuleren;
- het vermelden van Nederlandse namen en enige veelgebruikte Engelse namen voor zoetwateraquariumvissen en voor consumptie gekweekte zoetwatervissen;
- het vermelden van enige wetenschappelijke namen die door aquariumhouders verkeerd gebruikt worden;
- het vermelden van enige verwijzingen naar aquariumboeken;
- het geven van een overzicht van de zoetwater- en brakwateraquariumvissen die in de laatste honderd jaar vermeld werden in diverse aquariumboeken.

Hoewel vele wetenschappelijke namen nog gewijzigd zullen worden door voortschrijdend wetenschappelijk onderzoek, lijkt het ons toch nuttig om een lijst met de nu geldige wetenschappelijke namen te presenteren. Behalve de nu geldige namen en de juiste spelling van deze namen, kan de lijst ook gebruikt worden om de gebruikte namen in de aquariumliteratuur te achterhalen. Verder geeft de opsomming ook een overzicht van de al bekende soorten zoetwatervis.

We hopen dat de zoetwatervis-naamlijst zal bijdragen aan het juist schrijven van de wetenschappelijke namen en het gebruik van enigszins gestandaardiseerde Nederlandse namen zal stimuleren.



## Table of contents

<b>SUMMARY -----</b>	<b>3</b>
ZUSAMMENFASSUNG -----	3
SAMENVATTING -----	4
<b>CHAPTER ONE INTRODUCTION -----</b>	<b>7</b>
1.1 SCIENTIFIC NAMES -----	9
1.2 COMMON NAMES -----	15
1.3 EXAMPLES FROM THE LIST -----	19
1.4 GENUS AND SPECIES VALIDITY -----	23
1.5 AQUARIUM HISTORY-----	35
1.5.1 AQUARIUM AND FISH BOOKS & SOME HISTORICALLY IMPORTANT ARTICLES -----	37
1.5.2 AQUARIUM MAGAZINES -----	65
<b>CHAPTER TWO A CLASSIFICATION OF THE FRESHWATER FISHES OF THE WORLD-----</b>	<b>69</b>
INTRODUCTION-----	69
EINLEITUNG-----	70
INLEIDING-----	70
OUTLINE OF THE FRESHWATER FISH CLASSIFICATION-----	79
<i>Petromyzontiformes</i> -----	81
<i>Myliobatiformes</i> -----	81
<i>Ceratodontiformes</i> -----	82
<i>Polypteriformes</i> -----	82
<i>Acipenseriformes</i> -----	82
<i>Lepisosteiformes</i> -----	83
<i>Amiiformes</i> -----	83
<i>Anguilliformes</i> -----	83
<i>Hiodontiformes</i> -----	84
<i>Osteoglossiformes</i> -----	84
<i>Clupeiformes</i> -----	85
<i>Gonorynchiformes</i> -----	86
<i>Cypriniformes</i> -----	86
<i>Gymnotiformes</i> -----	93
<i>Characiformes</i> -----	94
<i>Siluriformes</i> -----	98
<i>Lepidogalaxiiformes</i> -----	104
<i>Galaxiiformes</i> -----	105
<i>Salmoniformes</i> -----	105
<i>Osmeriformes</i> -----	105
<i>Percopsiformes</i> -----	106
<i>Gadiformes</i> -----	106
<i>Ophidiiformes</i> -----	107
<i>Batrachoidiformes</i> -----	107
<i>Gobiiformes</i> -----	107
<i>Syngnathiformes</i> -----	110
<i>Synbranchiformes</i> -----	110
<i>Anabantiformes</i> -----	111
<i>Pleuronectiformes</i> -----	112
<i>Cichliformes</i> -----	113
<i>Atheriniformes</i> -----	117
<i>Beloniformes</i> -----	118
<i>Cyprinodontiformes</i> -----	118
<i>Mugiliformes</i> -----	121
<i>Blenniiformes</i> -----	122

Table of contents

<i>Uranoscopiformes</i>	124
<i>Spariformes</i>	124
<i>Tetraodontiformes</i>	124
<i>Centrarchiformes</i>	125
<i>Perciformes</i>	126
<b>CHAPTER THREE REFERENCES IN THE FRESHWATER FISH LIST</b>	<b>127</b>
<b>CHAPTER FOUR FRESHWATER FISH NAMES</b>	<b>141</b>
<i>A</i>	141
<i>B</i>	233
<i>C</i>	273
<i>D</i>	357
<i>E</i>	373
<i>F</i>	399
<i>G</i>	411
<i>H</i>	447
<i>I</i>	511
<i>J</i>	517
<i>K</i>	521
<i>L</i>	527
<i>M</i>	571
<i>N</i>	617
<i>O</i>	647
<i>P</i>	671
<i>Q</i>	773
<i>R</i>	775
<i>S</i>	801
<i>T</i>	857
<i>U</i>	895
<i>V</i>	897
<i>W</i>	901
<i>X</i>	903
<i>Y</i>	911
<i>Z</i>	913
<b>APPENDIX: THE FRESHWATER AQUATIC HOBBY LITERATURE IN THE LOW COUNTRIES</b>	<b>917</b>
<i>In the Netherlands</i>	917
<i>In Flanders</i>	927
<i>The Dutch freshwater aquarium bibliography</i>	931
<b>INDEX</b>	<b>949</b>

## Genus and species validity

**Goodeidae** Jordan & Gilbert, 1883 (hooglandtandkarpers / Zwischenkäpfplinge / splitfins / goodeids)

{>14 Ma Middle Miocene}

**Empetrichthyinae** Jordan, Evermann & Clark, 1930 (Noord-Amerikaanse poeltandkarpers / Nordamerikanische Quellkäpfplinge / Wüstenkäpfplinge / springfishes) {>14 Ma Middle Miocene; age

12 Ma}: *Crenichthys* Hubbs, 1932; *Empetrichthys* Gilbert, 1893.

Freshwater fish classification

120

**Goodeinae** (Mexicaanse tandkarpers / Hochlandkäpfplinge / goodeines) {>11 Ma late Miocene; age

11,5 Ma}

**Characodontini** Regan, 1907 {age 10,5 Ma}: *Characodon* Günther, 1866.

**Ilyodontini** Doadrio & Domínguez, 2004 {age 9,5 Ma}: *Allodontichthys* Hubbs & Turner, 1939;

*Ilyodon* Eigenmann, 1907; *Xenotaenia* Turner, 1946.

**Girardinichthyini** Hubbs & Turner, 1939 {age 9 Ma}: *Allotoca* Hubbs & Turner, 1939;

*Girardinichthys* Bleeker, 1860; *Neotoca* Hubbs & Turner, 1939; *Skiffia* Meek, 1902.

**Goodeini** {age 8 Ma}: *Ataeniobius* Hubbs & Turner, 1939; *Goodea* Jordan, 1880.

**Chapalichthyini** Doadrio & Domínguez, 2004 {age 7 Ma}: *Alloophorus* Hubbs & Turner, 1939;

*Ameca* Miller & Fitzsimons, 1971; *Chapalichthys* Meek, 1902; *Xenoophorus* Hubbs & Turner, 1939;

*Xenotoca* Hubbs & Turner, 1939; *Zoogeneticus* Meek, 1902.

## CHAPTER FOUR FRESHWATER FISH NAMES

### **Allodontichthys Hubbs & Turner, 1939**

(GOODEIDAE>Goodeinae)

#### ***Allodontichthys hubbsi* Miller & Uyeno, 1980**

(Wischnath (1993):22, Aquarien Atlas Band 4

(1995):452, Hieronimus (1995):62, Aqualog 9

(1998):50) "whitepatch splitfin / Whitepatched Darter

Goodeid / mexcalpique de Tuxpan"

#### ***Allodontichthys polylepis* Rauchenberger, 1988**

(Wischnath (1993):22, Aquarien Atlas Band 4

(1995):452, Hieronimus (1995):65, Aqualog 9

(1998):50) "finescale splitfin / Orange Darter Goodeid /

mexcalpique escamitas"

#### ***Allodontichthys tamazulae* Turner, 1946** (Axelrod' s

Atlas (1989):323, Wischnath (1993):22, Dawes

(1995):202, Hieronimus (1995):66, Aqualog 9

(1998):50, Aquarien Atlas Band 6 (2002):712)

"peppered splitfin / Tuxpan Splitfin / Tamazula Darter

Goodeid / Tuxpan Darter Goodeid / mexcalpique de

Tamazula"

#### ***Allodontichthys zonistius* (Hubbs, 1932)** (Hoedeman

(1974):868, Wischnath (1993):26, Aquarien Atlas Band

4 (1995):454, Hieronimus (1995):68, Aqualog 9

(1998):50) "bandfin splitfin / Golden Darter Goodeid /

mexcalpique de Colima / Mexcalpique del Armería"

#### ***Allophorus* Hubbs & Turner, 1939**

(GOODEIDAE>Goodeinae)

***Alloophorus robustus* (Bean, 1892)** (Hoedeman (1974):868, Wischnath (1993):27, Aquarien Atlas Band 4 (1995):456, Dawes (1995):202, Hieronimus (1995):70, Aqualog 9 (1998):51, Aquarien Atlas Band 6 (2002):714) "bulldog goodeid / chegua"

***Allotoca* Hubbs & Turner, 1939**  
(GOODEIDAE>Goodeinae)

***Allotoca catarinae* (de Buen, 1942)** (Dawes (1995):204, Aqualog 9 (1998):51; *Neoophorus catarinae* Wischnath (1993):49) "Catarina allotoca / Green Allotoca / tiro Catarina"

***Allotoca diazi* (Meek, 1902)** (Aquarien Atlas Band 4 (1995):458, Dawes (1995):206, Hieronimus (1995):74, Aqualog 9 (1998):52; *Neoophorus diazi* Hoedeman (1974):868, Wischnath (1993):49) "Patzcuaro allotoca / Bugeye Allotoca / chorumo"

***Allotoca dugesii* (Bean, 1887)** (Hoedeman (1974):868, Mills (1993):198, Wischnath (1993):27, Dawes (1995):204, Hieronimus (1995):76, Aqualog 9 (1998):52, Aquarien Atlas Band 6 (2002):714, Dawes (2002):284) "bumblebee allotoca / Opal Allotoca / Golden Bumblebee Goodeid / tiro chato / Thiro"

***Allotoca goslinei* Smith & Miller, 1987** (Wischnath (1993):28, Aquarien Atlas Band 4 (1995):458, Dawes (1995):206, Hieronimus (1995):79, Aqualog 9 (1998):52) "banded allotoca / tiro listado / Tiro rayado"

***Allotoca maculata* Smith & Miller, 1980** (Wischnath (1993):28, Aquarien Atlas Band 4 (1995):460, Dawes (1995):206, Hieronimus (1995):81, Aqualog 9 (1998):53) "blackspot allotoca / Opal Allotoca / tiro manchado"

***Allotoca meeki* (Álvarez del Villar, 1959)** (Dawes (1995):206, Aquarien Atlas Band 6 (2002):717; *Neoophorus meeki* Wischnath (1993):50) "Zirahuén allotoca / tiro de Zirahuén"

***Allotoca (Neoophorus) regalis* (Álvarez del Villar, 1959)** (Hieronimus (1995):83, Aqualog 9 (1998):53; *Alloophorus regalis* Wischnath (1993):26, Aquarien Atlas Band 4 (1995):456; *Neoophorus regalis* Aquarien Atlas Band 6 (2002):722) "Balsas allotoca / Regal Goodeid / Los Reyes Goodeid / choromo del Balsas"

*Allotoca* sp. Hummel → *Allotoca zacapuensis*

*Allotoca* sp. Zacapu → *Allotoca zacapuensis*

*Allotoca vivipara* → *Allotoca dugesii*

***Allotoca zacapuensis* Meyer, Radda & Domínguez, 2001** (*Allotoca* sp. Hummel Aqualog 9 (1998):53)  
"Zacapu splitfin / Zacapu Allotoca / Bumblebee Allotoca / tiro de Zacapu"

Ameca hooglandkarper → *Ameca splendens*

***Ameca* Miller & Fitzsimons, 1971**  
(GOODEIDAE>Goodeinae)

***Ameca splendens* Miller & Fitzsimons, 1971E**  
(Aquarien Atlas Band 2 (1985):703, Axelrod's Atlas (1989):323, Kochetov (1989):180, Mills (1993):198, Dawes (1995):206, Hieronimus (1995):86, Aqualog 9 (1998):53, Cánovas & Puigcerver (2002):543, Dawes (2002):284) "butterfly splitfin / Butterfly Goodeid / mexcalpique mariposa / Ameca-hooglandtandkarper"

***Ataeniobius* Hubbs & Turner, 1939**  
(GOODEIDAE>Goodeinae)

***Ataeniobius toweri* (Meek, 1904)** (Hoedeman

(1974):867, Aquarien Atlas Band 3 (1991):584,  
Wischnath (1993):30, Dawes (1995):206, Hieronimus  
(1995):94, Aqualog 9 (1998):55; *Goodea toweri* Jacobs  
(1973):160, Dawes (2002):285) "bluetail splitfin /  
Tower's Goodeid / Bluetail Goodea / mexcalpique cola  
azul"

*Balsadichthys* → *Ilyodon*

Balsas Goodeid → *Ilyodon whitei*

***Chapalichthys* Meek, 1902**

(GOODEIDAE>Goodeinae)

***Chapalichthys encaustus* (Jordan & Snyder, 1899)**

(Sterba (1962):600, Aquarien Atlas Band 2 (1985):704,  
Wischnath (1993):32, Dawes (1995):206, Hieronimus  
(1995):97, Aqualog 9 (1998):56, Dawes (2002):285;  
*Characodon encaustus* Ahl (1932):66, Arnold  
(1933b):103, Arnold & Ahl (1936):348, Arnold  
(1949a):26, Sterba (1962):600, Jacobs (1973):92)  
"barred splitfin / Sidespot Goodeid / Spotted Goodea /  
Barred Goodea / pintito de Ocotlán"

***Chapalichthys pardalis* Álvarez del Villar, 1963**

(Aquarien Atlas Band 3 (1991):587, Wischnath  
(1993):33, Dawes (1995):208, Hieronimus (1995):99,  
Aqualog 9 (1998):57; *Chapalichthys peraticus*  
Wischnath (1993):33, Aqualog 9 (1998):57) "polka-dot  
splitfin / Polka-dot Goodea / Alien Splitfin / Spotted  
Goodea / pintito de Tocumbo"

*Chapalichthys peraticus* → *Chapalichthys pardalis*

***Characodon* Günther, 1866**

(GOODEIDAE>Goodeinae)

*Characodon atripinnis* → *Goodea atripinnis*

***Characodon audax* Smith & Miller, 1986** (Mills

(1993):199, Wischnath (1993):31, Dawes (1995):208,  
Hieronimus (1995):101, Aqualog 9 (1998):59, Aquarien  
Atlas Band 6 (2002):718; *Characodon* sp. Coahuila  
Wischnath (1993):31) "bold characodon / Bold Goodea  
/ Black Prince / mexcalpique del Toboso / Durangoohooglandkarper  
/ Zwarte prins"

*Characodon bilineata* → *Neotoca bilineata*

*Characodon eiseni* → *Xenotoca eiseni*

*Characodon encaustus* → *Chapalichthys encaustus*

*Characodon furcidens* → *Ilyodon furcidens*

***Characodon garmani* Jordan & Evermann, 1898E**

(Hieronimus (1995):104) "Parras characodon /  
mexcalpique de Parras"

***Characodon lateralis* Günther, 1866** (Hoedeman

(1974):868, Aquarien Atlas Band 2 (1985):706,  
Wischnath (1993):32, Dawes (1995):208, Hieronimus  
(1995):105, Aqualog 9 (1998):61, Dawes (2002):285)  
"rainbow characodon / Rainbow Goodeid / mexcalpique  
arcoiris / Regenbooghooglandkarpertje"

*Characodon multiradiatus* → *Girardinichthys*

*multiradiatus*

*Characodon* sp. Abraham Gonzales

*Characodon* sp. Amado Nervo (Aqualog 9

(1998+):330) "Orangethin Characodon"

*Characodon* sp. Coahuila → *Characodon audax*

*Characodon variatus* → *Xenotoca variata*

***Crenichthys* Hubbs, 1932**

(GOODEIDAE>Empetrichthyinae)

***Crenichthys baileyi albivallis* Williams & Wilde, 1981**

(Aquarien Atlas Band 3 (1991):552, Wildekamp (1995):146, Aqualog 14 (2000):76) "Preston White River springfish"

***Crenichthys baileyi baileyi* (Gilbert, 1893 )** (Lazara (1984):52, Aquarien Atlas Band 3 (1991):553, Aquarien Atlas Band 4 (1995):444, Wildekamp (1995):144, Goldstein (2000):211, Aqualog 14 (2000):77) "White River springfish"

***Crenichthys baileyi grandis* Williams & Wilde, 1981**  
(Aquarien Atlas Band 4 (1995):446, Wildekamp (1995):148, Aqualog 14 (2000):77) "Hiko White River springfish"

***Crenichthys baileyi moapae* Williams & Wilde, 1981**  
(Aquarien Atlas Band 4 (1995):446, Wildekamp (1995):150, Aqualog 14 (2000):77) "Moapa White River springfish"

***Crenichthys baileyi thermophilus* Williams & Wilde, 1981** (Aquarien Atlas Band 4 (1995):448, Wildekamp (1995):152, Aqualog 14 (2000):78) "Mormon White River springfish"

***Crenichthys nevadae* Hubbs, 1932** (Lazara (1984):52, Sterba (1990):532, Aquarien Atlas Band 4 (1995):448, Wildekamp (1995):154, Goldstein (2000):212, Aqualog 14 (2000):78) "Railroad Valley springfish / Nevada Springfish / Duckwater Springfish"

***Empetrichthys* Gilbert, 1893**

(GOODEIDAE>Empetrichthyinae)

*Empetrichthys concavus* → *Empetrichthys latos concavus*

***Empetrichthys latos concavus* Miller, 1948E**

(Wildekamp (1996):14; *Empetrichthys concavus* Lazara (1984):66) "Manse Spring killifish / Raycraft Ranch Poolfish"

***Empetrichthys latos latos* Miller, 1948EW** (Lazara (1984):66, Sterba (1990):533, Aquarien Atlas Band 4 (1995):462, Wildekamp (1996):12, Goldstein (2000):212, Aqualog 14 (2000):78) "Pahrump poolfish / Pahrump Killifish / Raycraft Spring Killifish"

***Empetrichthys latos pahrump* Miller, 1948E** (Lazara (1984):66, Wildekamp (1996):16) "Pahrump Spring killifish / Pahrump Ranch Poolfish"

***Empetrichthys merriami* Gilbert, 1893E** (Lazara (1984):67, Wildekamp (1996):18) "Ash Meadows poolfish / Ash Meadows Killifish"

**Bleeker, 1860**

(GOODEIDAE>Goodeinae)

*Girardinichthys innominatus* → *Girardinichthys viviparus*

***Girardinichthys ireneae* Radda & Meyer, 2003**

*Girardinichthys limnurgus* → *Girardinichthys multiradiatus*

***Girardinichthys multiradiatus* (Meek, 1904)**

(Aquarien Atlas Band 2 (1985):706, Sterba (1990):579, Wischnath (1993):35, Dawes (1995):210, Hieronimus (1995):109, Aqualog 9 (1998):61; *Characodon multiradiatus* Arnold (1935):101, Arnold & Ahl (1936):348, Arnold (1949a):26; *Lermichthys multiradiatus* Rachow in HMR (1937):974, Sterba (1962):598, Jacobs (1973):172, Hoedeman (1974):868, van Ramshorst (1977):310) "darkedged splitfin / Striped Goodea / Golden Sailfin Goodeid / mexcalpique

de Zempoala"

**Girardinichthys turneri** (de Buen, 1940) (*Hubbsina*

*turneri* Wischnath (1993):38, Aquarien Atlas Band 4

(1995):464, Dawes (1995):214, Hieronimus (1995):120,

Aqualog 9 (1998):63) "highland splitfin / Turner's Sailfin Goodeid / mexcalpique michoacano"

*Girardinichthys variegatus* → *Girardinichthys viviparus*

**Girardinichthys viviparus** (Bustamente, 1837)

(Wischnath (1993):35, Dawes (1995):212, Hieronimus

(1995):112, Aqualog 9 (1998):62, Aquarien Atlas Band

6 (2002):720, Dawes (2002):285; *Limnurgus*

*innominatus* Ahl (1932):67, Jacobs (1973):174;

*Girardinichthys innominatus* Stoye (1935):77,

Hoedeman (1974):868, Sterba (1990):578; *Limnurgus*

*variegatus*) "Chapultepec splitfin / Amarillo / Black

Sailfin Goodeid / mexcalpique"

**Goodea Jordan, 1880** (GOODEIDAE>Goodeinae)

**Goodea atripinnis atripinnis** Jordan, 1880 (Arnold

(1937):82, Arnold (1949a):49, Jacobs (1973):157,

Hoedeman (1974):868, van Ramshorst (1977):310,

Sterba (1990):579, Aquarien Atlas Band 3 (1991):588,

Wischnath (1993):36, Dawes (1995):212, Hieronimus

(1995):116, Aqualog 9 (1998):63, Dawes (2002):285)

"blackfin goodea / Blackfin Goodeid / tiro"

*Goodea atripinnis gracilis* → *Goodea gracilis*

*Goodea atripinnis luitpoldii* → *Goodea luitpoldii*

**Goodea atripinnis martini** de Buen, 1946 (Wischnath

(1993):38, Dawes (1995):212, Aquarien Atlas Band 5

(1997):608, Aqualog 9 (1998):63) "Martin's Blackfin

Goodeid / tiro de Cuitzeo" = ? *Goodea atripinnis*

**Goodea atripinnis xaliscone** (Jordan & Snyder,

1899) (Wischnath (1993):38, Dawes (1995):212)

"Chapala Blackfin Goodeid / tiro de Chapala" = ?

*Goodea atripinnis*

*Goodea bilineata* → *Neotoca bilineata*

*Goodea caliente* → *Goodea atripinnis*

*Goodea captiva* → *Xenoophorus captivus*

**Goodea gracilis** Hubbs & Turner, 1939 (Rachow in

HMR (1955):973, Sterba (1962):597, Hoedeman

(1974):868, Sterba (1990):597, Aquarien Atlas Band 4

(1995):464; *Goodea atripinnis gracilis* Dawes

(1995):212) "dusky goodea / Dusky Splitfin / Panuco

Goodea / tiro oscuro" = ? *Goodea atripinnis*

*Goodea lermae* → *Skiffia lermae*

**Goodea luitpoldii** (Steindachner, 1894) (*Goodea*

*atripinnis luitpoldi* Wischnath (1993):38, Dawes

(1995):212, Aquarien Atlas Band 5 (1997):608, Aqualog

9 (1998):63) "green goodea / Luitpold's Goodeid / tiro

de Pátzcuaro" = ? *Goodea atripinnis*

*Goodea multipunctata* → *Skiffia multipunctata*

*Goodea toweri* → *Ataeniobius toweri*

*Goodea whitei* → *Ilyodon whitei*

Goodeidae (splitfins / Zwischenkäpfinge /  
hooglandtandkarpers) (CYPRINODONTIFORMES>  
Cyprinodontoidei)

*Hubbsina* → *Girardinichthys*

**Ilyodon Eigenmann, 1907** (GOODEIDAE>Goodeinae)

**Ilyodon cortesae** Paulo-Maya & Trujillo-Jiménez,

2000 "freckled splitfin / mexcalpique pecoso"

**Ilyodon furcidens** (Jordan & Gilbert, 1882) (Jacobs

(1973):168, Hoedeman (1974):868, Kochetov (1989):180, Aquarien Atlas Band 3 (1991):590, Wischnath (1993):39, Aquarien Atlas Band 4 (1995):466, Dawes (1995):214, Hieronimus (1995):123, Aqualog 9 (1998):64, Dawes (2002):286; *Ilyodon xantusi* Kochetov (1989):180, Wischnath (1993):47, Aqualog 9 (1998):65 "goldbreast splitfin / Goldbreast Ilyodon / Bass Goodeid / Xantusi / mexcalpique de Armería"  
*Ilyodon lennoni* → *Ilyodon whitei*  
*Ilyodon paraguayense* → *Ilyodon furcidens*  
***Ilyodon whitei* (Meek, 1904)** (Aquarien Atlas Band 2 (1985):708, Wischnath (1993):47, Hieronimus (1995):127, Aqualog 9 (1998):66; *Goodea whitei* Jacobs (1973):161; *Balsadichthys whitei* Hoedeman (1974):868; *Ilyodon lennoni* Aquarien Atlas Band 2 (1985):708, Wischnath (1993):46, Aqualog 9 (1998):66; *Ilyodon* sp. Axelrod's Atlas (1989):323; *Ilyodon* sp. Axelrod's Atlas (1989):323) "Balsas splitfin / Balsas Goodeid / White's Ilyodon / Chacambero Splitfin / Lennon's Goodeid / Lennon's Ilyodon / Blackbanded Goodeid / mexcalpique cola partida"  
*Ilyodon xantusi* → *Ilyodon furcidens*  
*Lermichthys* → *Girardinichthys*  
*Limnurgus* → *Girardinichthys*  
*Limnurgus innominatus* → *Girardinichthys viviparus*  
*Limnurgus variegatus* → *Girardinichthys viviparus*  
*Neophorus* → *Allotoca*  
***Neotoca* Hubbs & Turner, 1939**  
(GOODEIDAE>Goodeinae)  
***Neotoca bilineata* (Bean, 1887)** (Hervey & Hems (1952):269, Brymer (1954):208, Axelrod & Schultz (1955):461, Rachow in HMR (1955):976, Innes (1956):329, Sterba (1962):598, Jacobs (1973):180, Hoedeman (1974):869, van Ramshorst (1977):310; *Skiffia bilineata* Innes (1935):281, Arnold (1936):111, Beirens (1938):28, Kramer & Weise (1943):225, Arnold (1949a):101, Laursen (1949):107, Sterba (1990):579, Aquarien Atlas Band 3 (1991):592, Wischnath (1993):57, Dawes (1995):217, Hieronimus (1995):129, Aqualog 9 (1998):67) "twoline skiffia / Twoline Neotoca / Elfin Goodea / tiro de dos rayas"  
*Ollentodon multipunctatus* → *Skiffia multipunctata*  
***Skiffia* Meek, 1902** (GOODEIDAE>Goodeinae)  
*Skiffia bilineata* → *Neotoca bilineata*  
***Skiffia francesae* Kingston, 1978EW** (Wischnath (1993):58, Aquarien Atlas Band 4 (1995):468, Dawes (1995):217, Hieronimus (1995):133, Aqualog 9 (1998):68) "golden skiffia / Golden Sawfin Goodea / tiro dorado"  
*Skiffia francesae* x *Skiffia multipunctata* (Mills (1993):202, Wischnath (1993):59; *Skiffia* sp. Hybrid) "Black Beauty"  
***Skiffia lermae* Meek, 1902** (Hoedeman (1974):869, Wischnath (1993):58, Aquarien Atlas Band 4 (1995):468, Dawes (1995):219, Hieronimus (1995):135, Aqualog 9 (1998):68; *Skiffia variegata* Hoedeman (1974):860) "olive skiffia / Hooded Sawfin / tiro olivo"  
***Skiffia multipunctata* (Pellegrin, 1901)** (Sterba

(1990):579, Aquarien Atlas Band 3 (1991):594,  
Wischnath (1993):59, Aquarien Atlas Band 4  
(1995):470, Dawes (1995):219, Hieronimus  
(1995):139, Aqualog 9 (1998):68, Dawes (2002):286;  
*Ollentodon multipunctatus* Rachow in HMR (1955):975,  
Sterba (1962):600; *Goodea multipunctata* Jacobs  
(1973):159) "splotched skiffia / Spotted Skiffia /  
Piebald Goodea / Piebald Skiffia / Speckled Sawfin  
Goodea / tiro pintado"  
***Skiffia* sp. *Zacapu*** (Hieronimus (1995):139, Aqualog 9  
(1998):69) "Zacapu Sawfin" = ? *Skiffia lermae*  
*Skiffia variegata* → *Skiffia lermae*  
*Xenendum caliente* → *Goodea atripinnis*  
*Xenendum multipunctatum* → *Skiffia multipunctata*  
***Xenoophorus* Hubbs & Turner, 1939**  
(GOODEIDAE>Goodeinae) ↗ *Goodea*  
***Xenoophorus captivus* (Hubbs, 1924)** (Hoedeman  
(1974):868, Aquarien Atlas Band 2 (1985):710,  
Axelrod's Atlas (1989):323, Sterba (1990):580,  
Wischnath (1993):62, Dawes (1995):219, Hieronimus  
(1995):142, Aqualog 9 (1998):70, Dawes (2002):286)  
"relict splitfin / Green Goodeid / mexcalpique viejo"  
*Xenoophorus erro* → *Xenoophorus captivus*  
*Xenoophorus exsul* → *Xenoophorus captivus*  
***Xenotaenia* Turner, 1946** (GOODEIDAE>Goodeinae)  
***Xenotaenia resolanae* Turner, 1946** (Aquarien Atlas  
Band 2 (1985):710, Wischnath (1993):65, Dawes  
(1995):219, Hieronimus (1995):145, Aqualog 9  
(1998):71) "leopard splitfin / Resolana Goodeid /  
Leopard Goodeid / mexcalpique leopardo"  
***Xenotoca* Hubbs & Turner, 1939**  
(GOODEIDAE>Goodeinae)  
**'*Xenotoca*' *eiseni* (Rutter, 1896)** (Aquarien Atlas  
Band 2 (1985):712, Axelrod's Atlas (1989):323,  
Kochetov (1989):180, Sterba (1990):580, Mills  
(1993):203, Sakurai, Sakamoto & Mori (1993):206,  
Wischnath (1993):50, Dawes (1995):219, Hieronimus  
(1995):148, Aqualog 9 (1998):71, Cánovas &  
Puigcerver (2002):545, Dawes (2002):286) "redtail  
splitfin / Redtail Goodeid / Orangetail Goodeid /  
mexcalpique cola roja / Banderollevisje"  
**'*Xenotoca*' *melanosoma* Fitzsimons, 1972**  
(Axelrod's Atlas (1989):323, Kochetov (1989):180,  
Wischnath (1993):56, Dawes (1995):223, Hieronimus  
(1995):153, Aqualog 9 (1998):74, Aquarien Atlas Band  
6 (2002):724) "black splitfin / Dusky Goodeid /  
Bluebelly Goodeid / mexcalpique negro"  
***Xenotoca variata* (Bean, 1887)** (Hoedeman  
(1974):868, Aquarien Atlas Band 2 (1985):712,  
Kochetov (1989):180, Wischnath (1993):57, Dawes  
(1995):221, Hieronimus (1995):156, Aqualog 9  
(1998):74) "jeweled splitfin / Jewel Goodeid / pintada"  
***Zoogeneticus* Meek, 1902**  
(GOODEIDAE>Goodeinae)  
*Zoogeneticus dugesii* → *Allotoca dugesii*  
*Zoogeneticus maculatus* → *Alloophorus robustus*  
***Zoogeneticus purhepechus* Domínguez-  
Domínguez, Pérez-Rodríguez & Doadrio, 2008** "La  
Luz picote splitfin"  
***Zoogeneticus quitzeoensis* (Bean, 1898)**

(Hoedeman (1974):868, Aquarien Atlas Band 2  
(1985):714, Wischnath (1993):66, Aquarien Atlas Band  
4 (1995):472, Dawes (1995):223, Hieronimus  
(1995):161, Aqualog 9 (1998):75) "picote splitfin /  
Picote Goodeid / Goldedged Goodeid / picote"

*Zoogoneticus robustus* → *Alloophorus robustus*

*Zoogoneticus* sp. Crescent → *Zoogoneticus tequila*

***Zoogoneticus tequila* Webb & Miller, 1998**

(Aquarien Atlas Band 6 (2002):726; *Zoogoneticus* sp.  
cf. *quitzeoensis* Aquarien Atlas Band 4 (1995):472;  
*Zoogoneticus* sp. Crescent Hieronimus (1995):165,  
Aqualog 9 (1998):75) "Tequila splitfin / Crescent  
Goodeid / Crescent Zoe / picote Tequila"