NOTES ON SOUTH AMERICAN CATFISHES, INCLUDING REMARKS ON VALENCIENNES AND BLEEKER TYPES IN THE LEIDEN MUSEUM

by

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With two plates

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A recent perusal of Valenciennes' accounts on the nematognathous fishes (Valenciennes in Cuvier & Valenciennes, 1839, 1840) showed that of the numerous South American species newly described or renamed, eighteen wholly or partly were based on specimens in the collection of the Rijksmuseum van Natuurlijke Historie at Leiden. It was surprising to find that most of these specimens are stated to have been sent to Leiden from Cayenne, and only a few from Surinam, for most of the pre-1839 South American catfishes in the Leiden Museum are of Surinam origin and few, if any, from Cayenne. Moreover, an examination of the collection showed that up to recently none of the specimens belonging to the pertinent species bear any indication as to a typical status.

On the whole, neglecting a few omissions and additions, the same material subsequently became the subject of a large paper by Bleeker (1864), who presumed a typical status in only one case, and of a more recent review by Van der Stigchel (1946, 1947), who also distinguished only a single Valenciennes type, though nine Bleeker types (8 species) are indicated as such.

Considering the importance of the actual types in this group, which in many respects is very intricate, and in view of the fact that I was able to locate sixteen of the eighteen types or type lots recorded by Valenciennes, it seems appropriate to provide here the available data and to point out a few of the serious errors that have somehow been introduced into the pertinent literature.

Among the eighteen species that Valenciennes newly described or named with the aid of Leiden specimens, thirteen were stated to have been based on material from Cayenne; the remaining five were understood to come from Surinam, three of which as having been collected by H. H. Dieperink (erroneously spelled Diepering or Deppering).

Quoting extensively from Holthuis (1959: 21-23), the following information about this collector may be given: "Hendrik Haagen Dieperink (born Hoornaar, province of South-Holland, 10 April 1794, died Amsterdam, 18 May 1842) was the son of a Protestant minister and became about 1816 a military apothecary in Paramaribo. Between June 1824 [1]) and April 1836 Dieperink sent at least 13 consignments of preserved and living animals to the Rijksmuseum van Natuurlijke Historie at Leiden. Extensive lists of these consignments are still preserved in the archives of the Museum". In April 1836, Dieperink returned to the Netherlands.

The detailed lists, eleven of which are still available, appear to cover most, if not all, of the material Dieperink sent to Leiden. Most of the enumerated specimens are vertebrates, and a considerable part consists of fishes indicated with latin and/or vernacular Surinam names. At first, Dieperink identified his specimens as good as possible with Linnaeus' Regnum Animale (1758?) or with Houttuyn's free version of it (1764-1765, fishes), but soon after the first rich shipments had arrived at the Leiden Museum, the Director, C. J. Temminck, provided Dieperink with the Museum's copy of Bloch's Allgemeine Naturgeschichte der Fische (1782-1795), a valuable though hardly adequate gift that only slightly improved his identifications. Still, the references to Bloch, and especially to his plates, together with the vernacular names, in several cases allow a reasonably certain identification.

It is interesting to note that all the material listed in the available inventories arrived at the Leiden Museum after Valenciennes' visit to that institution around December 1824 (Veth, 1879: 38, after a letter by Temminck in the Leiden archives), but well before the date of publication of Valenciennes' account in the volumes 14 and 15 of the Histoire Naturelle des Poissons (1839, 1840). Though there may have been earlier shipments, about which no lists were found, it seems unlikely that these would have been of comparable importance to those that arrived from May 1825 onward, as these are covered by lists numbered consecutively and starting with number one. This seems to prove that all Dieperink catfishes were sent to Paris on loan, as is confirmed by the list of a loan in the archives of the Leiden Museum dated 15 September 1827. Considering only the catfishes, this list contains the following items: "Hypostomus hirsutus n. sp. Sur.", (Hypostomus) "serratus n. sp. Sur.", "Hypostomus Schneideri", "15 espèces de pimelodus et ♀♂ individus, il n'y a plus que 3 individus d'une espèce; de plusieurs espèces un seul individu". We may observe here that the total number of species sent on loan is eighteen, exactly the number

1) However, the first list is dated 24 May 1825.

I found as newly described or named by Valenciennes after Leiden material. Also it seems interesting that Valenciennes accepted the name *Hypostomus serratus* (1840: 503), together with the locality Surinam as listed by Temminck; a second *Hypostomus* for which Valenciennes also records the correct locality Surinam, as provided by Temminck, *Hypostomus guttatus* (1840: 508) must be Temminck's *H. hirsutus,* the name evidently not having been accepted by Valenciennes; Valenciennes' third *Hypostomus* species, *H. temminckii* (1840: 514) is stated to have been "envoyé de Cayenne au Musée royal de Leyde", and must represent Temminck's *H. schneideri,* for which no locality was given on Temminck's list.

As stated before, I have not been able to locate any pre-1839 specimens of catfishes from Cayenne in the Leiden collections, at least not with any certainty. There are two specimens which appear to have been received as *Arius fissus* (RMNH 3037) from Cayenne, presented by the Paris Museum at an unknown date. As *Arius fissus* was based on only a single example (from Leiden), we may assume that these specimens were not yet available to Valenciennes before 1840; otherwise, he would certainly have recorded them. Also, if only one of the two specimens had been the holotype, we would have to assume that the two had arrived at Paris at different dates, or Valenciennes would have recorded both; and we would have to accept the unlikely circumstance that Valenciennes would have presented the single type to Leiden. Moreover, Valenciennes states about the *fissus* type that it was "aussi de Cayenne, et appartient également au Musée de Leyde" (1840: 107), implying that, as the previously described species (*Arius arenatus*), it had also been "envoyé de Cayenne au Musée royal de Leyde", without any indication of its having been sent via Paris. Considering all these circumstances , it seems clear that both examples arrived in Paris at a later date.

The same seems to apply to a Cayenne specimen of *Arius quadriscutis* (RMNH 3049), also presented by the Paris Museum at an unknown date. The Leiden type recorded by Valenciennes (1840: 113) had been "envoyé au Musée royal de Leyde ... de Cayenne", the Paris Museum not being mentioned as an intermediairy. It seems plausible to assume that this specimen too arrived in Leiden at a later date, but it may still be one of the listed types assembled by Poiteau, Leschenault & Doumerc, or Frère.

Resuming the last paragraphs, it seems clear that before 1840 no Cayenne catfishes were available in the Leiden Museum.

The final point to which attention may be drawn is the circumstance that, with only a single exception evidently caused by a typographical error, all representatives of Valenciennes' species in Dieperink's Surinam collection are specimens reasonably agreeing in size with Valenciennes' measures of

his types. It is unfortunate that here the word "reasonably" has to be used, but Valenciennes was very inaccurate in his measurements, which often seem little more than a rough estimation. If we compare the sizes of the types as given by Valenciennes (in "pouces" or "pieds") with those in the Paris type catalogue by Bertin & Estève (1950), we find that Valenciennes' "pouces" vary between 26 and 30 mm in the Ariinae (e.g., *Arius ritoides* and *A. luniscutis*) and possibly still more elsewhere. For Valenciennes' "pieds" it seems illustrative that a specimen of 400 mm (*A. pavimentus*) has been indicated as "de près d'un pied", while actually the French foot measures about 325 mm. Considering this approximative aspect of Valenciennes' measurements, and taking into account the occasional damage of the caudal fins (presumably caused at a later date), the sizes of the available Dieperink specimens show a remarkably close agreement with Valenciennes' measurements.

Considering all the facts discussed in the previous paragraphs, these seem to provide an overwhelming amount of evidence proving that Valenciennes made an error when relating nematognathous specimens from the Leiden Museum to Cayenne. Therefore, the type localities of thirteen species, as far as based on these specimens, should not be Cayenne, as stated, but Surinam, and most likely the region not far from Paramaribo.

As stated before, Bleeker reviewed approximately the same material, but only in two cases (*Pimelodus mustelinus* Valenciennes, 1840: 168, = *Heptapterus surinamensis* Bleeker, 1864: 91; *Hypostomus serratus* Valenciennes, 1840: 503, = *Pseudacanthicus serratus*, Bleeker, 1864: 15) he appears to have realized that he had at hand specimens also examined by Valenciennes. It must be more than a mere coincidence that both these species according to Valenciennes were of Surinam origin, and it seems safe to assume that Bleeker usually did not realize that he was handling the same specimens as Valenciennes because he was led astray by the erroneous locality given by Valenciennes to most of the specimens. For the same reason, Van der Stigchel was unable to find more than a single Valenciennes type (*Hypostomus serratus* Valenciennes).

Before presenting an annotated list of the Valenciennes types in the Leiden Museum, I must confess that a detailed taxonomic approach is beyond the scope of the present paper and, at the moment, beyond my powers. Several of Valenciennes' species doubtlessly should be relegated to the synonymy of forms previously described, but such a task can only be accomplished during a thorough revision based on much more material than at my disposal in the Leiden Museum collections, and would take much more time than is now available. Moreover, a part of the group, the Ariinae, is now being revised

by Dr. Taylor at Washington who, as a matter of fact, by asking some information, put me on the track of the various facts disclosed in the present paper. Consequently, the information given here primarily concerns the specimens, not the species. For descriptions of these specimens, the reader is referred to the publications covering this material by Valenciennes, Bleeker, and Van der Stigchel.

Bagrus temminckianus Valenciennes, 1839: 463

To begin a list of the present kind, this is rather an unfortunate case, the holotype of *temminckianus* not yet having been located or, more likely, being lost. According to Valenciennes, the specimen had been received by the "Musée royal des Pays Bas" (Leiden Museum) from Cayenne, while its total length is stated to have been eight "pouces" (about 216 mm). Among the specimens from tropical America that must have been available to Valenciennes, especially those collected by Dieperink, no likely specimen could be found of approximately that size [1]). As the species has been omitted both by Bleeker (1864) and by Van der Stigchel (1946, 1947), we may presume that the holotype is lost.

As has been shown in the foregoing paragraphs, and will be confirmed by the information provided elsewhere is this type list, Cayenne evidently is not the correct type locality and should be replaced by Surinam, near Paramaribo, presumably the sea around the Surinam River outlet.

Arius stricticassis Valenciennes, 1840: 58

Valenciennes states about this species that the Leiden Museum had received a specimen from Cayenne measuring eleven "pouces" (about 300 mm). This is evidently the same specimen as recorded by Bleeker (1864: 50) and by Van der Stigchel (1946, 1947: 32), collected by (or for, as he seems to have obtained many of his specimens at the fish market in Paramaribo) Dieperink, probably around the Surinam River outlet. Neither Bleeker nor Van der Stigchel appears to have suspected its typical status. According to Bleeker, the specimen measured 316 mm, which information obviously was merely copied by Van der Stigchel, the actual size being 270(327) mm, with the caudal tips hardly damaged. Though the Leiden specimen (reg. no. RMNH 3034) appears not to be the specimen that Valenciennes actually described, it must be considered syntypic, while the type locality should read Cayenne (Paris example), and Surinam, around Surinam River outlet (Leiden example).

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1) See also remarks on *Hexanematichthys hymenorrhinos* Bleeker on p. 310.

Arius phrygiatus Valenciennes, 1840: 79

This species was based on a single example stated to have been sent to the Leiden Museum from Cayenne, but no specimen with this name occurs in the Leiden collections. However, as in similar cases recorded throughout this list, we may assume that the holotype actually came from Dieperink, Surinam. Searching the Dieperink collection of catfishes, it became apparent that only the specimen subsequently described by Bleeker as *Arius dieperinki* (1864: 50) showed a sufficiently close agreement to be considered the holotype of *phrygiatus*. Moreover, it was remarkable that this specimen, apparently available to Valenciennes, had not been recorded in his accounts elsewhere. A drawback seemed at first its much larger size, 240(284) mm, Valenciennes' holotype being stated to measure only "six pouces et demi" (about 175 mm). However, the actual size of 284 mm accurately equals ten-and-a-half French inches, and it seems evident that the discrepancy in size is merely the result of a typographical error, "six et demi" having been printed instead of "dix et demi". Therefore, considering the close agreement with Valenciennes' description and the lack of any alternative example among the material available at that time, it seems well warranted to consider the crucial specimen (reg. no. RMNH 3038) to represent the holotype both of *Arius phrygiatus* Valenciennes and of *A. dieperinki* Bleeker, the type locality of both being Surinam, probably the sea around the Surinam River outlet.

The typographical error in the stated size and the erroneous locality provided by Valenciennes make it easy to understand that Bleeker (1864: 51) and Van der Stigchel (1946, 1947: 33) remained unaware of the specimen's status as holotype of *A. phrygiatus*, though Bleeker realized the close resemblance as he stated to consider his species, *A. dieperinki*, "fort-voisine de l'Arius rugispinis Val. et de l'Arius phrygiatus Val.".

Arius arenatus Valenciennes, 1840: 106

This species was based on a holotype stated to have been sent to the Leiden Museum from Cayenne, and measuring seven "pouces" (about 190 mm). In our collection only a single example named *Arius arenatus* (reg. no. RMNH 3099) is available, moreover indicated on the card index as typical, presumably by my predecessor Dr. F. P. Koumans. It has been collected in Surinam by Dieperink and closely agrees with Valenciennes' rather inadequate description, but for the fact that it measures only 134(162) mm. However, after comparing both the present specimen and the holotype of the next species (*Arius fissus*) with the concerned descriptions by Valenciennes, it became evident that this author must have interchanged the sizes of both holotypes.

The *fissus* type is recorded to measure six "pouces" (about 162 mm), but has a length of 185 mm.

The present holotype has been recorded by Bleeker (1864: 54) as *A. arenatus*, and by Van der Stigchel (1946, 1947: 37) as *A. spixii*, both times with rather inaccurate sizes (154 and 152 mm, respectively). None of these authors appears to have suspected its typical status, probably as a result of the erroneous locality provided by Valenciennes. The type locality must be Surinam, probably the sea around the Surinam River outlet.

Arius fissus Valenciennes, 1840: 107

The holotype of this species was stated to have been sent to Leiden from Cayenne, and to measure six "pouces" (about 162 mm). Among the specimens that must have been available to Valenciennes only a single example could be found labelled *Arius fissus* (reg. no. RMNH 3036). It has been collected by Dieperink in Surinam, presumably in the sea around the Surinam River outlet. The specimen appears to agree with Valenciennes' inadequate description with the exception of its length, 150(185) mm (almost seven "pouces"). The tips of the caudal fin are slightly damaged. As already explained in the discussion of the previous type (*Arius arenatus*), this discrepancy in size can be easily explained by accepting that Valenciennes interchanged the sizes given for both species, so there remains no reason to doubt that the present specimen indeed is the holotype of *Arius fissus*, the type locality accordingly becoming Surinam, sea around the Surinam River outlet.

Together with the holotype of *arenatus*, the present specimen has been recorded by Bleeker (1864: 53) and Van der Stigchel (1946, 1947: 37), without any suspicion about its typical status.

Arius quadriscutis Valenciennes. 1840: 111

In his account of this species, Valenciennes only records that the species also has been sent from Cayenne to Leiden, and no information on number or size(s) is given. Only a single example in the Leiden collections seems to have been available to Valenciennes (reg. no. RMNH 3050). It has been sent from Surinam by Dieperink and measures 266(318) mm. Though it does not seem to have been the actual subject of Valenciennes' description, it must have been one of the examples this author originally had at hand and listed with the description; it consequently must be considered one of the syntypes of the present species. In view of this, Surinam, or the sea around

the Surinam River outlet, should be considered an additional type locality, though it seems advisable to have the type locality restricted to Cayenne.

At an unknown date, the Paris Museum presented to Leiden, either as a gift or in exchange, another specimen, stated to come from Cayenne (reg. no. RMNH 3049), and measuring 228(270) mm. This may be one of the syntypes too, probably the example collected by Leschenault and Doumerc from the Mana river, as neither a specimen from that locality nor of "un pied" now seems to exist in the Paris collections (Bertin & Estève, 1950: 11, 12).

Both specimens were recorded by Bleeker (1864: 60) and Van der Stigchel (1946, 1947: 27), but the typical status was not suspected.

Pimelodus bufonius Valenciennes, 1840: 154

This species is stated to have been based on a specimen sent from Cayenne to Leiden, measuring seven "pouces" (about 190 mm). No specimen fitting the description by Valenciennes could be found in the old collections. The species has usually been referred to the genus *Pseudopimelodus*, a judgement merely based on Valenciennes' description, the type never since having been examined. As neither any examples nor even this species have been mentioned by Bleeker (1864) or Van der Stigchel (1946, 1947), we may assume that the holotype is lost.

It is interesting to note that, judging by similar cases, the type locality should be changed into Surinam, environs of Paramaribo (a region from which *Pseudopimelodus* hitherto never appears to have been recorded).

Pimelodus sebae Valenciennes, 1840: 169

Actually, this is not a new species but merely a new name for *Pimelodus quelen* Quoy & Gaimard, 1824. About the present species Valenciennes (1840: 173) states: "nous ne voyons aucun moyen de le distinguer du *pimélode Quelen*, pris à Monté-Vidéo par MM. Quoy et Gaimard", and one may wonder why most authors ever since have considered *sebae* and *quelen(i)* as different species.

Among the material listed, all of which should be considered syntypical for *sebae*, Valenciennes records the Leiden Museum to have received the species from Cayenne, omitting any information on number or size. It seems clear that Valenciennes actually refers to material sent from Surinam by Dieperink. In the Leiden collection are nine examples from that source, three of which (cf. remarks by Temminck on the invoice, see introductory paragraphs) should be considered syntypes: reg. nos. RMNH 3064, 1 ex.,

255(315) mm; RMNH 3065, 1 ex., 175(222) mm; RMNH 3066, 1 ex., 140(153) mm; RMNH 3067, 4 ex., 162(197) mm, 168(206) mm, 180(222) mm, and 228(280) mm; and RMNH 3068, 2 ex., 112(140) mm and 167(202) mm.

Some of these examples have been recorded by Bleeker (1864: 77), all by Van der Stigchel (1946, 1947: 50), without any remarks on a typical status.

Auchenipterus dentatus Valenciennes, 1840: 210

The species was based on a single specimen recorded to have been sent to Leiden from Cayenne and to measure five "pouces" (about 135 mm). Apparently, this holotype was retained by Valenciennes for the Paris collection, as it is listed by Bertin & Estève (1950: 16), with a recorded size of 140 mm. It seems evident that the stated type locality is erroneous, as the specimen must have been sent to Leiden by Dieperink from Surinam, probably from the neighbourhood of Paramaribo.

A similar specimen (reg. no. RMNH 4824) has been recorded by Bleeker (1864: 87), as *Auchenipterus dentatus*, and by Van der Stigchel (1946, 1947: 103) as *A. demerarae* Eigenmann, but as it measures 132 (158) mm (150 mm cf. Bleeker, 147 cf. Van der Stigchel), it is too large to be considered typical and to allow any doubt about the typical status of the Paris specimen.

Auchenipterus maculosus Valenciennes, 1840: 216

Valenciennes apparently based this species on two examples stated to have been sent from Cayenne to the Leiden Museum, and to measure four-and-a-half and six "pouces" (about 122 and 162 mm). According to Bertin & Estève (1950: 17), the Paris Museum appears to possess one of the syntypes, measuring 160 mm, the specimen evidently having been retained by Valenciennes. Unfortunately, among the specimens of this species (= *Trachycorystes galeatus* auct.) in the Leiden Museum which must have been available to Valenciennes, the smallest (reg. no. RMNH 3007) has a length of 145(175) mm, though it must be the same as the smallest example recorded by Bleeker (1864: 47) as measuring 160 mm, a size apparently copied by Van der Stigchel (1946, 1947: 100). This means that there are two specimens available measuring about six "pouces", but none of four-and-a-half "pouces". This seems to imply that either the smallest syntype is lost and the Leiden example not typical or, more likely as the Leiden specimen shows a remarkable agreement with Valenciennes' description, that the given measurements by that author are erroneous or at least seriously lacking

in accuracy. There is still another possibility as Valenciennes' paragraph on *Auchenipterus maculosus* seems rather ambiguous with regard to the number of syntypes. After describing the species with extensive details on the colour markings, stating "Des taches noirâtres assez grandes sont disposées sur quatre rangs tout le long de chaque côté", Valenciennes continues, apparently as an afterthought, "Un individu envoyé de Cayenne au Musée de Leyde, est long de six pouces, et a ses taches latérales sur quatre rangs". This may well imply that the Leiden example, for which he repeats the markings, is not the same example as the one on which the more extensive description was based. Otherwise, this repetition would not have had any sense. Accepting this possibility, which would mean that the small syntype has disappeared, or an error in Valenciennes' measurements, and taking into account the perfect agreement with the original description, we may provisionally accept the Leiden Museum example (RMNH 3007) as one of the syntypes. It has been sent from Surinam by Dieperink.

Auchenipterus immaculatus Valenciennes, 1840: 218

About the type of this species, Valenciennes merely states that it had been sent to Leiden from Cayenne together with the "auchéniptère tacheté", evidently meaning his "Auchéniptère a grandes taches" (*Auchenipterus maculosus*); the length is not indicated. This means that the holotype must be one of the Surinam specimens sent to Leiden by Dieperink, and afterwards referred to *Trachycorystes galeatus* (Linnaeus). Among the Dieperink material in the Leiden Museum is a specimen (reg. no. RMNH 3008) which is much lighter in colour with only a few vague lateral blotches or streaks on the body, with a more rough and pitted dorsal surface of the head, and with slight serrations along the anterior dorsal spine. This is evidently the holotype of *Auchenipterus immaculatus* Valenciennes, and the type locality must be Surinam, probably environs of Paramaribo.

The specimen has also been listed by Van der Stigchel (1946, 1947: 100), who records the size as 232 mm, while it must be the largest of the three examples described by Bleeker (1864: 47), who indicates the length as merely 198 mm! The actual size is 177(216) mm. Bleeker's description of the colour markings agrees with that given by Valenciennes: "ne montre qu'assez peu distinctement les taches noires du corps et des nageoires ...".

Hypophthalmus marginatus Valenciennes, 1840: 225

The species was based on an unknown number of specimens, partly sent from Surinam by Dieperink (erroneously spelled Deppering), measuring from one "pied" (325 mm) to thirteen or fourteen "pouces" (about 351 or

378 mm). Among the specimens preserved in spirits which must have been available to Valenciennes, none even approaches the lower size limit given by that author (see chapter on *Hypophthalmus longifilis*, usually considered identical with *H. marginatus*); on the other hand, there are also two stuffed specimens from Surinam, collected by Dieperink, which may have been examined by Valenciennes, but their lengths surpass Valenciennes' size range (reg. nos. RMNH D1932, 390(465) mm; RMNH D1933, 400(475) mm). As no Leiden specimens of this species appear to have been retained in Paris, and as the two stuffed examples must have been the only specimens in the Leiden collection available to Valenciennes, we have to accept that the stated size range by this author is incorrect or merely concerns the Paris examples, and to consider these to be syntypes of *Hypophthalmus marginatus* As stated before, uncorrect measurements are not at all an uncommon aspect of Valenciennes' descriptions: for *Arius pavimentatus* the holotype is stated to measure about one foot (1840: 97), while the specimen actually seems to have a length of 400 mm (Berlin & Estève, 1950: 29). With this large kind of "foot", the two stuffed examples would well fit within the stated size range.

The two syntypes have not been recorded by Bleeker (1864: 88) or Van der Stigchel (1946, 1947: 111). The other syntypes, from Cayenne, collected by Leschenault and Doumerc, are not listed by Bertin & Estève (1950), and may be lost. As there are reasons to doubt the current view as to the monotypic status of the genus *Hypophthalmus*, it may prove useful to have at least some of the nominal forms based on an extant type.

Hypophthalmus longifilis Valenciennes, 1840: 230

The Leiden Museum is stated to have received from Surinam several examples (types) measuring five to six "pouces" (about 135-162 mm). Three specimens could be located which must have been available to Valenciennes, a stuffed example (reg. no. RMNH D1931) measuring about 105(125) mm, and two in spirits (reg. no. RMNH 2974 & 2988) measuring 148 (?, caudal mutilated) and 150(177) mm, all of which may be considered to represent the type material of the present species. They were collected by Dieperink, presumably in the region around Paramaribo.

The two spirit specimens have also been recorded by Bleeker (1864: 89), as *Hypophthalmus longifilis*, and by Van der Stigchel (1946, 1947: 111), as *H. edentatus* Spix, both not suspecting the typical status of the specimens.

Ageneiosus brevifilis Valenciennes, 1840: 242

This species appears to have been based on only a single example, stated

to have been sent from Cayenne to the Leiden Museum, and measuring ten "pouces" (about 270 mm). In the Leiden fish collections are two examples, labelled *Pseudageneiosus brevifilis* that may have been available to Valenciennes (reg. no. RMNH 2975). Both have been collected by Dieperink in Surinam, and measure 196(230) and 240(280) mm. There can be no doubt that the larger of the two is the holotype of the present species. Apparently C. J. Temminck, Director of the Leiden Museum, retained the small specimen in Leiden, probably to prevent the risk of losing both.

The two specimens have been recorded by Bleeker (1864: 84), and by Van der Stigchel (1946, 1947: 106), both times with slightly different measurements, and without showing any suspicion of the fact that one of the specimens represents Valenciennes' holotype. Evidently, they were led astray by the erroneous type locality, Cayenne; this should be Surinam, presumably the region inland of Paramaribo.

Aspredo tibicen Valenciennes, 1840: 438

The species is correctly stated to be based on a specimen sent by Dieperink (erroneously spelled Diepering) from Surinam to Leiden, according to Valenciennes measuring eight "pouces" (about 216 mm). At that time, there appear to have been available three examples in the Leiden collections, two in spirits measuring (RMNH 3111) 197(212) mm, (RMNH 3112) 147 (?, caudal mutilated) mm, and one stuffed (RMNH D1917) measuring 290 (?, caudal mutilated) mm. It seems evident that only the specimen in reg. no. RMNH 3111 has been forwarded to Paris, and that it represents the holotype of this species.

Both the specimens in spirits have been recorded by Bleeker (1864: 99) and Van der Stigchel (1946, 1947: 11), without suspicion of the included holotype. The type locality, Surinam, may well be restricted to the region around Paramaribo.

Hypostomus serratus Valenciennes, 1840: 503

As all types listed here, the holotype of the present species has been sent from Surinam by Dieperink (not Diepering), as almost correctly stated this time by Valenciennes. The length is given as eight "pouces" (about 216 mm). In the Leiden Museum collections is only a single example that may have been available to Valenciennes (reg. no. RMNH 3125), measuring 155(208) mm. Undoubtedly it is the holotype of the species, as has been presumed by Bleeker (1864: 15), and as stated by Van der Stigchel (1946, 1947: 167).

The type locality may be restricted to the region around Paramaribo.

Hypostomus guttatus Valenciennes, 1840: 508

Valenciennes based this species on a single specimen stated to have been sent from Surinam to Leiden and to measure nine "pouces" (about 243 mm). It seems evident that the type must have been collected by Dieperink, and indeed such a specimen could be located in the fish collections of the Leiden Museum. The specimen (reg. no. RMNH 3126) has a standard length of 187 mm, while the caudal fin is mutilated. However, the standard length accurately agrees with that of the figure presented by Bleeker (1864, pl. 2 fig. 2), where the total length about agrees with the size given in that author's description (p. 11): 235 mm, stated to include the caudal fin "ex parte abrupta". Consequently, the specimen at hand must have closely fitted the size recorded by Valenciennes, and there is no doubt that it actually represents the holotype of the present species.

This example has also been recorded by Van der Stigchel (1946, 1947: 155), as a female measuring 211 mm, a size about in agreement with the specimen in the present mutilated condition. The type status was not suspected.

The type locality may be restricted to the region near Paramaribo.

Hypostomus temminckii Valenciennes, 1840: 514

The species was based on a specimen sent on loan to Paris by C. J. Temminck; it had been sent to Leiden from Surinam, evidently (though this is not stated by Valenciennes) by Dieperink, the size being four "pouces" (about 108 mm). There is only one specimen in the Leiden Museum collections accurately fitting the given size and in close agreement with Valenciennes' description. The specimen (reg. no. RMNH 3123) measures 83(102) mm, but has both the caudal lobes mutilated. It is evidently the holotype of Valenciennes' species, of which the type locality may well be restricted to the region near Paramaribo.

The specimen has also been discussed by Bleeker (1864: 12), in his remarks on the present species; his actual description was based on another, considerably larger example (reg no. RMNH 3123, 113(151) mm), after which also his figure (pl. 1 fig. 3) was made. Both these specimens were recorded by Van der Stigchel (1946, 1947: 164). Neither Bleeker nor Van der Stigchel appears to have suspected the typical status of the smaller example.

Additional remarks

Valenciennes (1839: 454) states that there were in the Leiden Museum examples of *Bagrus herzbergii* from Cayenne. Actually, there never have

been any Cayenne specimens of this species in the Leiden collections available to Valenciennes, only two specimens from Surinam collected by Dieperink.

In his discussion of *Pimelodus mustelinus* (1840: 168), Valenciennes also records a specimen presumed to represent that species, sent by Dieperink from Surinam to Leiden. Bleeker (1864: 91) understood to have at hand the example recorded by Valenciennes, but made it the holotype of his *Heptapterus surinamensis*. As such, it has also been recorded by Van der Stigchel (1946, 1947: 41).

II

The search for Bleeker types of South American catfishes in the Leiden Museum collections proved to be less troublesome, and to provide less reason for doubt, than the detection of the Valenciennes types listed above. Evidently, this was principally the fortunate result of the much more detailed and accurate descriptions that Bleeker provided for his new species.

During the period 1858 to 1864, Bleeker wrote six publications wholly or partly devoted to the present subject, but several of these merely contain more or less verbal repetitions of previous publications, while a number of his new species actually were replacement names for previously known species only. The apparent reason for Bleeker's renaming of these species seems to have been his inclination to avoid tautonymy, resulting from his habit to adopt the original specific names for his newly established genera. However, as Bleeker himself states to have prepared his various reviews of the group after having examined actual specimens ("ayant pu étudier les représentants africains et américains de l'ordre", Bleeker, 1862b: 1), and as he is known to have repeatedly consulted such material from the Leiden Museum, either in Leiden or on loan, even for the merely renamed species such specimens, together with the original type material, at least technically may be considered typical. For completeness' sake, these cases are added here, together with those where apparently no Leiden material was examined.

In the following enumeration, the species are discussed in chronological order.

Davalla schomburgkii Bleeker, 1858: 64

The new name *schomburgkii* was proposed by Bleeker for *Hypothalmus dawalla* Schomburgk (apparently without exception quoted in literature as *Hypophthalmus dawalla*, which must be a correct interpretation), to prevent the tautonymy resulting from his proposal of the new generic name *Davalla*. Bleeker incorrectly spelled the original specific name as *davalla*. The species is presently considered identical with *Ageneiosus brevifilis* Valenciennes, a

species that Bleeker listed separately in his 1858 monograph (p. 245). As Bleeker prepared this paper in the East Indies, two Dieperink specimens from Surinam (see the first part of the present paper, *Ageneiosus brevifilis* Valenciennes, 1840: 242) subsequently (1864: 83) described by Bleeker as *brevifilis*, evidently were not examined by Bleeker for his proposal of *Davalla schomburgkii*, and only the original Schomburgk material may be considered typical, both of *Hypothalmus davalla* and of ***Davalla schomburgkii.***

Genidens valenciennesi Bleeker, 1858: 68

This case is similar to the previous one, the name *valenciennesi* being proposed for the species *Bagrus genidens* Valenciennes for the same reason. As at that time Bleeker still lived in the East Indies, only the specimens described by Valenciennes may be considered typical, both of *Bagrus genidens* and of *Genidens valenciennesi* (see Bertin & Estève, 1950: 10).

The name *Genidens valenciennesi* appears to have been overlooked by most authors on the present subject, e.g. Eigenmann & Eigenmann, 1890: 38, Gosline, 1945: 7, and Van der Stigchel, 1946, 1947: 22.

Zungaro humboldtii Bleeker, 1858: 207

The specific name *humboldtii* is only a replacement name for *Pimelodus zungaro* Humboldt, 1833, proposed to prevent the tautonymy resulting from Bleeker's introduction of the new generic name *Zungaro* for this species. As at that time Bleeker lived in the East Indies, only Humboldt's material may be considered typical of both *Pimelodus zungaro* and *Zungaro humboldtii.*

Bleeker repeated the use of his new name in two subsequent papers (1862b: 11; 1863 b: 101).

Rhamdia schomburgkii Bleeker, 1858: 208

This is a replacement name for *Pimelodus maculatus* Schomburgk, 1841, a name preoccupied by *Pimelodus maculatus* Lacépède, 1804, which Bleeker considered to represent a different species. This view was shared by Eigenmann & Eigenmann (1890: 122), and Gosline (1945: 36), but not by Eigenmann (1912: 172, 173), to give a few examples.

Only the Schomburgk example(s) may be considered typical of the present species, the name having been proposed during the period Bleeker lived in the East Indies.

Rhamdia laukidi Bleeker, 1858: 208

This name was proposed for the species that Schomburgk (1841: 176) described with only the Arawak name "Laukidi". Schomburgk's species has

been considered composite (including also *Genidens genidens* (Valenciennes)), but as Bleeker refers his species to *Rhamdia*, we may assume that he left the *Genidens* part out of consideration. Again, only Schomburgk's material may be considered typical of *Rhamdia laukidi*.

Bunocephalichthys gronovii Bleeker, 1858: 329

For unknown reason, this species has hitherto been referred to as *Bunocephalus gronovii* (Günther, 1864: 266; Eigenmann & Eigenmann, 1890: 17; Van der Stigchel, 1946, 1947: 16). Bleeker's original "description" merely consists of a reference to Gronovius (1756: 5, pl. 5 fig. 3), quite sufficient to validate the species, but unfortunately Gronovius' material appears to have been lost (Wheeler, 1958), while Bleeker, at the time still in the East Indies, obviously did not examine any specimens. Therefore, no type seems available for this species.

Platystacus nematophorus Bleeker, 1862a: 371

This species was based on a single example in the Leiden collections, from Surinam, measuring 177 mm total length. The specimen (reg. no. RMNH 3105, 162(176) mm), collected by Dieperink, is still in the Leiden Museum collection. It has already been recorded as the holotype by Van der Stigchel (1946, 1947: 14). Bleeker repeated the description of this species in a subsequent paper (1864: 96), and the original record has generally been overlooked.

Parahemiodon typus Bleeker, 1862a: 373

The specimen on which Bleeker based this species is still in the Leiden Museum collections (reg. no. RMNH 3121). It has been recorded as the holotype by Van der Stigchel (1946, 1947: 173), but with the erroneous standard length of 195 mm, the actual size being in complete agreement with Bleeker's measurement: 175 mm; the two caudal lobes are damaged, so Van der Stigchel can not have meant the total length, as he frequently does throughout his paper.

The specimen is indicated to have been collected in Surinam, but there are no accurate data available on its origin: it formed part of an old cabinet, one of the original sources of the Leiden Museum collections, and may have come from the Cabinet of the Stadholder or even from Seba's Cabinet, as the size accurately agrees with Seba's plate 29 fig. 14 (1759).

The species also occurs in subsequent Bleeker papers (1862b: 3, 1863b: 80), and has been extensively described and figured in Bleeker's final review of the Surinam catfishes (1864: 20, pl. 6 fig. 1, pl. 13 fig. 1).

Arius dieperinki Bleeker, 1862a: 375

Bleeker states to have based this species on a single example in the Leiden Museum, from Surinam, measuring 271 mm. The holotype (reg no. RMNH 3038) actually measures 240(284) mm, though Van der Stigchel (1946, 1947: 33), who records the specimen as the type of *dieperinki*, states it to measure only 227 mm in standard length, agreeing with a total length of exactly 271 mm. It seems evident that the slight discrepancies in these measurements merely reflect a different degree of stretching of the curved specimen.

As has been stated already in the first part of this paper, the same specimen seems to have been the type of Valenciennes' *Arius phrygiatus*, a fact that Bleeker did not notice, probably because he did not realize that Valenciennes' Cayenne specimens from the Leiden Museum actually came from Dieperink, Surinam. Moreover, probably the result of a typographical error, Valenciennes recorded an erroneous size.

Bleeker subsequently (1864: 50, pls. 10, 12 fig. 3) published an almost verbal replica of the original description together with a few illustrations, which has usually been understood to be the original version.

Hexanematichthys hymenorrhinos Bleeker, 1862a: 377

The single specimen on which this species was based, stated to have come from Guatemala and to measure 212 mm, is still in the Leiden Museum (reg. no. RMNH 3056) and has already been recorded as the holotype by Van der Stigchel (1946, 1947: 28). Van der Stigchel seems to have copied Bleeker's measurement, the specimen actually having a length of 171(215) mm. Adding a few figures, Bleeker had the original description almost verbally reprinted in 1864 (p. 57, pls. 11 fig. 2, 13 fig. 4).

A difficult problem appears to be the correct locality of the present species. If we accept the usual allocation of Bleeker's species to *Selenaspis* (or *Sciadeichthys*) *herzbergii* (Bloch), its distributional range is apparently restricted to the coastal areas of eastern and northern South America, reaching westward not or hardly beyond Venezuela. Therefore, we may assume that Guatemala is not the correct type locality. The present type specimen was bought by the Leiden Museum from a certain Mr. Deby, about whom little more is known than that around 1852 he had his domicile in Santo Tomás, Guatemala, near Puerto Barrios on the shore of the Bahía de Amatique (Gulf of Honduras), and that he collected the specimen in October of that year. He may well have been a trader and, as a consequence, may have travelled around in tropical Middle and South America. However

this may be, the Leiden Museum archives contain a letter of October 14, 1852, from James W. Deal, custom house agent and ship broker at Southampton, stating that the specimens bought from Mr. Deby had been shipped from "Parana". Unfortunately, I am unable to find any commercial harbour of that name in the distributional area of the species [1]); it seems unlikely that Mr. Deal used the name of an inland locality, a state, or a river (in Brazil) for his bill of freight, and the most acceptable suggestion to be made seems to hint at the possibility that Mr. Deal made an error and that Paramaribo was meant. This also would agree with Jordan & Evermann's (1896: 125) indication of Surinam as the type locality, a statement for which no grounds are offered.

Considering the various circumstances, it seems advisable to accept the sea near Surinam as the type locality.

The present holotype is the only specimen at that time available which accurately agrees with the measurement given by Valenciennes for his *Bagrus temminckianus*, but it probably is not the missing type of that species as it shows several differences in comparison with the original description.

Hexanematichthys surinamensis Bleeker, 1862a: 380

The species was based on a single Surinam specimen in the Leiden collection measuring 268 mm. Actually, the holotype (reg. no. RMNH 3055) measures 216(272) mm; it has been collected in Surinam by H. H. Dieperink and has already been recorded as the holotype by Van der Stigchel (1946, 1947: 35). With a few figures added, the original description has almost verbally again been printed in 1864 (p. 55, pls. 6 fig. 2, 12 fig. 1); erroneously, this verson has often been considered original.

Netuma dubia Bleeker, 1862a: 382

The two syntypes, stated to have come from Surinam and measuring 131 and 171 mm, still are in the Leiden collections (reg. nos. RMNH 3051, 3052); they have been collected by Dieperink, presumably not far from the Surinam River outlet. Both have been recorded as typical by Van der Stigchel (1946, 1947: 28), who indicated the larger example as holo (= lecto) type (RMNH 3051) and apparently quoted Bleeker's measurements. Bleeker

1) The well-known harbour Paraná, capital of the province Entre Rios, Argentine, does not appear to provide an acceptable interpretation: the southernmost limit of the distributional area of *herzbergii* evidently being situated around São Paulo province, Brazil (cf. Fowler, 1951: 446), at a distance of approximately 1650 km from Paraná, and in the neighbourhood of several much more plausible facilities for dispatch. The species is not known to occur in Argentine (Ringuelet et al., 1967).

(1864: 63, pls. 13 fig. 5, 15 fig. 2) subsequently re-issued his description, adding illustrations. The types measure 103(133) and 140(175) mm.

A stuffed specimen (RMNH D2140, 265(320) mm) evidently was not examined by Bleeker.

Heptapterus surinamensis Bleeker, 1862a: 397

The holotype is stated to be of Surinam origin, measuring 112 mm standard length, and to be in the Leiden Museum collection. The type specimen (reg no. RMNH 2984, standard length 111 mm, caudal fin mutilated) has since been referred to by Van der Stigchel (1946, 1947: 41), by Boeseman (1953: 5), and by Mees (1967: 226), while Bleeker himself repeated his description, adding a figure, in 1864 (p. 91, pl. 15 fig. 1). The specimen was collected by Dieperink, probably not far from Paramaribo.

Plecostomus brasiliensis Bleeker, 1862b: 2

This is one of the cases where Bleeker, for the sake of priority, went back to a pre-Linnean name, by Willoughby (1686). As he appears to have been the first to use the name after 1758, this may stand as a Bleeker species, while the specimens that were available to Bleeker may be considered typical.

The present species has been extensively discussed by Boeseman (1968: 37 et seq.), who listed the probable types and indicated a specimen from Surinam collected by Dieperink (reg. no. RMNH 3102) as lectotype.

Bleeker used the name *Plecostomus brasiliensis* also in some subsequent papers (1863b: 78; 1864: 7).

Loricaria dura Bleeker, 1862b: 3

Bleeker adopted Linnaeus' specific name *dura*, published in 1754, to replace the name *cataphracta* Linnaeus, 1758, which since its proposal had been in general use, because (as he stated in a later paper, 1864: 19) "Linné avait déjà donné à cette espèce le nom spécifique de "dura", avant qu'il la nomma "cataphracta", et c'est donc la première dénomination qui devra rester". As Bleeker appears to have been the first author since 1758 to apply the name *dura*, he should be considered its author, while all the specimens Bleeker has had at hand technically become typical.

Bleeker subsequently twice used the same name (1863b: 80; 1864: 18), the second time adding an extensive description and some remarks making it clear that he examined six examples from Surinam and Mexico in the Leiden Museum, measuring 115-325 mm. In the Leiden Museum collections are only four examples still bearing the name *dura* on the old label, which are the only specimens that were available at the time Bleeker consulted the collection, neglecting three stuffed examples (reg. nos. RMNH D1914, D1915,

D1916) which are far too big to be considered typical. All these were collected in Surinam by Dieperink, but no "Mexican" example(s) could be found. The only two specimens of *Loricaria* stated to have come from Mexico have always correctly been allocated to *L. maculata* (see Van der Stigchel, 1946, 1947: 173) and can not be expected to have been mixed with the specimens of *dura*, considering the distinct differences between the two species.

Consequently, only four syntypes appear to exist in the Leiden collection, all with the caudal fin mutilated (reg. nos. RMNH 3113, 3114 (2 ex.), 3116; standard lengths 134, 103 & 125, 303 mm, respectively. The type locality is Surinam, probably not far from Paramaribo. Moreover, Linnaeus' original material of *cataphracta*, from undefined locality, should be considered typical for the present species.

Hemiloricaria caracassensis Bleeker, 1862b: 3

About this species Bleeker only provided the following information:

"*Hemiloricaria* Blkr.

Velum labiale vix fimbriatum postice latum, antice angustum. Dentes utraque maxilla conspicui. Cristae occipitales vel nuchales dentatae nullae. Scuta trunco carina dentata. Regio subthoracico-analis scutata. Pinna dorsalis supra ventrales incipiens. Spec. typ. *Hemiloricaria caracassensis* Blkr sp. nov. in Mus. L.B. sub nom. "Loricaria ... (Caracas)" conserv."

It seems easy to understand that few later authors dared to interpret this very inadequate description or, at most, restricted themselves to merely list it without any commentary, though it remains remarkable that none ever attempted to examine the holotype, even though it was distinctly stated in the original description to be in the Leiden Museum collections. The only exception to the rule was Van der Stigchel (1946, 1947: 177) who, in the course of his review of the South American catfishes in the Leiden and Amsterdam Museums, came to the conclusion that it was identical with *Loricaria lima* Kner. I am not acquainted with any subsequent author accepting this opinion, but I presume that the mere fact that *Loricaria lima* is only known to occur in SE Brazil may have been sufficient to cast serious doubt on this allocation.

The holotype (reg. no. RMNH 3120, plate 1), presented to the Leiden Museum by R. F. van Lansberge in 1843, still is in a rather good condition, with only the dentition of the upper jaw partly damaged and the tips of the caudal fin mutilated. Judging by the available information, the specimen has been sent from Caracas, Venezuela, and all keys covering the Loricariid species of NW South America that I consulted (Regan, 1904; Eigenmann, 1922; Schultz, 1944; Miles, 1947) proved to lead to *Loricaria magdalenae*

Steindachner, 1878. The agreement with the original description by Steindachner (1878: 74), with the exception of a few male sexual characters, and with that author's figure of the species (1879, pl. 7 fig. 3), was found to be remarkably close. A verification of this result by direct comparison with one of the female syntypes of *magdalenae* (plate 2), kindly put at my disposal by Dr. Kähsbauer at Vienna, definitely confirmed the conspecifity of *caracassensis* Bleeker and *magdalenae* Steindachner. The principal counts and (relative) measurements of the available types of both nominate species are listed in the following table, together with those of an additional specimen received from Dr. Géry (see p. 314).

TABLE 1

Comparative data on the holotype of *Loricaria caracassensis* Bleeker, a syntype of *Loricaria magdalenae* Steindachner [1]) and an Orinoco basin example

	RMNH 3120	Vienna Mus. P. 45800	ex. Géry
standard length	74.6 (mm)	107.0 (mm)	84.8 (mm)
head length [2])	15.7 [4.75]	21.5 [5.0]	16.8 [5.1]
head width	11.4 (1.4)	14.7 (1.45)	13.0 (1.3)
head depth	6.2 (2.55)	9.3 (2.3)	7.5 (2.25)
pre-D length	23.4 [3.2]	34.3 [3.15]	26.2 [3.2]
pre-A length	31.7 [2.35]	45.8 [2.35]	35.9 [2.35]
post-A length	39.0 [1.9]	56.5 [1.9]	46.0 [1.85]
max. depth	7.6 [9.55]	10.6 [10.0]	9.2 [9.0]
min. depth ped.	1.0 (15.5)	1.4 (15.5)	1.1 (15.5)
eye diam. (vert.) [3])	2.2 (7.1)	2.9 (7.4)	2.4 (7.0)
int. orb. width	4.5 (3.5)	5.0 (4.3)	4.8 (3.5)
snout length	7.9 (2.0)	9.5 (2.25)	8.4 (2.0)
length D sp.	18.7 (0.85)	23.4 (0.9)	19.6 (0.85)
length P sp.	13.4 (1.15)	17.6 (1.2)	14.7 (1.15)
length 1st V ray	12.6 (1.25)	17.0 (1.25)	14.1 (1.2)
length 1st A ray	14.2 (1.1)	17.7 (1.2)	16.1 (1.05)
teeth upper jaws	7 or 8-?	8-9	7-7
teeth lower jaws	8-8	8-8	8-8
lateral scutes	15 + 15 - 15 + 15	15 + 16 - 15 + 16	14 + 15 - 14 + 15

1) The measurements (in mm) are taken as described in my previous paper dealing with the Loricariids (Boeseman, 1971: 18, 19). Ratios are added, in comparison with standard length (between square brackets), and in comparison with head length (between curved brackets).

2) The head length measured to the posterior rim of the temporal plate, as occasionally given in literature, is exactly or almost equal to that measured to the posterior margin of the occipital, as given here.

3) Accurate measurement of the horizontal diameter is impossible on account of the wide orbital notch; approximately, the maximum diameters are 25 (6.2) and 33 (6.5) mm, respectively, for the Leiden and Vienna specimens.

The following additional information on the holotype of *L. caracassensis* may be given. The upper lip is narrow, with the margin fringed except along a short median part, with a transverse series of small papillae just before the gums, apparently also interrupted at the centre. The dorsum in front of the dorsal fin is hardly keeled and only moderately spinose, far less than in *L. lima* Kner. At the anterior margin of the snout is a narrow transverse naked zone. There are three plates across the belly, regularly arranged except anteriorly, where the number considerably increases. The body width at the origin of the anal fin is comprised almost 5 times in the post-A length, against approximately 4 times in *L. lima*. The specimen is evidently a female. Further data may be taken from the accompanying plate.

Reconsidering the evidence as presented above, it seems beyond doubt that *L. caracassensis* Bleeker is identical with *L. magdalenae* Steindachner. As Bleeker's name has priority, *L. caracassensis* should replace the current name *L. magdalenae*. The species appears to be very close to *L. brunnea* Hancock, the separate status of which should be verified.

Another problem is the type locality of *L. caracassensis*. The holotype is stated to have been sent from Caracas, as indicated on the label, and this has hitherto been interpreted as meaning that it has been collected near that locality. In fact, Caracas has merely been the port from where a collection of fishes has been shipped to the Leiden Museum by Mr. Van Lansberge.

Reinhart Frans van Lansberge (born at Olst, Netherlands, March 6, 1804; died at The Hague, June 13, 1873) was appointed vice-consul at Santa Fé de Bogotá about 1825, subsequently (at an unknown date but evidently before 1843, the year of the shipment) becoming consul general of Ecuador, New Grenada (= Colombia) and Venezuela. It may be surmised that, considering his position, he travelled around quite a lot in NW South America, and it must remain uncertain where and when he obtained the present specimen. Van Lansberge left the South American continent in 1856, to become governor of Curaçao, then from 1859 to 1867 governor of Surinam, after which he returned to the Netherlands.

As *L. magdalenae*, the species has hitherto been recorded from the lower Rio Magdalena and the Rio Atrato, both in Colombia (Eigenmann, 1922), and from small streams around the Lago de Maracaibo, in Venezuela (Schultz, 1944), but I have been unable to locate any record from the Orinoco basin. However, among a small collection of South American catfishes kindly put at my disposal by Dr. J. Géry (Saint-Cyprien, France), I found an evidently conspecific specimen (see table) collected in the upper Rio Meta (a tributary of the Orinoco), at approximately 30 mi. SE of Villavicencio, central Colombia (coll. R. Socolof, December 1963), which seems to present

sufficient proof that the species must have crossed the divide between the Rio Magdalena and the Rio Meta, possibly in the area around Bogotá and the nearby Villavicencio. See map by Eigenmann (1922: 220).

Considering the circumstance that Van Lansberge evidently did not collect his specimen in the neighbourhood of Caracas, since the species never has been recorded from farther east than the Maracaibo region, and that, during the prosecution of his function, he almost certainly paid several visits to Bogotá, at the time already a very important centre, and which moreover had been his previous station as a vice-consul, it seems warranted to provisionally consider the region around Bogotá and Villavicencio to be the type locality, as the species in now known to occur there.

Bleeker re-issued his diagnosis in one of his subsequent papers (1863b: 81).

Callichthys tamoata Bleeker, 1862b: 4

Bleeker appears to have been the first author since 1758 to use again this old name, given to the species by Linnaeus in 1754. Though Bleeker must have seen specimens of this species in the Leiden Museum collection, it apparently has no sense to indicate these (listed by Van der Stigchel, 1946, 1947: 120) as syntypes, as the species (= *Callichthys callichthys* (Linnaeus)) poses no problems.

Bleeker repeated the use of the specific name *tamoata* in two subsequent papers (1863b: 82; 1864: 22).

Oxydoras kneri Bleeker, 1862b: 5

This again is only a replacement name, for *Doras niger* Kner, 1855, correctly considered to differ from *Doras niger* Valenciennes, 1817(?), and thereby standing as a good species. Bleeker repeated the use of this name in subsequent papers (1863a: 14; 1863b: 85), but nowhere actually states to have seen a specimen. As apparently there were at that time no specimens of the present species available in the Leiden Museum collection, only the specimen(s) described by Kner may be regarded as typical for *Oxydoras kneri*. Presumably, the type material is in the Vienna Museum.

Trachycorystes typus Bleeker, 1862b: 6

A replacement name for *Auchenipterus trachycorystes* Valenciennes, 1840, proposed to prevent tautonymy. The same name was also used by Bleeker in a subsequent paper (1863b: 88). As the Leiden Museum does not possess, and apparently never did possess, any specimens of this species, only the material that Valenciennes had at hand may be considered typical, and should be looked for in the Paris Museum (Bertin & Estève, 1950: 17).

Pinirampus typus Bleeker, 1862b: 11

This is a case completely similar to the previous one, the introduction of a new specific name for *Pimelodus pinirampu* Spix, 1829, to prevent tautonymy caused by Bleeker's proposal of the new generic name *Pinirampus* for the present species. As during the period of his visits there was no material of this species available in the collection of the Leiden Museum, only the original material described by Spix may be considered typical, both of *Pimelodus pinirampu* and of *Pinirampus typus*.

Bleeker used the same name in one of his subsequent papers (1863b: 100).

Amblydoras truncatus Bleeker, 1863a: 18

This species has been described after a single specimen in the Leiden Museum collections (reg. no. RMNH 2973, Rio Guaporé, Natterer coll.), and was considered different from the species *affinis* Kner, 1855, and *weddelli* Castelnau, 1855. The holotype, which measures 65(83) mm, has been recorded as typical by Van der Stigchel (1946, 1947: 85); it has apparently been received, as a gift or by exchange, from the Vienna Museum and, as already suggested by Van der Stigchel, may well represent one of the syntypes of *Doras affinis* Kner, a possibility evidently overlooked by Bleeker.

Pseudorhamdia macronema Bleeker, 1864: 79

This species is stated to have been based on four examples from Surinam measuring 106-236 mm total length. In a previous paper (Bleeker, 1862a: 384), the same specimens were described as *Pseudorhamdia ascita* (Gronovius (Gray)), but in 1864 Bleeker does not refer to his earlier description. Of the four specimens, the smallest was stated to belong to the Amsterdam Museum collection, leaving three syntypes in the Leiden Museum. However, the Leiden Museum has in its fish collections four specimens in spirits, all named *Pseudorhamdia macronema* on the old labels, measuring 182 (ca. 230, estimated, the caudal fin being mutilated) mm (RMNH 3069), 127(158) mm (RMNH 3070), 150(190) mm (RMNH 3071), and 98(122) mm (RMNH 3072), besides two stuffed examples (RMNH D1912, 215(265) mm; RMNH D2411, 250(300) mm) both too large to be considered typical. Unless Bleeker made an error in his number of specimens, only three of the four specimens in spirits may represent syntypes of the present species.

Considering the fact that the largest (RMNH 3069) closely agrees with the upper size limit given by Bleeker, there can be no doubt about its typical status. One of the further specimens (RMNH 3070) has the head laterally

cut open, a frequent aspect of Bleeker types, and therefore leaves little doubt about its typical status too. Of the two remaining examples (RMNH 3071, 3072), at least one must be a syntype, but it is impossible to decide which one. All these examples were collected by Dieperink in Surinam, presumably not very far from Paramaribo. The largest type (reg. no. RMNH 3069) is hereby selected as lectotype.

The same specimens have been listed by Van der Stigchel (1946, 1947: 61), who evidently remained unaware of their typical status. Moreover, they have been considered to represent types of *Pimelodus blochii* Valenciennes, but this is evidently incorrect as Valenciennes' description (1840: 188) does not provide even the slightest indication about his examination of Leiden examples.

Ageneiosus valenciennesi Bleeker, 1864: 82

This new name, hidden among extensive remarks on *Ageneiosus militaris* (Bloch), was proposed by Bleeker to replace *Ageneiosus militaris* Valenciennes, regarded as not conspecific with Bloch's species. Considering these remarks, it seems clear that Bleeker founded his opinion only on a single stuffed example in the Leiden Museum (RMNH D1900, Brazil, from the Vienna Museum) of what he believed to represent *Ageneiosus militaris* (Bloch), and on the description and figure provided by Valenciennes for his "*militaris*" (1847: 7, pl. 4 fig. 1); or actually on the figure only as Valenciennes' "description" merely consists of the name and a few references. Therefore, only the material that Valenciennes had at hand may be considered typical of *Ageneiosus valenciennesi*.

Aspredo batrachus Bleeker, 1864: 93

For this species Bleeker was the first to use again the name that Linnaeus had proposed in 1754, thereby stretching priority beyond the customary limits. This unwarranted action by such an eminent and experienced ichthyologist as Bleeker led his colleague Günther (Records for 1864: 169) to declare (on a similar case): "Hence it appears that Dr. Bleeker goes back to the seventeenth century for the regeneration of our nomenclature". Nevertheless, on several occasions, e.g., in his Catalogue chapter on the present species (1864: 208), Günther committed the same sin!

It goes without saying that in the present case only the material described by Linnaeus should be considered typical. Bleeker must have seen several Dieperink specimens from Surinam in the Leiden Museum, but in the present case, the species (*Aspredo aspredo* (Linnaeus)) apparently being well defined, there seems to be no sense in indicating the Leiden specimens (listed

by Van der Stigchel, 1946, 1947: 12) as syntypic, even if the Linnaeus examples are now lost.

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Plate 1

Loricaria caracassensis Bleeker. The holotype (RMNH 3120, standard length 74.6 mm) in dorsal, lateral, and ventral view.

Plate 2

Loricaria magdalenae Steindachner. A syntype (Vienna Mus. P. 45800, standard length 107.0 mm) in dorsal, lateral, and ventral view.