

**SURVEILLANCE STUDY OF MARINE EDIBLE
MOLLUSCS IN EGYPT**

BY

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ABSTRACT

The present work includes a check-list of 41 species of edible molluscs collected from marine waters and markets of Egypt. Among the identified species, 32 are included in class Bivalvia, 7 in class Gastropoda and 2 in class Cephalopoda. A detailed list of the sampling places, habitats and shell size is given, together with an auxiliary map. Photographs are also presented to facilitate the separation of species.

INTRODUCTION

The present communication is an extension of the first attempt given by the authors (Mona *et al.*, 1988) on the Egyptian edible molluscs. Under the previous heading the authors confine themselves. The cause of this mounting interest is the realization that edible molluscs have a considerably higher economic importance than was hitherto surmised and can be considered as nontraditional protein supply which can be used as a promising alternative source of

food in Egypt. In addition, countries like Egypt are passing through a very critical period of food shortage. Therefore, the authors believed that every effort must be directed towards exploiting food resources in the Sea.

Most of the earliest works on marine molluscs in Egypt (e.g. Audouin, 1827; Pollary, 1909; Crossland, 1913; Aboul Ela 1960; Gohar & Soliman, 1963a,b,c, 1967a,b,c; Soliman, 1971, Hassan, 1979, 1983; Gabal 1982 & 1988) gave no attention to the edible species except the work given by Esawy (1965). Thus, the authors felt it is necessary, for the sake time reduction, to make a check-list that represents an attempt to condense the list of the recorded species into a form usable for zoologists as a source of reference and serves to lay foundation for further investigations. As far as we are aware the present study is the first faunistic survey of marine edible molluscs in Egypt.

MATERIAL AND METHODS

The investigated edible molluscs were collected from different markets and stations covering the majority of the Egyptian marine coasts during 1986 and 1987. The collection sites located at Alexandria, Damietta, Al-Manzalla, Port-Saied, Ismailia, Suez, Suez-Gulf, Ras-Gimsha, Hurghada and Safaga (Fig. 1). The collected samples were found inhabiting sandy, muddy or rocky shores as well as coral reefs. Shell length (longest dimension) was recorded with calipers (Table 1).

The shellfish were relaxed in 8% magnesium chloride, fixed in 95% alcohol or 10% buffered formaline in sea water and stored in 70% ethanol. Keys and monographs proposed by Pallary (1909), Melvin (1966), George and George (1979), Campbell (1980), Mondadori (1980), Shurabati (1984) and Gaillard (1987) were consulted for species identification. Representative specimens have been deposited in Marine Invertebrates laboratory, Department of Zoology, University of Tanta, Egypt.

Check-List of edible molluscs.

The list includes 41 species belonging to 3 classes, 10 orders, 22 families and 36 genera.

Edible Bivalvia:

1. Order Veneroida:

1.1. Family Veneridae

Genus Venus Linn, 1758.

V. oerucosa Linn, 1758

Genus Circentia jousseame, 1888.

C. arabica Dillwyn, 1817.

Genus Circe Schumacher, 1817.

C. crocea (Gray, 1849)

C. scripta (Linn, 1758)

C. intermedia (Reeve, 1850).

C. corrugata (Chemnitz, 1784).

Genus Dosinia Scopoli, 1777.
D. radiata (Reeve, 1850)

Genus Venerupis Lamark, 1818.
V. aurea Gmelin, 1791

Genus Paphia Roding, 1798.
P. undulata (Born, 1780).

Genus Tapes Muhlfeld, 1811.
T. decussatas (Linn, 1758)

Genus Callista Poli, 1791.
C. florida (Lamarck, 1818)

1.2. Family Petricolidae

Genus Petricola Lamarck, 1801.
P. hemprichii Issel, 1869.

1.3. Family Cardiidae

Genus Cerastoderma poli, 1795.
C. lamarkii (reeve, 1845)

Genus Fuloia Gray, 1853.
F. papyraceum (Chemnitz, 1782)

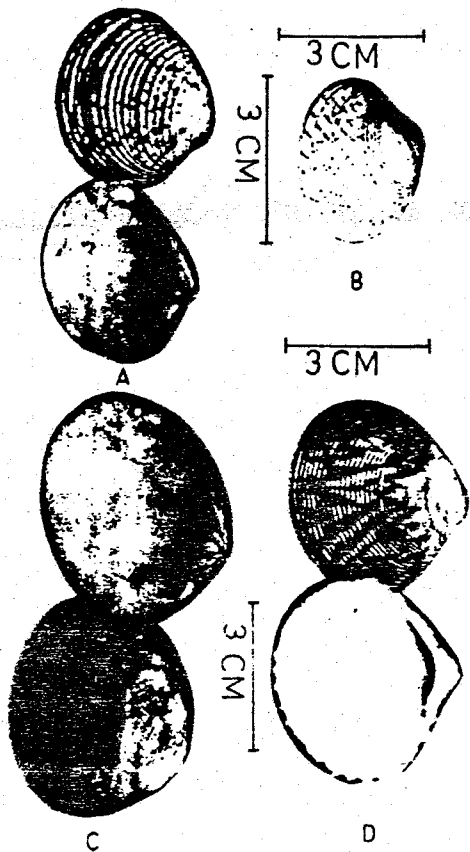
1.4. Family Donacidae

Genus Donax Linn, 1758.
D. trunculus Linn, 1758

1.5. Family Psammobiidae

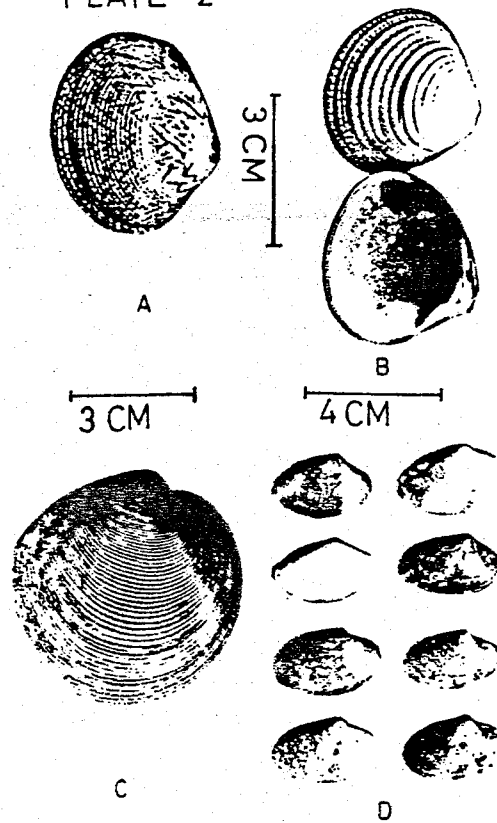
Genus Asaphis Modeer, 1793.
A. deflorata (Linn, 1758)

PLATE 1



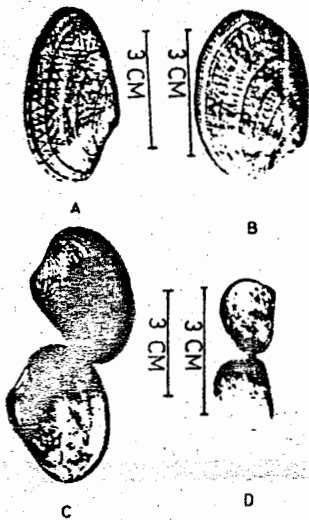
- (A) *Venus verrucosa*
- (B) *Circentia atabica*
- (C) *Circe crocea*
- (D) *Circe acriptra*

PLATE 2



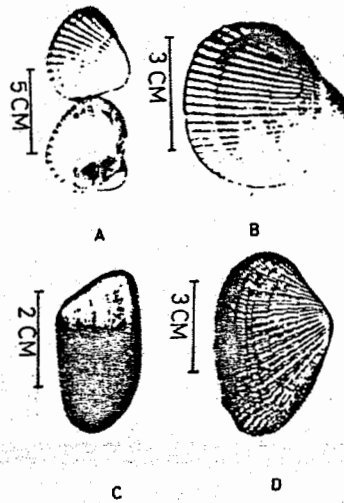
- (A) *Circe intermedia*
- (B) *Circe corrugata*
- (C) *Dosinia radiata*
- (D) *Venerupis aurea*

PLATE 3



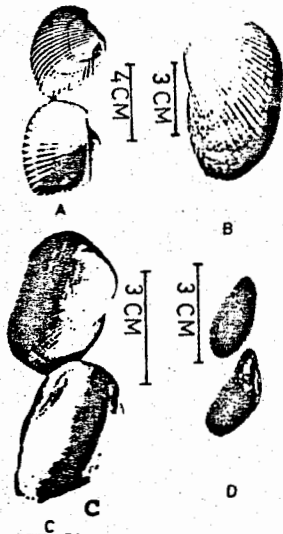
- (A) *Paphia undulata*
- (B) *Tapes decussatas*
- (C) *Callista florida*
- (D) *Petricola hemprichii*

PLATE 4



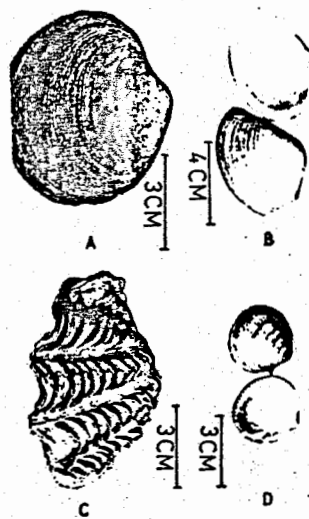
- (A) *Cerastoderma lamarkii*
- (B) *Fulvia papyraceum*
- (C) *Donax trunculus*
- (D) *Asaphis deflorata*

PLATE 5



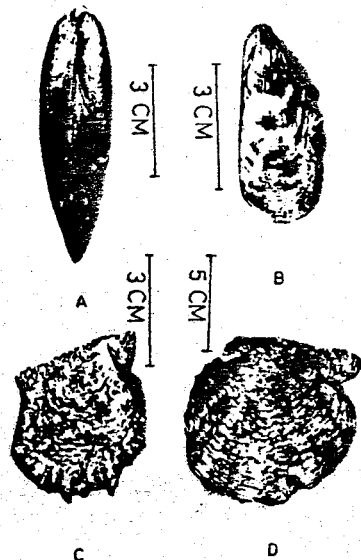
- (A) *Codakia tigrina*
- (B) *Mactra olorina*
- (C) *Tridacna squamosa*
- (D) *Glycymeris glycymetis*

PLATE 6



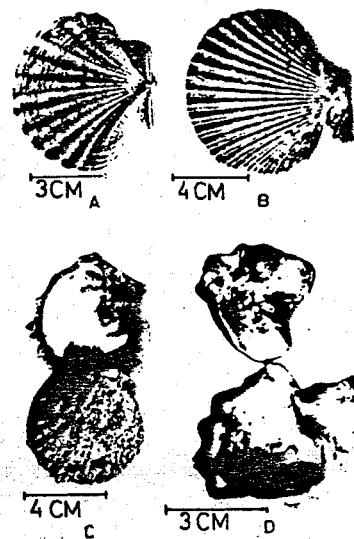
- (A) *Anadara uropygmelana*
- (B) *Anadara antiquate*
- (C) *Barbatia decussata*
- (D) *Brachidontis vatiabilis*

PLATE 7



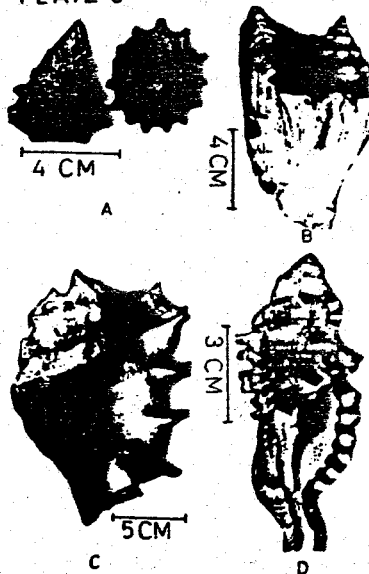
- (A) *Lithophaga lithophaga*
- (B) *Modiolus auriculatus*
- (C) *Pinctada tadiata*
- (D) *Pinctada matgritifera*

PLATE 8



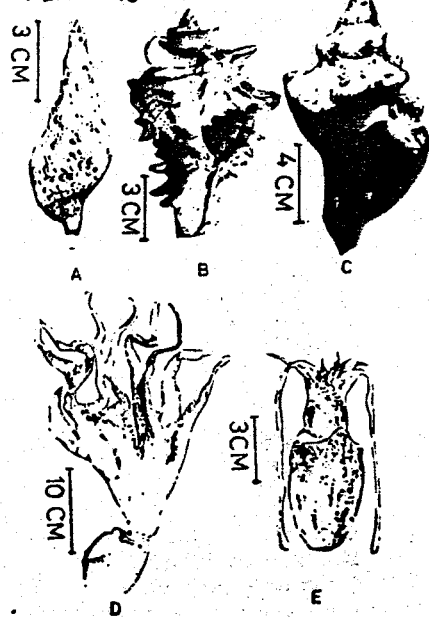
- (A) *Pecten erythraeensis*
- (B) *Chlamys squamosa*
- (C) *Spandylus gaederopus*
- (D) *Lopha cristagalli*

PLATE 9



- (A) *Tectus dentatus*
- (B) *Strombus tricornis*
- (C) *Lambis lambis*
- (D) *D. Cymatium lotorium*

PLATE 10



- (A) *Charonia tritonis*
- (B) *Chicoreus virgineus*
- (C) *Pleuroploca trapezium*
- (D) *Octopus vulgaris*
- (E) *Sepia officinalis*

1.6. Family Lucinidae

Genus Codakia Scopoli, 1777.
C. tigerina Linn, 1758

1.7. Family Mactridae

Genus Mactra Linn, 1767.
M. plorina Philippi, 1846

1.8. Family Tridacnidae

Genus Tridacna Bruguiere, 1797.
T. squamosa Lamarck, 1819

2. Order Arcoida:

2.1. Family Glycymerididae

Genus Glycymeris Dacosta, 1778.
G. glycymeris (Linn, 1758)

2.2. Family Arcidae

Genus Anadara Gray, 1847.
A. uropygmelana (Bory & Vincent, 1824)
A. antiquata (Linn, 1758)

Genus Barbatia Gray, 1842.
B. decussata Sowerby, 1833

3. Order Mytiloida:

3.1. Family Mytilidae

Genus Brachidontis Swinson, 1840.
B. variabilis (Krauss, 1848).

Genus Lithophaga Roding, 1798.
L. lithophaga (Linn, 1780)

Genus Modiolus Lamarck, 1818.
M. auriculatus Krauss, 1848

4. Order Pterioidea:

4.1. Family Pteriidae

Genus Pinctada Roding, 1798.
P. radiata (Leach, 1814)
P. margaritifera Linn, 1758

4.2. Family Pectinidae

Genus Pecten Muller, 1776.
P. erythraeensis Sowerby, 1847

Genus Chlamys Roding, 1798.
C. squamosa (Gmelin, 1791)

4.3. Family Spondylidae

Genus Spondylus Linn, 1758.
S. gaederopus Linn, 1758

5. Order Ostreina:

5.1. Family Ostreidae

Genus Lopha Linn, 1758.
L. cristagalli Linn, 1758

Edible Gastropoda:**1. Order Archaeogastropoda:**

1.1. Family Trochidae

Genus Tectus Forskal, 1775.T. dentatus Forskal, 1775**2. Order Mesogastropoda:**

2.1. Family Strombidae

Genus Strombus Lamarck, 1822.S. tricornis Humphrey, 1786Genus LambisL. lambis Linn, 1758

2.2. Family Cymatiidae

Genus Cymatium Roding, 1798.C. lotorium Linn, 1767Genus Charonia Gistel, 1848.C. tritonis Linn, 1758**3. Order Neogastropoda:**

3.1. Family Muricidae

Genus Chicoreus Roding, 1798.C. virgineus Roding, 1798

3.2. Family Fascioliidae

Genus Pleuroploca Linn, 1758.P. trapezium Linn, 1758

Edible Cephalopoda:**1. Order Octopoda:**

1.1. Family octopodidae

Genus Octopus Linn, 1758.O. vulgaris Cuvier, 1797**2. Order Decapoda:**

2.1. Family Sepiidae

Genus Sepia Linn, 1758.S. officinalis Linn, 1758**ACKNOWLEDGEMENT**

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دراسة حصرية للرخويات البحرية الصالحة للغذاء في مصر

بحث مقدم من

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قسم علم الحيوان ، كلية العلوم ، جامعة طنطا ، طنطا ، مصر .

يهدف هذا البحث إلى إلقاء الضوء على مجموعة الرخويات ذات القيمة الغذائية وخاصة لدى سكان المدن الساحلية في مصر وإبراز أهميتها الاقتصادية كمصدر غذائي هام . وقد تم جمع هذه الأسماك القشرية من الأسواق والشواطئ المصرية المنتشرة على البحر الأبيض المتوسط (الاسكندرية ، دمياط ، المنزلة) وقناة السويس (بورسعيد ، الاسماعيلية ، السويس) والبحر الأحمر (خليج السويس ، رأس جيمسا ، الغردقة ، سفاجة) في عامي ١٩٨٦ و ١٩٨٧ .

وتتلخص الدراسة الحصرية في تعريف ٤١ نوعاً من الرخويات المستساغة تتبع ثنائياً المصراع (٣٢ نوعاً) وبطنية القدم (٧ أنواع) ورأسية القدم (نوعان) . وبالإضافة إلى ذلك قدم البحث طبيعة تواجد هذه الأحياء البحرية في بيئتها الطبيعيه والأحجام الشائعة لها ودليلاً مضموراً لهذه الأنواع .

ومن المعروف ان هذه الاسماك القشرية تؤكل طازجة أو مغلية كمشتبهيات على بعض الشواطئ المصرية وتستخدم الأجزاء الرخوة كلها أو القدم أو العضلات كطعام إلا إن استغلالها محدود نظراً لعدم التعود على مذاقها . ويوصى البحث بضرورة التوسع في تربية هذه الرخويات وغيرها من الأحياء البحرية التي يمكن استغلالها كغذاء بروتيني .