OKAA Breeders Award Program



Rules & Regulations, Rev. 2A

I. STATEMENT OF PURPOSE

The purpose of the Breeders Award Program (BAP) is: to promote the keeping and breeding of aquarium animals, to recognize and motivate achievement in the hobby, to encourage research into the breeding of more difficult species, to share knowledge about different techniques, and to document accounts of breeding.

To further our purpose, various awards and titles are presented for achievements in breeding. These include: Individual Species Certificates, Class Completion Plaques, Target Species Certificates, Chair's Awards, and titles of achievement.

II. REQUIREMENTS FOR THE INDIVIDUAL SPECIES CERTIFICATE

Each time an individual breeds a different species, a certificate recognizing that account will be presented to the breeder upon the completion of the following requirements:

- 1. VERIFICATION: Six (6) young must be brought to a general meeting for verification by a member of the BAP Committee. The young must be between two (2) and four (4) months old. Young of rapidly maturing species may be verified before two (2) months of age ONLY with prior permission of the BAP Chair. In special cases (e.g., if moving the young would endanger them), the breeder may submit a timely photograph or request that a BAP Committee member verify the breeders' spawn via an on-site visit, when the young are 2-4 months old. In all instances, the BAP Committee reserves the right to require on-site verification, particularly in the case of target species.
- 2. REPORT: A completed BAP Breeding Report must be submitted at the time of contribution. It is the breeder's responsibility to complete the form and to correctly identify the species. The scientific name (genus and species) must be spelled correctly. Individuals are strongly encouraged to make use of current scientific and hobby literature in order to identify species accurately. The BAP Chair and/or committee member(s) should be consulted if there is confusion as to the currently accepted scientific name. When the term "unidentified" is used in these rules, it refers to fauna unidentified in the scientific literature,

not simply unidentified to the breeder.

- 3. CONTRIBUTION: The breeder must choose and complete one of the following options (in addition to completing a Breeding Report):
- a. Donate six young to the BAP auction. The young must be of sufficient size, health, and development to provide them a reasonable chance of survival during handling and transfer as well as a courtesy to the future buyer.
- b. Write an article about the event which will be submitted for publication. The article should cover and expand on items covered briefly in the Breeding Report, as well as interesting and useful information gained by the breeder's experience and information from literature (which must be referenced). Inadequate articles will be returned for revision.
- c. Give a short slide and/or verbal presentation on the spawning at an OKAA General Meeting or program that contains the elements listed above for a written article.

III. GENERAL RULES FOR INDIVIDUAL SPECIES CERTIFICATES AND FOR PLAQUES

- 1. The Breeding Report must assign the fish/animal to the appropriate BAP Class. "Native" species must be endemic to the waters of the United States, not a species that has been introduced. If a fish/animal is eligible for inclusion in more than one Class, the Breeding Report must declare which Class is chosen by the breeder.
- 2. Credit will be awarded to the breeder only once for any species. Only distinct species will be recognized. Different collection locations, color, fin or other varieties, and albinos ARE the same species and will be considered to be such; credit will be given only once.
- 3. The breeding account must have occurred under the breeder's own care and the breeder must have full jurisdiction over the fate of the parents and young.
- 4. Some species normally produce few young, or breed over an extended period. For such species, breeders may apply for credit with six young produced from more than one event. The BAP Committee will consider each case individually.
- 5. The BAP Committee has final authority to determine the identity of submitted species. Their decision will be based on recognized, published literature of recent copyright.
- 6. In the instance of distinct, but unidentified species, a certificate will be awarded for each only if reference can be made to a description and/or photograph in recognized literature. Alternatively, a recognizable photograph and the specific description may be submitted with the Breeding Report. In such cases, the certificate shall read as "unidentified" as depicted with notations such as "Whiptail Catfish, *Sturisoma* sp.", if the

genus can be established.

7. Special problems in classifying fish for BAP credit include; "species complexes," synonymous species names, and different species impossible for the hobbyist to differentiate from each other. Credit will be given only once to each breeder.

Examples: A) Species complexes include groups of fish (such as the Lake Malawian 'peacock' cichlid) of which certain varieties are not (yet) recognized as distinct species. Photographic identification may be used to differentiate the species.

- B) Synonymous species names are duplicate names used at various time for the same animal; e.g., 'Geophagus' steindachneri, 'Geophagus' hondae and 'Geophagus' magdelena, the first of which is currently recognized as correct.
- C) Cichlasoma bimaculatum and Cichlasoma portalegrense are distinct species but impossible for the hobbyist to identify with certainty unless collecting locality is known. Likewise Mogurnda mogurnda and Mogurnda adspersa. * These groups are listed in the Point Groups (below) at the appropriate locations, marked with an asterisk and enclosed by brackets.
- 8. If a target species is bred repeatedly the target status of that species may be reevaluated by the BAP Committee.
- 9. Under no circumstance will hybrids be recognized or accepted in the BAP.
- 10. The use of hormones to induce spawning is prohibited.
- 11. The term "Ornamental" is used in the BAP to denote a species of interest to the aquarium trade and is not considered a pest or live food e.g., hydra, gammarus.

IV. REQUIREMENT FOR CLASS PLAQUES AND AWARDS

With the exception of certain target species (see below), individual species certificates will be applied toward the completion of the appropriate Class and award of a Class Plaque. For this purpose all fauna are categorized into the following Classes, with the required number and type of events necessary to complete the Class as shown.

- · Class 1: Livebearers 6 species
- Class 2: Anabantoids 5 species
- · Class 3: Barbs 5 species
- Class 4: Rainbowfish 5 species
- · Class 5: Rasboras and Minnows 6 species (3 Rasboras and 3 Minnows)

- · Class 6: Characins 5 species
- · Class 7: Cichlids Old World 6 species (3 mouthbrooding and 3 substrate)
- · Class 8: Cichlids New World 6 species
- · Class 9: Killifish Mop Spawners 6 species
- · Class 10: Killifish Soil Spawners 3 species
- · Class 11: Catfish 4 species
- Class 12: Sharks, Eels, and Loaches 1 species
- · Class 13: Marine Fish 1 species
- Class 14: All Other Fish 2 species
- Class 15: Native Fish 3 Species (1 livebearer and 2 egglayers)
- · Class 16: Ornamental Freshwater and Saltwater Invertebrates 4 species

V. TARGET SPECIES CERTIFICATE

To encourage BAP members to breed very difficult species, the BAP Committee will award a certificate for the breeding of any animal from the Target List. The certificate will be awarded following donation of six young for BAP auction, submission of a completed BAP Breeding Report and submission of an article about the event written for OKAA publication.

Any member may propose another species as difficult to breed in addition to those listed as Target (below) and may petition the BAP Committee in writing so that it may be considered. The petition must be accompanied by written proof as to the difficulty of breeding, with references to published literature.

VI. THE CHAIR'S AWARD

The Chair's award may be presented for outstanding contribution to the goals of the Breeders Award Program. This is separate from and in addition to any other awards.

VII. SYSTEM OF POINTS FOR SPECIES SPAWNED

Within each Class, species are divided into point categories based upon the relative difficulty of breeding the animal and/or raising of the young. Species are assigned values of 5, 10, 15, or 20 points, with "Targets" being valued at 40 points. At the time a certificate is

awarded, the breeder is automatically credited with the appropriate number of points. Although eligible for only one plaque per Class, each breeder continues to receive certificates and points for additional species bred in that class.

Species that are maintained in captivity and recognized through published literature as being 'extinct in the wild,' will be awarded points 2X above their typical point category. See Attachment A for a listing of species known to be extinct in the wild and their point values. Species not listed in Attachment A but are thought to be extinct in the wild may qualify for the 2X bonus provided that published peer reviewed documentation is submitted. Extinct in the wild bonus points may equate to, but do not qualify for, Target Species status or Target Plaques. However, a combined total (base + bonus) worth 20 points may qualify toward the '20 pointer' requirements.

IX. ACHIEVEMENT TITLES

Achievement Titles will be given based on total points earned, Classes completed, the number of 20 pointers, and the number of Target Species spawned. The program is made up of six levels of achievement. The achievement titles are:

*One Star Breeder – Requires 100 points plus 1 completed Class

**Two Star Breeder – Requires 200 points plus 2 completed Classes

***Three Star Breeder – Requires 300 points plus 3 completed Classes

****Four Star Breeder – Requires 400 points plus 7 completed Classes and at least 1 species spawned from the Target group

Master Breeder – Requires 600 points plus 10 completed Classes and at least 9 species spawned from the 20 point groups and at least 2 species spawned from Target groups

Grand Master Breeder – Requires "Master Breeder" status and at least 5 species spawned from Target groups and must have completed all Classes. (Any member who achieves "Grand Master Breeder" status will be awarded a lifetime membership in OKAA.)

X. THE BAP COMMITTEE

- 1. The BAP Committee is responsible for reviewing the ongoing program, assigning proper credit, and maintaining BAP records of members. All aspects of the program are subject to review by the BAP Committee and decisions of the committee are final.
- 2. The BAP Committee will maintain all records for individual members listing all species spawned, the Classes credited, and the points awarded.
- 3. Periodically, a roster of participating members with their cumulative record will be

published. Upon the periodic publication of the BAP roster, it is the breeder's responsibility to see that their species records are correct and that appropriate points have been credited.

- 4. Any species not assigned in the Point Groups (below) will be assigned by the BAP Committee based upon published information relative that specific species or its genus.
- 5. Any person transferring membership into OKAA from another club will receive OKAA BAP point values for all spawns verified by their previous club. Their request for assignment of points must be submitted to the BAP Committee in writing, along with a record (certificate) of verified spawns from the previous club. However, the transferred species are not eligible for Class Plaques or Target Species certificates.
- 6. The BAP Chair and the OKAA President or a Chapter President are responsible for signing individual species certificates prior to issuance to the breeder.

XI. ADVANCED, SPECIALIST, AND EXPERT TITLES

Members who have gone well beyond the basic requirements in any of the BAP Classes will be awarded that title of Advanced, Specialist, or Expert Breeder in the Classes.

Members who have fulfilled the criteria below are responsible for notifying the BAP Chair. The Chair will verify the completion of the Title requirements, issue the appropriate certificates, and note the BAP records.

The criteria for each title are as follows:

- 1. Advanced Breeder in the Class. The member must have: a. bred a total of two times the number of species required for Class completion and b. written an article for OKAA publication or presented a program for OKAA about breeding or keeping a species from the Class.
- 2. Specialist Breeder in the Class. The member must have: a. previously attained Advanced Breeder in the Class, and b. bred a total of three times the number of species required for Class completion, and c. written another article for the OKAA publication or presented a program for OKAA about a topic related to the Class, and d. completed at least two of the following: (1) bred a species, from the Class, that has not been bred by any OKAA member within the past three years, (2) written an article for OKAA publication, related to any aspect of the Class, that reviews published literature, (3) shown and placed (1st, 2nd, or 3rd) in at least three different shows with species from the Class, or (4) bred a total of six times the number of species required for Class completion.
- 3. Expert Breeder in the Class. The member must have: a. previously attained Specialist Breeder in the Class, and b. bred a total of four times the number of species normally required for the Class, and c. written an article for the OKAA publication or presented a program for OKAA about a topic related to the Class, and d. completed at least three of the following: (1) written an article, related to the Class, which is published by a national journal or magazine, (2) presented a program related to the Class at an aquarium club other than

OKAA, (3) served as a judge for species from this Class at a show other than OKAA, (4) shown and placed first with species from the Class in at least three different fish shows, (5) served as an Officer, Board Member, or Editor for a specialty club, (6) bred a total of ten times the number of species normally required for the Class, (7) bred two species from this Class that have not been previously bred by OKAA members, or (8) bred one species from this Class that has not been previously bred and registered with the Federation of American Aquarium Societies (FAAS).

XII. CLASSES

Class 1: Livebearers (6 species)

- 5 points: *Brachyrhaphis rhabdophora*, *Heterandria* sp., *Gambusia* sp., *Poecilia* (guppy & molly types), *Xiphophorus* (swords, platys, and variatus), and All other Livebearers not listed in other point groups
- 10 points: All species in family Goodeidae, all species from genera *Ameca*, *Belonesox*, *Chapalichys*, and *Xenotocas*
- \cdot 15 points All livebearing halfbeaks plus all species with published brood records of less than 20 fry
- · 20 points: Ataeniobius toweri, Skiffia lermae, and S. multipunctata plus All species with published brood records of less than 10 fry including: Allodontichthys tamazulae, Brachyrhaphus holdridgei, Gambusia alvarezi, Poecilia melanazona, Poecilia turneri, Poeciliopsis prolifica, and P. turraburensis.
- · Target: Anableps anableps, Jenysia lineata, Skiffia francesae, Hubbsina turneri.

Class 2: Anabantoids (5 species)

- 5 points: *Macropodus opercularis* (paradise fish, all varieties), *Trichogaster trichopterus* (all varieties such as 3 spot, blue, gold, Cosby and opaline gouramis)
- 10 points: *Betta picta*, *Betta splendens*, *Trichogaster leeri* (pearl gourami), *Colisa* sp. (dwarf blue gouramis, neons, and giant gouramis).
- · 15 points: All species from genus *Macropodus*, except those listed in other point groups. All species from the genera *Belontia* and *Trichopsis* (croaking gouramis). All wild Bettas such as *Betta smaragdina*, *Betta unimaculata* and all other Anabantoid species not listed in other point groups.
- · 20 points: Bettas in the *B. coccina* complex (*B. coccina*, *B. tussyae*, *B. brownorum*, *B. livida*, *B. persephone*, *B. miniopinna*, *B. burdigala*, *B. rutilans*), *Helostoma temmincki* (kissing), and *Parosphromenus* sp. (licorice & related sp.).
- · Targets: Betta albimarginata, B. channoides and B. macrostoma, Ctenopoma sp., Sphaerichthys sp. (chocolate gouramies), Osphronemus goramy (true goramy), and Luciocephalus pulcher.

Class 3: Barbs (5 species)

- · 5 points: None
- · 10 points: All barbs not listed in other point groups, including *Puntius sachsi* (gold barb), *Capoeta oligolepis* (checker barb), and *Capoeta tetrazona* (tiger barb).
- · 15 points: Barbodes everetti (clown barb), Puntius filamentosa, Capoeta arulius

· 20 points: Barbodes lateristriga (spanner T barb), and Any African barb species such as Barbodes fasciolatus, Barbodes macrops, Barbodes kerstenii, and Barbodes trispilos

· Target: Barbodes schwanenfeldii (tinfoil barb)

Class 4: Rainbowfishes (5 species – any combination of blue-eyes or rainbowfish with at least one from each category)

- 5 points *Melanotaenia splendida* (including all subspecies such as *M. s. inornata* and *M. s. rubristriata*)
- · 10 points All species of the genera *Glossolepis*, and *Pseudomugil*, *Bedotia geayi* (madagascar rainbow). All *Melanotaenias* sp. not listed elsewhere. *Telmatherina ladigesi* and *Chilatherina heikobleheri*
- · 15 points All rainbowfishes not listed elsewhere
- · 20 points Pseudomugil tenellus
- · Target: Iriatherina werneri (featherfin rainbowfish)

Class 5: Rasboras and Minnows (3 Rasboras and 3 Minnows)

- 5 points: All minnows from genera *Danio* and *Devario*, *Tanichthys albonubes* (white clouds)
- 10 points: Danionella
- · 15 points: All minnows not listed elsewhere, *Rasbora trilineata* (scissortail rasbora), and *Rasbora borapetensis* (redtailed rasbora)
- 20 points: All species of Rasboras not listed in other point groups Genera *Trigonostigma*, *Rasbora*, *Sundadanio*, *Microrasbora*, *Boraras*, *Inlecypris*.
- · Target: Rasbora heteromorpha (harlequin) and R. espei

Class 6: Characins (5 species)

- · 5 points: None
- · 10 points: *Inpaichthys kerri* (royal tetra), *Nematobrycon lacortei* (rainbow tetra), and *Nematobrycon palmeri* (emperor tetra)
- · 15 points: *Gymnocorymbus ternetzi* (black tetra) and All species not listed in other point groups.
- 20 points: *Exodon paradoxus* (buck toothed tetra), *Hyphessobrycon herbertaxelrodi* (black neon tetra), and All species of genera *Carnegiella* and *Gasteropelecus*
- Target: Paracheirodon innesi (neon tetra), Cheirodon axelrodi (cardinal tetra), Micralestes interruptus (Congo tetras) Serrasalmidae sp.(non-piranha), Thoracocharax sp. (hatchetfish) and all Abramites and Anostomus.

Class 7: Cichlids of the Old World (6 species: 3 mouthbrooding + 3 substrate spawning)

- · 5 points: All mouthbrooders from genera *Sarotherodon*, *Hemihaplochromis*, *Tilapia*, plus *Haplochromis burtoni* and other closely related *Haplochromis* species
- 10 points: Steatocranus casuarius, all mouthbrooding species from Lake Malawi and Victoria, plus all substrate spawning African and Asian cichlids except those listed in other point groups

- · 15 points: Etroplus maculatus, Haplochromis moorii, all species from genera: Lamprologus, and Steatocranus, (except those listed in other point groups), and all substrate spawning species from Lake Tanganyika
- 20 points: *Etroplus suratensis*, *Teleogramma* sp., (except those listed in other point groups), and all mouthbrooding species from Lake Tanganyika
- · Targets: Cyathopharynx sp. and other Lake Tanganyika "featherfins"

Class 8: Cichlids of the New World (6 species: including at least one mouthbrooding species)

- 5 points: *Cryptoheros nigrofasciatus* (convicts), and *Herotilapia multispinosa* (rainbow cichlid)
- · 10 points: Pterophyllum scalare (angelfish: all varieties) 'Geophagus' steindachneri, 'Geophagus' brasiliensis and other brasiliensoids, Gymnogeophagus balzanii, Parachromis managuensis, Thorichthys meeki, Rocio octofasciatum, Nannacara anomala, Neetroplus nematopus, and all other substrate spawning Central, North, and South American cichlids except those listed in other point groups.
- · 15 points: All species from genera Astronotus, Acaronia, Amphilophus, Bujurquina, Caquetaia, Crenicara, Crenicichla (unless noted elsewhere), Dicrossus, Geophagus, 'Geophagus' (unless noted elsewhere), Gymnogeophagus, Heroina, Nannacara (unless noted elsewhere), Nandopsis, Parachromis (unless noted elsewhere), and Satanoperca (unless noted elsewhere); Archocentrus spinosissimus, Pterophyllum leopoldi, plus all mouth brooding species of South American cichlids except those listed in other point groups.
- · 20 points: All species from the following *Crenicichla* complexes: *lacustris*, *strigata*, and *vittata*. *Hoplarchus psittacus*, *Symphysodon aequifasciatus*, *Taeniacara candidi*, *Teleocichla* spp. and *Uaru amphiacanthoides*
- Targets: Acarichthys heckelii, Biotodoma spp., Biotoecus spp., Chaetobranchopsis spp., Chaetobranchus spp., Cichla spp., Pterophyllum altum, Retroculus spp., Satanoperca acuticeps, Satanoperca daemon, Satanoperca lilith, Symphysodon discus, Uaru fernadezyepezi, and Uaru sp. "Big Blotch".

Class 9: Killifish, Mop Spawners (6 species)

- · 5 points Fundulopanchax gardneri, Aplocheilus lineatus, Aplocheilus panchax, Epiplatys dageti, Pachypanchax playfairi, Oryzias latipes (rice fish)
- 10 points Aphyosemion cognatum, Aphyosemion christyi, Aphyosemion schoutedeni, Aphyosemion fallax, Aphyosemion gulare, and Aphyosemion australe plus all mopspawning species not listed in other point groups.
- 15 points All species from the *Aphyosemion diapteron* group including *Aphyosemion abacinum*, *Aphyosemion georgiae*, *Aphyosemion cyanostictum*, and *Aphyosemion fulgen* plus All species from the genus *Procatopus*.
- · 20 points Pseudepiplatys annulatus, and Kryptolebias marmaratus*
- · Target: Lamprichthys tanganicanus
- * Kryptolebias marmoratus can be BAPed under Native Fish

Class 10 : Killifish, Soil Spawners (3 species)

- · 5 points: None
- 10 points: Fundulopanchax sjoestedti (Blue Gularis)
- 15 points: All soil-spawning species with PUBLISHED* incubation times of five months or less
- · 20 points: All soil-spawning species with PUBLISHED* incubation times of six months or more
- · Target: Terranatos dolichopterus (sabrefin killie), and Nothobranchius rachovi
- * Proof of publication should be copied and added to the BAP Form

Class 11: Catfish (4 species)

- 5 points: None10 points: None
- 15 points: Corydoras aeneus and Corydoras paleatus (including albino forms)
- · 20 points: All species not listed in other point groups. *Corydoras hastatus*, *Corydoras pygmaeus*, *Hoplosternum pectorale* (dwarf hoplo), *Ancistrus* sp. 3, "temmincki," and "dolicopterus."
- · Target: Any species from the genus *Synodontis*, any species of "plecostomus" or "suckermouth" types (not otherwise mentioned), *Dianema urostriatum*, any of the "Wood Cats".

Class 12: Sharks, Loaches, and Eels (1 species)

- 5 points: None10 points: None15 points: None
- 20 points: *Misgurnus anguillicaudatus* (dojo or weather loach), *Acanthophthalmus* sp. (kuhli type loaches). All other species not listed in Target Group
- · Target: Epalzeorhynchos bicolour (redtailed shark), Botia macracantha (clown loach), and Mastocembelus species (spiny eels)

Class 13: Marine Fish (1 Species)

5 points: None10 points: None15 points: None20 points: None

· Target: All marine fishes.

Class 14: All Other Species (2 species)

5 points: None

- · 10 points: All Badis and Dario species
- 15 points: Carassius auratus (goldfish: all varieties) and Chlamydogobius eremius (desert goby)
- · 20 points: Koi, Scats, *Mogurnda mogurnda*, all others not in other point groups
- Target: Brachygobius xanthozona (bumblebee goby), Monodactylus sebae, Pantodon buchholzi (butterfly fish), "mudskippers", and all gobies/gudgeons not listed elsewhere

Class 15: U.S. Natives (3 species: 1 livebearer + 2 egglayers)

- 5 points: *Gambusia affinis*, *Heterandria formosa*, *Poecilia latipinna* and all livebearing species native to the United States.
- · 10 points: All Cyprinodon species (pupfish), *Elassoma evergladei* (pigmy sunfish), *Jordanella floridae* (Florida flag fish), and all other egg laying species native to the United States.
- 15 points: All "sunfish" except Elassoma evergladei and all "minnows"
- · 20 points: None
- Target: All "Darters" and Sculpins

Class 16: Ornamental Invertebrates (4 species)

Class 16 is Broken into two parts, Freshwater and Saltwater. Only 4 species are needed total not 4 from each subgroup.

Class 16A: Ornamental Freshwater Invertebrates

- 5 points: All FW snails from the genera *Ampullaria*, *Vivipara*, *Campiloma*, *Pomacea* and *Marisa*.
- 10 points: All crayfish and shrimp that reproduce through direct development unless listed in other points groups.
- 15 points: All crayfish and shrimp that reproduce through primitive development and do not require saltwater for larvae developement
- · 20 points: All shrimp and crayfish that reproduce by indirect development and require saltwater for larvae development.
- · Target: All freshwater crabs, mussels, and clams.

Class 16B: Ornamental Saltwater Invertebrates

- 5 points: None.
- · 10 points: Tubeworms and mushroom anemones.
- · 15 points: All hermaphroditic shrimp with direct development. All other anemones.
- · 20 points: All crabs, lobsters, and other crustaceans not listed elsewhere.
- · Target: None.

XIII.HISTORY

Rev. 2 – Issued 6/2006. Class 16 broken into Freshwater and Saltwater subgroups.

OKAA BAP - Attachment A

Extinct In The Wild Fishes

Ameca splendens Butterfly Goodeid IUCN Species Information Red List 20 Cyprinodon alvarezi Perrito de Potosi IUCN Species Information Red List 20 Cyprinodon longidorsalis Cachorrito de Charco Palmal IUCN Species Information Red List 20

Epalzeorhynchos bicolour Redtailed Shark IUCN Species Information Red List 80

Haplochromis lividus IUCN Species Information Red List 10 Labrochromis ishmaeli IUCN Species Information Red List 10

Megupsilon aporus Cachorrito Enano de Potosi IUCN Species Information Red

List 20

Platytaeniodus degeni IUCN Species Information Red List 10 Prognathochromis perrieri IUCN Species Information Red List 20 Skiffia francesae Tiro IUCN Species Information Red List 80 Yssichromis "argens" IUCN Species Information Red List 20

Xiphophorus couchianus Monterrey Platy IUCN Species Information British Livebearer

Association 10

Zoogoneticus tequila Fish Ark; John Lyons 20

Aphyosemion elberti – N'tui IKCP Emergency Survival Plan 20

Fundulopanchax oeseri Bioko Island IKCP Emergency Survival Plan 20

Fundulopanchax robertsoni IKCP Emergency Survival Plan 20 Fundulopanchax walkeri Kutunse, GH 2/74 IKCP Emergency Survival

Plan 20

Simpsonichthys marginatus

IKCP Emergency Survival Plan 30