

*Alasmidonta atropurpureum* Raf. 1831 (= *raveneliana* Lea 1834)  
*Fusconaia lateralis* Raf. 1820 (= *undata* Barnes 1823)  
*Fusconaia pusilla* Raf. 1820 (= *ebena* Lea 1831)  
*Fusconaia polita* Say 1834 (= *subrotunda* Lea 1831 preocc.)  
*Megaloniais nervosa* Raf. 1820 (= *gigantea* Barnes 1923)  
*Quadrula bullata* Raf. 1820 (= *pustulosa* Lea 1831)  
*Plethobasus pachosteus* Raf. 1820 (= *vicatricosus* Say 1829)  
*Plethobasus striatus* Raf. 1820 (= *cooperianus* Lea 1834)  
*Pleurobema obliquata* Raf. 1820 (= *pyramidatus* Lea 1834)  
*Pleurobema obliquum* Lamarck 1819 (= *cordatum* Raf. 1820)  
*Pleurobema sintoxia* Raf. 1820 (= *solidum* Lea 1838)  
*Pleurobema premorsa* Raf. 1831 (= *plenum* Lea 1840)  
*Cyprogenia stegaria* Raf. 1820 (= *irrorata* Lea 1829)  
*Ellipsaria ligamentina* Lamarck 1819 (= *carinata* Barnes 1823)  
*Crenodonta lineolata* Raf. 1820 (= *securis* Lea 1829)  
*Truncilla vermiculata* Raf. 1820 (= *truncata* Raf. 1820 preocc.)  
*Potamilus alatus* Say 1817 (monotype of *Potamilus* in 1818)  
*Potamilus ohioensis* Raf. 1820 (= *laevissima* Lea 1829)  
*Toxolasma livida* Raf. 1831 (= *glans* Lea Dec. 1831)  
*Lemiox rimosus* Raf. 1831 (= *caelatus* Conrad 1834)  
*Villosa tenellus* Raf. 1831 (= *taeniata* Conrad 1834)  
*Lampsilis teres* Raf. 1820 (= *fallaciosa* Smith 1899)  
*Lampsilis luteola* Lamarck 1819 (= *siliquoidea* Barnes 1823)  
*Lampsilis cardium* Raf. 1820 (= *ventricosa* Barnes 1823)  
*Lampsilis abruptus* Say 1831 (= *orbiculatus* Lea not Hildreth 1828)  
*Plagiola interruptus* Raf. 1820 (= *brevidens* Lea 1831)  
*Plagiola ridibundus* Say 1831 (= *sulcatus* Lea 1829 preocc.)  
*Plagiola perobliqua* Conrad 1837 (= *delicata* Simpson 1900)  
*(Epioblasma) flexuosa* Raf. 1820 (= *foliata* Hildreth 1828)

## EARLY WORKERS ON THE NORTH AMERICAN NAIADS

WILLIAM J. GLENCH

Museum of Comparative Zoology, Cambridge, Massachusetts

There is a rather imposing list of people who were interested in the rich naiad fauna of North America. Prior to 1800 only a very few species had been described, and these few were described by European zoologists. Thomas Say's article on conchology in the American edition of Nicholson's British Encyclopedia of 1817 was the first report by an American worker to appear in the United States. Shortly thereafter Rafinesque, a European who had been appointed Professor of Botany and Natural History in Transylvania University of Lexington, Kentucky, started to publish on freshwater mollusks of the Ohio River system. Since this early beginning there have been many who have left a heritage of material and publications regarding this important group of mollusks.

There are four rather distinct categories of knowledge of this group: 1. the collection of specimens by Ortmann and a host of others who have since been mentioned upon which later studies were based; 2. the work of Lea, J. G. Anthony and others who have done much to establish the existence of the genera and species; 3. the work of T. Conrad, I. Lea, C. T. Simpson with the vast amount of isolated data which has been accumulated on members of this group; 4. the geographic mapping of the group by R. E. Call, B. Walker, and A. E. Oakes. The present distribution of the various genera and species of mussels of North America.

EFFECTS OF POLLUTION ON THE NAIAD FAUNA OF THE ILLINOIS RIVER. William C. Starrett, Illinois Natural History Survey (no abstract)

EGG CASES OF *NITIDELLA OCEANA*

DOROT  
ELMHUR

A single adult specimen of *Nitidella* from the Florida Keys Key Vaca area of the Florida Keys in a aerated container of sea water with 1969 egg cases were discovered, in such as niches in coral rocks and in crevices, continued at intervals until mid-February of which were observed at the time of collection. The egg cases were yellowish bulbs, globular-oval, 1.5 mm in diameter at a 1 mm base plus a narrow, irregularly large for the size of the center, rather saddle shaped, and in twenty cases found, the number of embryos developed beyond the velum than two juveniles hatched crawling second) veliger being either underdeveloped or became crowded.

Time of incubation was not determined as two cases that when discovered their crawling young until 49 days after hatching the newly hatched averaged .8 mm in diameter. Having rasped and pushed their young fed almost immediately on detritus (Linné). At three days there was no evidence of spots that are characteristic of *Nitidella*.

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*undata* Barnes 1823)  
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*rotunda* Lea 1831 preocc.)  
*gigantea* Barnes 1923)  
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 = *securis* Lea 1829)  
 (= *truncata* Raf. 1820 preocc.)  
 type of *Potamilus* in 1818)  
*laevissima* Lea 1829)  
*lans* Lea Dec. 1831)  
*latus* Conrad 1834)  
*lata* Conrad 1834)  
*riosa* Smith 1899)  
 (= *siliquoides* Barnes 1823)  
*ventricosa* Barnes 1823)  
*obiculatus* Lea not Hildreth 1828)  
 = *brevidens* Lea 1831)  
*sulcatus* Lea 1829 preocc.)  
 = *delicata* Simpson 1900)  
 = *foliata* Hildreth 1828)

## THE NORTH AMERICAN NAIADS

IAN J. CLENCH  
 Zoology, Cambridge, Massachusetts

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There are four rather distinct categories which form a basis for our present  
 knowledge of this group: 1. the collectors such as T. Say, H. H. Smith, A. E.  
 Ortmann and a host of others who had brought together much of the material  
 upon which later studies were based; 2. the describers such as T. Say, Isaac  
 Lea, J. G. Anthony and others who made known by the printed page the  
 existence of the genera and species of naiads; 3. the monographers such as  
 T. Conrad, I. Lea, C. T. Simpson who brought together in systematic order  
 the vast amount of isolated data which had accrued during the early history  
 of this group; 4. the geographic monographers such as T. Say, T. Conrad,  
 R. E. Call, B. Walker, and A. E. Ortmann who worked out the patterns of  
 distribution of the various genera and species composing the freshwater  
 mussels of North America.

EFFECTS OF POLLUTION ON THE NAIADS OF THE ILLINOIS  
 RIVER. William C. Starrett, Illinois Natural History Survey, Havana, Illinois.  
 (no abstract submitted)

## EGG CASES OF *NITIDELLA OCELLATA* GMELIN AND AN *ANACHIS*

DOROTHY RAEMBLE  
 Elmhurst, New York

A single adult specimen of *Nitidella ocellata* Gmelin was taken in the  
 Key Vaca area of the Florida Keys November 26 or 27, 1968 and kept in an  
 aerated container of sea water with several other mollusks. On January 10,  
 1969 egg cases were discovered, having been deposited in concealed areas  
 such as niches in coral rocks and in the hinge sockets of clam shells. Deposits  
 continued at intervals until mid-February with a total of twenty cases, none  
 of which were observed at the time of deposit. The egg cases were sturdy  
 yellowish bulbs, globular-oval, 1.5 mm long, firmly attached to the substrate  
 at a 1 mm base plus a narrow, irregular rim. The thinner hatch area (com-  
 paratively large for the size of the case) was 1 mm in length, situated off  
 center, rather saddle shaped, and characterized by a flaring collar. In the  
 twenty cases found, the number of yellowish eggs varied from eight to  
 fourteen at best count without dissection. However, no more than three  
 embryos developed beyond the veliger stage in any one case, and no more  
 than two juveniles hatched crawling from a single case, the third (and/or  
 second) veliger being either underdeveloped or its shell crushed as the case  
 became crowded.

Time of incubation was not determined but it is apparently rather long,  
 as two cases that when discovered contained moving embryos did not hatch  
 their crawling young until 49 days later. The smooth dark brown shell of  
 the newly hatched averaged .8 mm in height and was about  $\frac{2}{3}$  at the overall  
 widest. Having rasped and pushed their way through the hatch area, the  
 young fed almost immediately on tiny crushed mussel spat (*Mytilus edulis*  
 Linné). At three days there was new growth, showing two rows of the white  
 spots that are characteristic of *Nitidella ocellata*.