

NOTE ON THE "ANALYSE DE LA NATURE" OF RAFINESQUE.

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One of the least known of the many publications of Rafinesque is that bearing the following title: "Analyse de la Nature, ou Tableau de l'Univers et des Corps Organisés. Par C. S. Rafinesque, Palerme, 1815."

This work consists of an elaborate scheme of classification, with definitions of families and higher groups, together with a mention of the genera included under each group. In the part which treats of fishes a very large number of generic names not previously used are introduced. None of these are defined in any way, nor is a typical species indicated. Some forty of them, however, are substitute names, intended to be used in place of older names, which were considered by Rafinesque as objectionable. In the severe code which he seems to have adopted, generic names too short, as *Naso*, *Raia*, are regarded as objectionable and subject to change. The same is true of names too long, as *Cephalacanthus*, *Cyprinodon*. Compound names, as *Serrasalmo* and *Scomberesox*, are ruled out, as are also all generic names formed by adding "*omorus*" or "*oides*" to the name of some older genus.

These substitute names of Rafinesque must be regarded as having the same typical species as the generic names they were intended to replace. In case the original name is really ineligible, these Rafinesquian names must be considered. The other generic names mentioned, those intended by Rafinesque to refer to new genera, are of course valueless as accompanied by no sort of definition or explanation.

The following is a list of the substitute names:

Substitute name.	Page.	Original name.
Batrichtus	82	Batrachoides Lacépède.
Dactyleptus	83	Muranoides Lacépède.
Nasonus	83	Naso Lacépède.
Alectis	84	Gallus Lac. (preoccupied in birds).
Polipturus	84	Scomberomorus Lac.
Oreynus	84	Scombroides Lac.
Panotus	85	Tanianotus Lac.
Cephalacandia	85	Cephalacanthus Lac.
Epipththalmus	86	Gobiomoroides Lac.
Megaphalus	86	Gobies-ox Lac.
Equietus	86	Eques Bloch.
Micropodus	86	Cheilio Lac.
Branchiostegus	86	Coryphenoides Gunner.
Plecopodus	87	Gobioides Lac.
Percis (Scopoli)	87	Aspidophoroides Lac.
Ayula	87	Coris Lac.
Clodactylus	87	Cheilodactylus Lac.
Gasterodon	88	Serrasalmo Lac.
Buronus	88	Buro Lac.
Myxonum	88	Mugiloides Lac.
Trichonotus	88	Mugilomorus Lac.
Sayris	88	Scomberesox Lac.
Thrissa	88	Clupanodon Lac.
Prinedon	88	Cyprinodon Lac.
Ramphistoma	89	Belone (Cuvier, 1817).
Orbidus	90	Les Sphaeroides Lac.

Substitute name.	Page.	Original name.
Oonidus	90	Les Ovoides Lac.
Ictiopogon	90	Bostrychus Lac.
Pterops	90	Bostrychoides Lac.
Lophidius	92	Lophius L.
Branderius	93	Cæcilia Lac.
Anopsus	93	Muraenoblenna Lac.
Gymnopsis	93	Gymnomuraena Lac.
Platopterus	93	Raia L.
Podoleptus	Leptopus Raf. (preoccupied in insects).
Megaderus	Echidna Forster.

Of these names only the following seem to deserve any notice :

ORCYNUS Rafinesque 1815, is prior to *Orcynus* Cuvier 1817. If Rafinesque's names are to be considered, the genus of Tunnies must receive a new name, as *Thynnus* Cuvier is also preoccupied. The name "*Oryenus* (Gill)" Cooper, originally a mere misprint for *Orcynus*, should apparently not be considered.

Dr. Cooper says (Proc. Cal. Ac. Sci., 1863, 77): "These [Tunnies], however, are evidently of a different genus [from *Orcynus alalonga*], and as *Thynnus* is preoccupied in insects, the name *Oryenus*, applied by Gill to the same type, may perhaps be retained, although founded on a mistake."

ALECTIS Rafinesque is prior to *Gallichthys* and *Blepharis* and may be used for the genus or subgenus of *Carangidae*, to which these names have been applied.

AMIATUS Rafinesque. If the generic names of Gronow, 1763, post-Linnæus but non-binomial are to be adopted, the name *Amia* Gronow must take the place of *Apogon* Lacépède. The generic name *Amia* Linnæus (1766) is of later date. If *Amia* Gronow be regarded as eligible, then *Amiatus* must take the place of *Amia* Linnæus. The generic names of Gronow seem to form a case parallel with some early genera of Birds, now generally admitted by American ornithologists. There are some serious objections to admitting the genera of any non-binomial authors, and confusion would certainly be avoided in ichthyology by ruling them all out.

ORBIDUS Rafinesque must supersede *Sphæroides* "Pilot" for the genus of Tetrodons common on our coast. Its typical species should stand as *Orbidus spengleri*. Lacépède gave to this genus only the French name "*Les Sphéroides*," and the Latin form *Sphæroides* was not applied until 1831. (See Jordan & Edwards, Proc. U. S. Nat. Mus., 1886, 232.)

I am indebted to Mr. Samuel Garman, of the Museum of Comparative Zoology, for the privilege of examining a copy of this rare work.

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