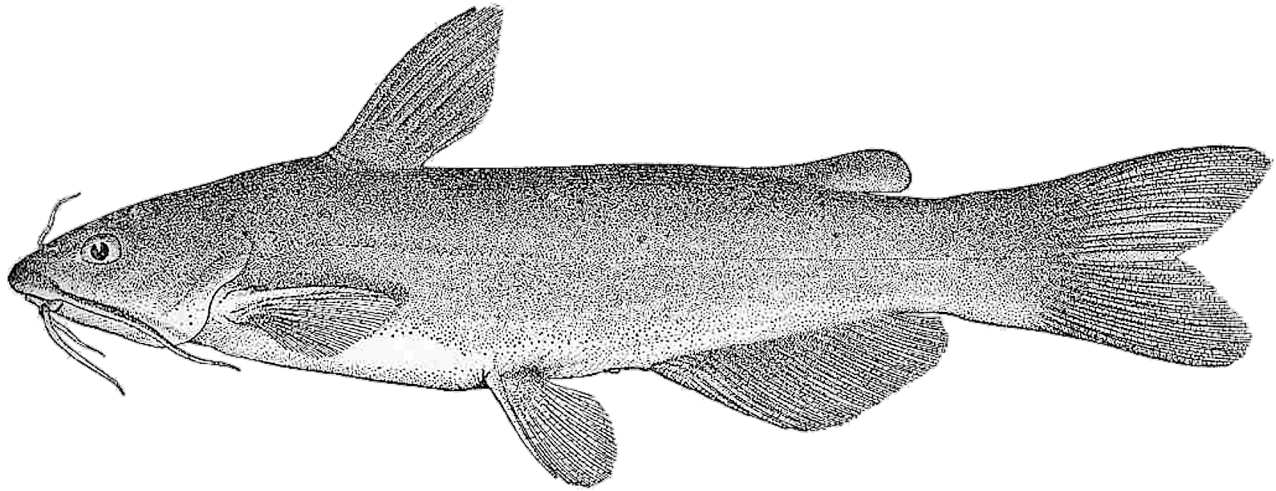


## Order SILURIFORMES

## North American Freshwater Catfishes

## Family ICTALURIDAE

Gill 1861



*Ictalurus balsanus*, holotype. From: Jordan, D. S. and J. O. Snyder. 1899. Notes on a collection of fishes from the rivers of Mexico, with description of twenty new species. Bulletin of the U. S. Fish Commission: 115–147.

**Ameiurus**

Rafinesque 1820

á- (ἄ), Greek privative, not; *meiōn* (Gr. μειών), less; *urus*, from *ourá* (Gr. οὐρά), tail, referring to absence of deep notch in caudal fin compared with forked tail of *Ictalurus*; per Rafinesque, the “Tail entire”

***Ameiurus brunneus* Jordan 1877** Medieval Latin for brown, referring to brownish color of young and juveniles

***Ameiurus catus* (Linnaeus 1758)** Latin for cat, referring to its cat-like whiskers (hence “catfish”)

***Ameiurus melas* (Rafinesque 1820)** *mélas* (Gr. μέλας), black, referring to its color (which varies to yellowish and brown)

***Ameiurus natalis* (Lesueur 1819)** Latin for “of or belonging to birth,” often applied to Christmas (Noel in French), as reflected in Lesueur’s vernacular name for this catfish, “Pimelode Noël,” allusion not explained but almost certainly in honor of Simon Barthélemy Joseph Noël de la Morinière (1765–1822), French naturalist, journalist, author, and fisheries inspector who devoted 20 years to a projected six-volume history of fisheries of which only one volume (1815) appeared (Lesueur mentioned Noël in his 1817 description of the American Eel *Anguilla rostrata*); most sources claim name means “having large nates or buttocks,” referring to either a swollen and elevated caudal peduncle, a large adipose fin, or the swollen head and nape muscles of breeding males, an etymological error apparently based on the assumption that *natalis* was the adjectival form of the Latin noun *natis* (rump or buttocks)<sup>1</sup>

***Ameiurus nebulosus* (Lesueur 1819)** Latin for cloudy, referring to olivaceous body color, “clouded with irregular brown spots”

***Ameiurus platycephalus* (Girard 1859)** flat-headed, from *platýs* (Gr. πλατύς), flat, and *kephalḗ* (Gr. κεφαλή), head, referring to its “very much depressed” head

***Ameiurus serracanthus* (Yerger & Relyea 1968)** *serra* (L.), saw; *acanthus* (L.), from *ákantha* (Gr. ἄκανθα), thorn or spine, referring to its strongly serrated pectoral spine

<sup>1</sup> See <https://etyfish.org/Scharpf-Natalis.pdf> for a detailed analysis of this name.

**Ictalurus**

Rafinesque 1820

*ict-*, from *ichthýs* (Gr. ἰχθύς), fish, and *alurus* from *aílouros* (Gr. αἴλουρος), cat; per Rafinesque, the name “means Cat-fish in Greek”

***Ictalurus australis* (Meek 1904)** Latin for southern, referring to specimens from southern Veracruz, Mexico, that Meek had assigned to this species [treated as a synonym of *I. mexicanus* by some workers]

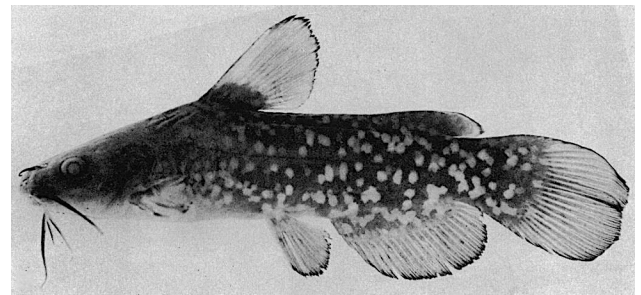
***Ictalurus balsanus* (Jordan & Snyder 1899)** *-anus* (L.), belonging to: Río Balsas basin, Mexico, where it is endemic

***Ictalurus dugesii* (Bean 1880)** in honor of Alfredo Dugès (1826–1910), French-born physician-naturalist in Guanajuato, Mexico, who collected holotype

***Ictalurus furcatus* (Valenciennes 1840)** Latin for forked, referring to forked tail [authorship often credited to Lesueur 1840, whose 1829 description of *Pimelodus caudofurcatus* (perhaps a senior synonym of *I. punctatus*) may have been unnecessarily renamed by Valenciennes]

***Ictalurus lupus* (Girard 1858)** Latin for wolf, allusion not explained nor evident, perhaps an oblique reference to its similarity to *Pimelodus vulpes* Girard 1858, a synonym of *I. punctatus* (*vulpes* is Latin for fox)

***Ictalurus meridionalis* (Günther 1864)** Latin for southern, being a southern (described from Guatemala) representative of the northern (central



*Ameiurus serracanthus*, paratype, male, 92 mm SL. Photo by David L. Fleming. From: Yerger, R. W. and K. G. Relyea. 1968. The flat-headed bullheads (Pisces: Ictaluridae) of the southeastern United States, and a new species of *Ictalurus* from the Gulf Coast. Copeia 1968 (2): 361–384.

USA, eastern Mexico) *I. furcatus* [treated as a synonym of *I. furcatus* by some workers]

***Ictalurus mexicanus* (Meek 1904) -anus** (L.), belonging to: Mexico, where it is endemic

***Ictalurus ochoterena* (de Buen 1946)** in honor of Isaac Ochoterena (1885–1950), Director, Instituto de Biología, Universidad Nacional Autónoma de México, who provided facilities for de Buen's work [treated as a synonym of *I. dugesii* by some workers]

***Ictalurus pricei* (Rutter 1896)** in honor of American ornithologist William Wightman Price (1871–1922), who collected holotype

***Ictalurus punctatus* (Rafinesque 1818)** Latin for spotted, referring to small, dark spots on body

## Noturus

Rafinesque 1818

*nōtos* (Gr. νῶτος), bac!; *urus*, from *ourá* (Gr. οὐρά), tail, i.e., tail over the back, referring to connected caudal and adipose fins

### Subgenus *Noturus*

***Noturus flavus* Rafinesque 1818** Latin for yellow, referring to the Kentucky (USA) specimens Rafinesque examined, “entirely of rufous yellow”

### Subgenus *Rabida*

Jordan & Evermann 1896

from *rabidus* (L.), mad, reflecting “Mad-Tom” vernacular used by African-Americans in 19th-century Virginia for *N. insignis*; meaning of vernacular may refer to one's anger after getting poked by one of their toxic spines<sup>2</sup> and/or to their seemingly insane swimming behavior, presumably when startled

***Noturus albater* Taylor 1969** *albus* (L.), white; *ater* (L.), black, referring to contrasting light areas on caudal fin and dark saddles on sides

***Noturus bailey* Taylor 1969** in honor of American ichthyologist Reeve M. Bailey (1911–2011), University of Michigan, under whom Taylor's study was conducted

***Noturus crypticus* Burr, Eisenhour & Grady 2005** Latin for hidden or secret, referring to its nocturnal habits and for having kept its identity a secret from researchers for so long

***Noturus elegans* Taylor 1969** Latin for fine or select, referring to its “neat or handsome color pattern”

***Noturus eleutherus* Jordan 1877** from *eleútheros* (Gr. ἐλεύθερος), free, referring to its “free adipose fin,” i.e., incomplete fusion of adipose and caudal fins

***Noturus fasciatus* Burr, Eisenhour & Grady 2005** Latin for banded, referring to “striking” bands or saddles on upper half of body

***Noturus flavater* Taylor 1969** *flavus* (L.), yellow; *ater* (L.), black, referring to its coloration

***Noturus flavipinnis* Taylor 1969** *flavus* (L.), yellow; *pinnis*, Neo-Latin adjective of *pinna* (L.), fin, i.e., finned, referring to its yellowish dorsal fin

***Noturus furiosus* Jordan & Meek 1889** Latin for mad, “the poison of its axillary gland is more virulent than that of” its congeners

***Noturus gladiator* Thomas & Burr 2004** Latin for swordsman, referring to its large and serrated pectoral spines

***Noturus hildebrandi* (Bailey & Taylor 1950)** in honor of American ichthyologist Samuel F. Hildebrand (1883–1949), U. S. Fish and Wildlife Service, “whose contributions to the ichthyology of the southeastern United States will long remain indispensable tools to his successors”

***Noturus hildebrandi lautus* Taylor 1969** Latin for neat or elegant, referring

<sup>2</sup> Reported, but without a source, in: Ono, R. D., J. D. Williams and A. Wagner. 1983. *Vanishing Fishes of North America*. Washington, D.C.: Stone Wall Press.



*Noturus gladiator*, paratype, 53.5 mm SL. From: Thomas, M. R. and B. M. Burr. 2004. *Noturus gladiator*, a new species of madtom (Siluriformes: Ictaluridae) from Coastal Plain streams of Tennessee and Mississippi. *Ichthyological Exploration of Freshwaters* 15 (4): 351–368.

to its “trim, neat, and pleasing color pattern”

***Noturus maydeni* Egge 2006** in honor of American ichthyologist Richard L. Mayden (b. 1955), Saint Louis University, for his work on species concepts and systematics and biology of central highlands (USA) fishes, and for publishing most of what is known about the life history of this cryptic madtom

***Noturus miurus* Jordan 1877** *meiōn* (Gr. μειών), less; *urus*, from *ourá* (Gr. οὐρά), tail, i.e., curtailed, allusion not explained nor evident, perhaps referring to the “general shortened appearance of some specimens” (Taylor 1969)<sup>3</sup>

***Noturus munitus* Suttkus & Taylor 1965** Latin for defended, fortified or protected, referring to its large spines and serrae

***Noturus placidus* Taylor 1969** Latin for mild, quiet or gentle, referring to its “relatively poorly armed pectoral spine” compared with congeners

***Noturus stanauli* Etnier & Jenkins 1980** derived from the Cherokee words *oostaunali* (a shoal area in a river) and *tsulistanauli* (catfish), referring to its occurrence over shoals with gravel substrate

***Noturus stigmosus* Taylor 1969** Latin for marked or branded, referring to two light spots in front of dorsal fin and brownish chromatophores on front part of abdomen

***Noturus taylori* Douglas 1972** in honor of American ichthyologist William Ralph Taylor (1919–2004), U.S. National Museum, for his contributions to our knowledge of catfishes (he revised *Noturus* in 1969)

***Noturus trautmani* Taylor 1969** in honor of American ornithologist-ichthyologist Milton B. Trautman (1899–1991), Ohio State University, who collected holotype and studied the fishes of Big Darby Creek, Ohio, USA, where this catfish was endemic (extinct, not seen since 1957)

### Subgenus *Schilbeodes*

Bleeker 1858

-oides, Neo-Latin from *eídos* (Gr. εἶδος), form or shape: *Schilbe* (Schilbeidae), a genus of catfishes that lack an adipose fin (Bleeker mistakenly believed *N. gyrinus* lacked an adipose fin)

***Noturus exilis* Nelson 1876** Latin for thin or meager, referring to its slender body

***Noturus funebris* Gilbert & Swain 1891** Latin for funereal, referring to its uniform black coloration

***Noturus gilberti* Jordan & Evermann 1889** in honor of friend and colleague Charles H. Gilbert (1859–1928), American ichthyologist and fisheries biologist

***Noturus gyrinus* (Mitchill 1817)** Latinization of *gyrīnos* (Gr. γυρίνος), tadpole, referring to its tadpole-like shape

***Noturus insignis* (Richardson 1836)** Latin for distinguished by marks or remarkable/extraordinary; Richardson did not provide a description, instead referring to “*Pimelodon livrée*” of Lesueur (1819)<sup>4</sup>, who

<sup>3</sup> Taylor, W. R. 1969. A revision of the catfish genus *Noturus* Rafinesque, with an analysis of higher groups in the Ictaluridae. *Bulletin of the United States National Museum* 282: i–vi +1–315, Pls. 1–21.

<sup>4</sup> Lesueur, C. A. 1819. Notice de quelques poissons découverts dans les lacs du Haut-Canada, durant l'été de 1816. *Mémoires du Muséum d'Histoire Naturelle*, Paris 5: 148–161.

was struck by its “second dorsal fin” (translation), i.e., its long adipose fin connected to the tail, a feature that would have been considered unique at the time, and the black margins on its dorsal, pectoral, anal and caudal fins

**Noturus lachneri Taylor 1969** in honor of Ernest A. Lachner (1916–1996), curator of fishes, U.S. National Museum, for his “outstanding work and interest” in North American ichthyology

**Noturus leptacanthus Jordan 1877** *leptós* (Gr. λεπτός), thin or slender;

*acanthus* (L.), from *ákantha* (Gr. ἄκανθα), thorn or spine, referring to “small and slender dorsal and pectoral spines which are devoid of internal serratures”

**Noturus nocturnus Jordan & Gilbert 1886** Latin for nocturnal, allusion not explained; per Jordan & Evermann (1896)<sup>4</sup>, referring to its dark-brown coloration

**Noturus phaeus Taylor 1969** from *phaiós* (Gr. φαίος), dusky, brown or grayish-brown, referring to its light- or dark-brown coloration in life

## *Pylodictis*, real and imaginary

*Pylodictis* — with one species, the very real Flathead Catfish of North America — may be the only currently valid genus named after an imaginary fish.

The eccentric French naturalist Samuel Constantine Rafinesque (1783–1840) described the Flathead Catfish as *Silurus olivaris*, from the Ohio River (USA), in 1818. *Silurus* was a catch-all genus for freshwater catfishes, and *olivaris* means olive-colored, referring to its body color, which Rafinesque described as “oliveaceous, shaded with brown.” The next year Rafinesque described another catfish from the Ohio River, which he named *Pylodictis limosus*.<sup>\*</sup> The meaning of the generic name requires a little guesswork, especially since Rafinesque took a careless (or creative, depending on your point of view) approach to the spelling of Greek and Latin words. *Pylodictis* is probably a combination of *pélós* (πηλός), mud, and *ictis*, a variant spelling of *ichthýs* (ἰχθύς), fish, with the “d” likely inserted for euphony. The specific epithet, *limosus*, is Latin for muddy. Both parts of the name reflect two of the common names Rafinesque reported for the fish — Mudcat and Mudsucker (Mudsucker) — and the fact that it “lives in the mire” (“vit dans la fange”).

For reasons unexplained, *Silurus olivaris* does not appear in Rafinesque’s *Ichthyologia Ohiensis* (1820), whereas *Pylodictis* (now spelled *Pilodictis*) *limosus* — called the “Toad Mudcat” — gets a more detailed account, this time in English. “I have not seen this fish,” Rafinesque wrote, “but describe it from a drawing of Mr. Audubon. It is found in the lower parts of the Ohio and in the Mississippi, where it lives on muddy bottoms, and buries itself in the mud in the winter. It reaches sometimes the weight of 20 pounds. It bears the name of Mudcat, Mudfish, Mudsucker, and Toadfish. It is good to eat and bites at the hook.”

Mr. Audubon is John James Audubon (1785–1851), the famous American ornithologist, painter, and namesake of the National Audubon Society. In 1818, Rafinesque was a guest at Audubon’s Kentucky home. In the middle of the night, Rafinesque noticed a bat in his room that he thought was a new species. He grabbed Audubon’s favorite violin in an effort to knock the bat down. We do not know the fate of the bat. The violin, however, was destroyed.

In 1877, David Starr Jordan reviewed Rafinesque’s contributions to American ichthyology. He determined that *Silurus olivaris* was the senior synonym of *Pylodictis limosus*. Since the catfish was distinct enough to warrant its own genus, Jordan settled on Rafinesque’s *Pylodictis*, the oldest available name. *Silurus olivaris* thus became *Pylodictis olivaris* (although Jordan attempted to correct Rafinesque’s spelling, unnecessarily changing “*Pylodictis*” to “*Pelodichthys*.”)

At around this time, American naturalists were beginning to realize that Audubon had pranked Rafinesque, presumably in retaliation for the broken violin. Audubon described and/or sketched a number of fictitious, even fantastical, fishes, which the gullible Rafinesque described as real. These included a sunfish with a dorsal fin resembling that of the dolphinfish or mahi-mahi (*Coryphaena*), with a single long, spiny ray beginning behind the head and ending near the tail, and a 10-foot long “devil jack diamond-fish,” an alligator gar with bullet-proof scales. Jordan knew of these fabrications, but apparently not all of them.

Jordan retained the name *Pylodictis*, presumably unaware that the type species, *Pylodictis limosus*, lived only “in the mire” of Audubon’s vengeful imagination.

<sup>\*</sup>Perhaps as evidence of Rafinesque’s eccentricity — or sloppiness as a taxonomist — he proposed several other names for the Flathead Catfish: *Illictis limosus*, *Leptopus viscosus* and *Opladelus nebulosus*.

### REFERENCES

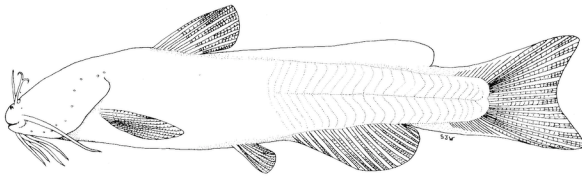
Jordan, D. S. 1877. Contributions to North American Ichthyology based primarily on the collections of the United States National Museum. I. Review of Rafinesque’s memoirs on North American fishes. *Bulletin of the United States National Museum* (1): 9: 1–53.

Markle, D. F. 1997. Audubon’s hoax: Ohio River fishes described by Rafinesque. *Archives of Natural History* 24 (3): 439–447.



Constantine Samuel Rafinesque  
(1783–1840)





*Prietella lundbergi*, holotype, female, 45.2 mm SL. Illustration by Stephen J. Walsh. From: Walsh, S. J. and C. R. Gilbert. 1995. New species of troglitic catfish of the genus *Prietella* (Siluriformes: Ictaluridae) from northeastern México. *Copeia* 1995 (4): 850–861.

### Prietella

Carranza 1954

-ella (L.), diminutive suffix connoting endearment: in honor of Carlos Prieto (no other information available), sponsor of expedition during which type was collected

*Prietella lundbergi* Walsh & Gilbert 1995 in honor of American ichthyologist John G. Lundberg (b. 1942), Academy of Natural Sciences of Philadelphia, for contributions to the systematics and paleontology of New World catfishes

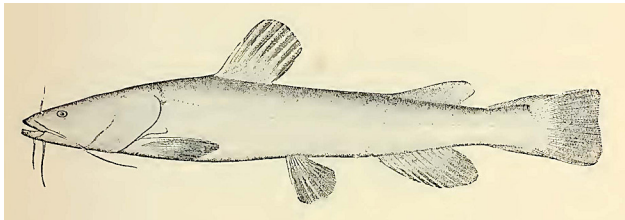
*Prietella phreatophila* Carranza 1954 *phréatos* (Gr. φρέατος), genitive of *phréar* (φρέαρ), artificial well; *phila*, from *philos* (Gr. φίλος), fond of, referring to type locality, a 2.5-m-deep well in Muzquiz, Coahuila, Mexico

### Pylodictis

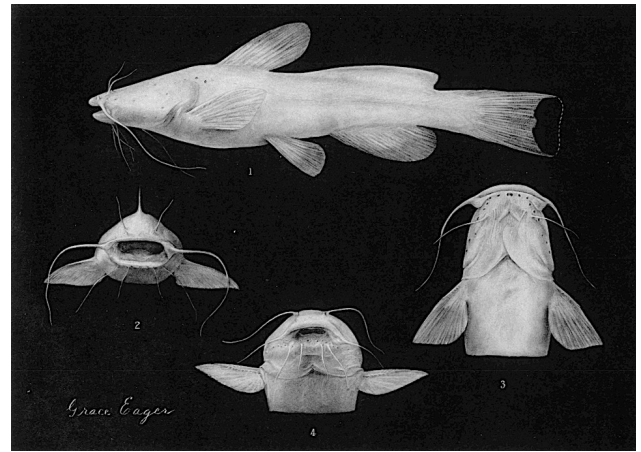
Rafinesque 1819

*pēlós* (Gr. πηλός), clay, earth or mud; *ictis*, variant spelling of *ichthys* (Gr. ἰχθύς), fish, with the “d” likely inserted for euphony, reflecting Rafinesque’s belief that *P. limosus* (an imaginary fish, based on a drawing by James Audubon, presumably presented to Rafinesque as a prank) lives on muddy bottoms and buries itself in the mud in the winter (Jordan 1877 synonymized *P. limosus* with *P. olivaris*, not realizing that the latter fish was imaginary; see essay on previous page)

*Pylodictis olivaris* (Rafinesque 1818) Latin for olive-colored, referring to its body color, “olivaceous, shaded with brown”



Possibly first-published image of *Pylodictis olivaris*, 82 years after its description. Illustration by H. L. Todd. From: Jordan, D. S. and B. W. Evermann. 1900. The fishes of North and Middle America: a descriptive catalogue of the species of fish-like vertebrates found in the waters of North America, north of the Isthmus of Panama. Part IV. Bulletin of the United States National Museum 47: i–ci + 3137–3313, Pls. 1–392.



*Satan eurystomus*, holotype, 69 mm SL, in lateral, anterior and ventral aspects (with damaged caudal fin reconstructed). Illustration by Grace Eager. From: Hubbs, C. L. and R. M. Bailey. 1947. Blind catfishes from artesian waters of Texas. Occasional Papers of the Museum of Zoology University of Michigan 499: 1–15, Pl. 1.

### Satan

Hubbs & Bailey 1947

named for the Prince of Darkness, referring to this fish’s underground habitat

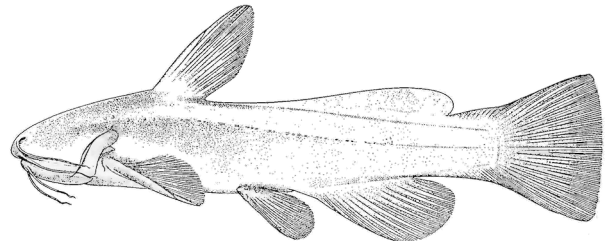
*Satan eurystomus* Hubbs & Bailey 1947 wide-mouthed, from *eurýs* (Gr. εὐρύς), wide or broad, and *stóma* (Gr. στόμα), mouth, referring to its wider mouth compared with the sympatric *Trogloglanis pattersoni*

### Trogloglanis

Eigenmann 1919

*tróglē* (Gr. τρώγλη), hole, referring to its underground habitat; *glánis* (Gr. γλάνις), ancient name for a silurid catfish (probably *Silurus aristotelis*) dating to Aristotle, often used as a general term for catfish

*Trogloglanis pattersoni* Eigenmann 1919 in honor of John Thomas “Pat” Patterson (1878–1960), embryologist and geneticist, University of Texas, who sent holotype to Eigenmann



*Trogloglanis pattersoni*, holotype. From: Eigenmann, C. H. 1919. *Trogloglanis pattersoni* a new blind fish from San Antonio, Texas. Proceedings of the American Philosophical Society 58 (6): 397–400.