

AQUATIC AND AMPHIBIOUS MOLLUSCS OF  
HIMACHAL PRADESH, Pt. I.

*By*

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INTRODUCTION

This paper presents a systematic account of mollusca collections made during the faunistic surveys of Simla Hills (districts of Solan, Simla, Bilaspur and Sirmour) from 1969 to 1973 by various tour parties of High Altitude Zoology Field Station, Solan. The area is a meeting place of Palaearctic and Oriental regions.

Since very little is known about the molluscan fauna of Himachal Pradesh, an attempt has been made here to place on record the various forms available in the area. Altogether eleven genera and eighteen species are dealt with. These represent further augmentation in the number of genera and species of molluscs known so far from the area. Out of the eighteen species listed, only two were recorded earlier, viz. *Gyraulus convexiusculus* (Hutton) and *Lymnaea (Pseudosuccinea) luteola* Lamarck, the remaining species being new records from the area. According to International Code of Zoological Nomenclature (1963) forms or varieties are not valid, such forms have been omitted. Brief field ecological observations, wherever possible, are included under respective species. Note on distribution of each species is made as complete as possible.

Abbreviations used :—Dist.—District; Coll.—Collector; Ex(s).—Example(s); mm.—Millimetre.

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LIST OF SPECIES INCLUDED IN THIS PAPER

Class I GASTROPODA

Subclass *PROSOBRANCHIA*

Order (i) MEGAGASTROPODA

Family 1. VIVIPARIDAE

Subfamily *VIVIPARINAE*

Genus 1. **Viviparus** Montfort, 1810

1. **Viviparus bengalensis** (Lamarck)

2. **Viviparus variatus** (Frauenfeld)

Family 2. AMNICOLIDAE

Genus 2. **Digoniostoma** Annandale, 1920

3. **Digoniostoma pulchella** (Benson)

4. **Digoniostoma cerameopoma** (Benson)

Family 3. MELANIIDAE

Subfamily *MELANIINAE*

Genus 3. **Melanoides** Lamarck, 1799

5. **Melanoides (Melanoides) tuberculatus** (Müller)

6. **Melanoides (Melanoides) pyramis** (Hutton)

Subfamily *PALUDOMINAE*

Genus 4. **Paludomus** Swainson, 1840

7 **Paludomus transchaurica** Gmelin

Subclass *PULMONATA*

Order (ii) BASOMMATOPHORA

Family 4. PLANORBIDAE

Genus 5. **Indoplanorbis** Annandale and Prashad, 1921

8. **Indoplanorbis exustus** (Deshayes)  
Genus 6. **Gyraulus** Charpentier, 1837
9. **Gyraulus convexiusculus** (Hutton)  
Family 5. LYMNAEIDAE  
Genus 7 **Lymnaea** Lamarck, 1799
10. **Lymnaea auricularia** (Linnaeus)
11. **Lymnaea stagnalis** (Linnaeus)
12. **Lymnaea (Pseudosuccinea) acuminata** Lamarck
13. **Lymnaea (Pseudosuccinea) luteola** Lamarck  
Order (iii) STYLOMMATOPHORA  
Family 6. FERUSSACIDAE  
Genus 8. **Glessula** Martens, 1860
14. **Glessula paupercula** (Blanford)  
Family 7. SUBULINIDAE  
Subfamily OPEATINAE  
Genus 9. **Opeas** Albers, 1850
15. **Opeas annandalei** Godwin-Austen  
Class II PELECYPODA (BIVALVIA)  
Order (iv) EULAMELLIBRANCHIATA  
Family 8. UNIONIDAE  
Genus 10. **Parreysia** Conrad, 1853
16. **Parreysia favidens** (Benson)
17. **Parreysia wynegungaensis** (Lea)  
Family 9. CORBICULIDAE  
Genus 11. **Corbicula** Megerle von Muhlfeid,  
1811
18. **Corbicula occidens** Deshayes

## SYSTEMATIC ACCOUNT

Family (i) VIVIPARIDAE

Subfamily VIVIPARINAE

Genus *Viviparus* Montfort, 18101. *Viviparus bengalensis* (Lamarck)

The Bengal Viviparus

1822. *Paludina bengalensis* Lamarck, *Hist. Nat. Anim. Sans. Vertb.*, 6(2): 174.
1963. *Vivipara bengalensis*: Tonapi and Mulherkar, *J. Bombay nat. Hist. Soc.*, 60(1): 106.

*Material*.—Sirmour Dist.: Coll. M. Chandra: 2 exs., a tank in Renuka, 6.iv.1970.

*Distribution*.—Himachal Pradesh (first record): as above. Elsewhere: India, Pakistan, Sri Lanka and Burma.

*Remarks*.—Shells are well developed; characters of the shells agree well with those of the form typica. This is a familiar banded pond snail formerly known as *Paludina*. Satyamurti (1960) gives good information on the various allied species. This species inhabits dirty ponds, tanks and sluggish streams.

2. *Viviparus variatus* (Frauenfeld)

The varied Viviparus

1862. *Paludina variata* Frauenfeld, *Verh. Zool. bot. Ges. Wien.*, 12: 1163.
1969. *Viviparus variatus*: Ray and Mukherjee, *Rec. zool. Surv. India*, 61(3 & 4): 417.

*Material*.—Solan Dist.: Coll. M. Chandra: 12 exs., nullah in Kuniyar, 19.ix.1970; Coll. H. P. Agrawal: 50 exs., Kuni khud, 3.viii.1971; Coll. M. Chandra: 62 exs., Arki, 23.x.1971.

*Distribution*.—Himachal Pradesh (first record); as above. Elsewhere: India, Pakistan, Sri Lanka and Burma.

*Remarks*.—Shells are of smaller size than that of *V bengalensis*. Most of them are of greenish colour, rim of the aperture typically black. Specimens were found in large number at the bottom of pond or stream.

Family (ii) AMNICOLIDAE

Genus **Digoniostoma** Annandale, 1920

3. **Digoniostoma pulchella** (Benson)

1836. *Paludina pulchella* Benson, *J. Asiat. Soc. Bengal*, **5**: 746.

1969. *Digoniostoma pulchella*: Ray and Mukherjee, *Rec. zool. Surv. India*, **61**(3 & 4): 418.

*Material*.—Sirmour Dist.: Coll. *H. P. Agrawal*: 2 exs., Nainatikkar, 27.iii.1971, Bilaspur Dist.: Coll. *K. K. Mahajan*: 14 exs., Maijpur, 27.viii.1972.

*Distribution*: Himachal Pradesh (first record): as above. Elsewhere: Throughout India, Burma and Malay Peninsula.

*Remarks*.—Ghose's *Paludomus baccula* var. *minuta* from the Batu Cave is a synonym (Laidlaw, 1940).

4. **Digoniostoma cerameopoma** (Benson)

1830. *Paludina cerameopoma* Benson, *Gleanings in Sci.*, Calcutta, **2**: 125.

1969. *Digoniostoma cerameopoma*: Ray and Mukherjee, *Rec. zool. Surv. India*, **61**(3 & 4): 420.

*Material*.—Bilaspur Dist.: Coll. *M. Chandra*: 2 exs., Bilaspur, 18.iv.1972; Coll. *K. K. Mahajan*: 24 exs., Swarghat, 20.viii.1972.

*Distribution*.—Himachal Pradesh (first record): as above. Elsewhere: India: Rajasthan, West Bengal, Bihar, Assam and Punjab, Pakistan (Sind).

*Remarks*.—The specimens are of smaller size.

Family (iii) MELANIIDAE

Subfamily MELANIINAE

Genus **Melanoides** Lamarck, 1799

Subgenus *Melanoides* Olivier, 1804

5. **Melanoides (Melanoides) tuberculatus** (Müller)

The Tubercled Melania

1774. *Nerita tuberculata* Müller, *Verm. Terr. Fluv. Testacea*, **2**: 191.

1969. *Melanoides tuberculatus*: Ray and Mukherjee, *Rec. zool. Surv. India*, **61**(3 & 4): 420.

*Material*.—Sirmour Dist.: Coll. *M. Chandra*: 9 exs., a pond 1 km. East of Ponta rest house, 9.iv.1970; Coll. *H. P. Agrawal*: 5 exs., Gaura, 5.viii.1971. Solan Dist. Coll. *M. Chandra*: 5 exs., Patta, 10.vi.1970. Bilaspur Dist.: Coll. *M. Chandra*: 132 exs.,

Bilaspur, 16.iv.1972; Coll. K. K. Mahajan : 4 exs., Bilaspur, 11.viii.1972; 51 exs., Alikhud, 13.viii.1972; 65 exs., Ghagas village, 14.viii.1972; 10 exs., Auyal village, 15.viii.1972; Coll. H. P. Agrawal : 236 exs., Changer village, 7.iii.1973; 253 exs., Kandrur village, 9.iii.1973; 74 exs., Bamta village, 10.iii.1973.

*Distribution.*—Himachal Pradesh (first record) : as above. Elsewhere : Very wide spread : from southern and eastern shores of the Mediterranean and Africa to Asia (India, Sri Lanka, Burma, Bangla Desh, Pakistan, Iran, Afghanistan, Malay Peninsula and Archipelago, China) and Philippines and Australia (Annan-dale, 1928a; 1918b; Benthem Jutting, 1956).

The occurrence of this species is prehistoric Jericho, Jordan (dating back to 5000-7000 years), is indicated by Biggs (1960).

*Remarks* : Shells vary in shape, size etc. Specimens were found in clear water (in slow moving water as well as in stagnant ponds).

## 6. *Melanoides (Melanoides) pyramis* (Hutton)

### The Pyramid Melania

1850. *Melania pyramis* Hutton, *J. Asiat. Soc. Bengal*, 18(2) : 658.

1969. *Melanoides pyramis* : Ray and Mukherjee, *Rec. zool. Surv. India*, 61(3 & 4) : 421.

*Material.*—Sirmour Dist. : Coll. M. Chandra : 2 exs., a pond 1 km. East of Ponta rest house, 9.iv.1970.

*Distribution.*—Himachal Pradesh (first record) : as above. Elsewhere : India : quite common in the Gangetic Plains. Also Pakistan (Baluchistan), Iran and Iraq.

*Remarks.*—Both the shells show the typical features of *M. pyramis*.

### Subfamily PALUDOMINAE

### Genus *Paludomus* Swainson, 1840

## 7 *Paludomus transchaurica* Gmelin

1790. *Paludomus transchaurica* Gmelin, *Syst. Nat.*, No. 3655.

1960. *Paludomus transchaurica* : Satyamurti, *Bull. Madras Govt. Mus.* (Nat. Hist. Series), 6(4) : 49.

*Material.*—Bilaspur Dist. : Coll. K. K. Mahajan : 140 exs., Dukali village, 25.viii.1972.

*Distribution.*—Himachal Pradesh (first record) : as above. Elsewhere : Southern India (Madras; Trichirapalli), Bengal, Kashmir and Sri Lanka.

*Remarks.*—Spire is incomplete, with the apex missing. The shell is smooth and glossy, yellowish-olive brown. The flame like reddish brown markings are distinct.

Family (iv) PLANORBIDAE

Genus **Indoplanorbis** Annandale and Prashad, 1921

### 8. **Indoplanorbis exustus** (Deshayes)

1834. *Planorbis exustus* Deshayes, *Belang. Voy. Indes-Orient. Zool. Moll.* : 417, pl. 1, figs. 11-13.

1969. *Indoplanorbis exustus* : Ray and Mukherjee, *Rec. zool. Surv. India*, **61**(3 & 4) : 422.

*Material.*—Sirmour Dist. : Coll. *M. Chandra* : 12 exs., a pond in Bauvaley, 6.i.1971; 13 exs., south bank of Renuka lake, 5.iv.1970; 89 exs., Sarahan, 28.vii.1972; 346 exs., Sarahan, 29.vii.1972; Coll. *H. P. Agrawal* : 10 exs., a pond near Chirvadhar 5 km. from Rajgarh, 27.vii.1971; 33 exs., Sarahan, 8.ix.1971. Solan Dist. : Coll. *M. Chandra* : 6 exs., Kuthar, 16.i.1971. Simla Dist. : Coll. *H. P. Agrawal* : 75 exs., Mashobra, 8.ix.1971. Bilaspur Dist. : Coll. *M. Chandra* : 54 exs., Bilaspur, 18.iv.1972; Coll. *K. K. Mahajan* : 2 exs., Ghagas village, 14.viii.1972; 345 exs., Dukali, 25.viii.1972; 236 exs., Maijpur, 27.viii.1972.

*Distribution.*—Himachal Pradesh (first record) : as above. Elsewhere : very common throughout Asia (India, Bangla Desh, Pakistan, Sri Lanka, Burma, Malay Peninsula and Archipelago, Indo-China, Thailand, China, Tibet and Iran).

Sewell (1931) recorded this planorbid mollusc from the pre-historic excavations at Mohanjodaro, Sind.

*Remarks.*—This is a very common species but not as common and wide spread as the species of *Lymnaea*. This mollusc is the carrier of a serious cattle-pest, *Schistosoma spindalis*. Living specimens inhabit sluggish streams, stagnant ponds and often attach themselves to aquatic plants. The living animal carries the shell with the wider end of the aperture on its right side.

Genus **Gyraulus** Charpentier, 18379. **Gyraulus convexiusculus** (Hutton)

1849. *Planorbis convexiusculus* Hutton, *J. Asiat. Soc. Bengal*, **18**(2): 657.  
 1969. *Gyraulus convexiusculus*: Ray and Mukherjee, *Rec. zool. Surv. India*, **61**(3 & 4): 424.

*Material*.—Solan Dist.: Coll. *M. Chandra*: 19 exs., a nullah near Deli, 6.xi.1971; Coll. *H. P. Agrawal*: 92 exs., a stream in Parwanu, 26.iii.1971. Sirmour Dist.: Coll. *H. P. Agrawal*: 30 exs., a pond near Chirvadhar—5km. from Rajgarh, 27.vii.1971; 5 exs., Gaura, 5.viii.1971. Simla Dist.: Coll. *H. P. Agrawal*: 133 exs., Taradevi, 10.iv.1972; 10 exs., Kasumpti, 25.iv.1972.

*Distributiin*.—Throughout Asia (India, Sri Lanka, Burma, Bangla Desh, Pakistan, Iran, Afghanistan, Malay Peninsula and Archipelago, Indo-China, Thailand, China, Philippines and Japan) (Annandale and Prashad, 1919; Bentham Jutting, 1956).

*Remarks*.—The specimens are typically flattened small shells of different sizes. The largest specimen measures: height, 1.5 mm., diameter, 3.5 mm. The animal is blackish or dusky brown in colour. Living specimens are common in tanks, marshes and along marshy banks.

## Family (v) LYMNAEIDAE

Hubendick (1951) has made a thorough revision of the family and has reduced the multitude of species to approximately forty. Among the earlier works of revision of the family mention may be made that of Baker (1911) and Annandale and Rao (1925). The last named authors have contributed much to our knowledge of Indian Lymnaeidae. The variations in the shape of the shell etc., exhibited by them are so great that many sub-specific forms were recognised by Annandale and Rao (1925).

## Subfamily LYMNAEINAE

Genus **Lymnaea** Lamarck, 179910. **Lymnaea auricularia** (Linnaeus)

1758. *Helix auricularia* Linnaeus, *Syst. Nat.* (ed. X): 774.  
 1969. *Lymnaea auricularia*: Rajgopal and Subba Rao, *Proc. Symp. Moll. Mandapam*, Pt. 1: 102.



*Material* : Sirmour Dist. : Coll. M. Chandra : 8 exs., a tank in Renuka, 6.iv.1970.

*Distribution* : Himachal Pradesh (first record) : as above. According to Mozley (1935) its distribution is Europe as far south as Spain and Italy; Northern Asia; Afghanistan and Kashmir. But according to Hubendick (1951) *L. auricularia* is a superspecies complex in which he includes the form *rufescens* Gray along with many other Asiatic species. According to this interpretation, the geographical distribution of *auricularia* would extend over a much wider area.

*Remarks*.—The shell is thin and fragile with short acuminate spire and very oblique and greatly inflated body whorl. Columella is twisted and dilated over the narrow umbilicus. The colour of periostracum is shining light brown to light olive green.

### 11. *Lymnaea stagnalis* (Linnaeus)

1758. *Helix stagnalis* Linnaeus, *Syst. Nat.* (ed. X) : 774.

1969. *Lymnaea stagnalis* : Rajgopal and Subba Rao, *Proc. Symp. Moll. Mandapam*, Pt. 1 : 100.

*Material*.—Bilaspur Dist. : Coll. K. K. Mahajan : 3 exs., Darlamour, 10.viii.1972; 23 exs., Bilaspur, 11.viii.1972.

*Distribution*.—Himachal Pradesh (first record) : as above. Elsewhere : India (Kashmir). Hubendick (1951) states: "The geographical range of *L. stagnalis* extends over almost the whole of Europe, and the western part of North America. The species inhabits all Asia with the exception of the most southern regions, and probably also the extreme north-eastern region. The range extends from Asia Minor, Syria, and Iran in the south, to Obdorsk in the north and Kamchatka in the east. The species is widely distributed in North America. According to Baker (1911) the range extends from the lake basins in a north-westerly direction to the Yukon River in Alaska. In the western states the species occurs to the north of the 37th parallel. It is noteworthy that the species inhabits the Alaska Peninsula but is absent along the east coast of America as well as on Newfoundland. Furthermore, the species is absent on Greenland and Iceland. The species is secondarily introduced in some areas, for instance New Zealand".

Subgenus *Pseudosuccinea* Baker, 1908

Baker (1908) erected *Pseudosuccinea* as a genus for the

Succinea-like forms, but Annandale and Rao (1925) made it a subgenus of *Lymnaea*.

## 12. *Lymnaea* (*Pseudosuccinea*) *acuminata* Lamarck

### The Acuminated *Lymnaea*

1822. *Limnaea acuminata* Lamarck, *Hist. Nat. Anim. sans. Verteb.*, **6**(2): 160.

1969. *Lymnaea acuminata*: Ray and Mukherjee, *Rec. zool. Surv. India*, **61**(3 & 4): 425.

*Material*.—Solan Dist.: Coll. *M. Chandra*: 83 exs., Kunihar, 19.ix.1970; Coll. *H. P. Agrawal*: 1 ex., Giripul, 24.iv.1971; 8 exs., Kuni Khud, 3.viii.1971. Simla Dist.: Coll. *H. P. Agrawal*: 5 exs., a pond in Taradevi, 3.ii.1971; 6 exs., a pond in Taradevi, 17.iii.1971; 10 exs., Mashobra, 8.xii.1971. Bilaspur Dist.: Coll. *M. Chandra*: 12 exs., Meiri Kattaushara, 7.iv.1972; 38 exs., Bilaspur, 13.iv.1972; 48 exs., Old Bilaspur, 15.iv.1972; 34 exs., Bilaspur, 16.iv.1972; Coll. *H. P. Agrawal*: 268 exs., Ghagas village, 7.iii.1973; 270 exs., Kandror village, 9.iii.1973; 379 exs., Bamta village, 10.iii.1973.

*Distribution*.—Himachal Pradesh (first record): as above. Elsewhere: Widely distributed species recorded from Bengal, Bihar, Bombay, Roorkee, Rajasthan, Mussoree, Nagpur, Streeperambatoor in Southern India, Sind and Burma.

*Remarks*.—The largest specimen measures: height, 26 mm., diameter, 14.5 mm. The main feature of the shell of this species which distinguishes it from that of *L. luteola* and *L. pinguis* is the rather abruptly narrowed base of the spire, resulting in a more or less strong demarcation between the bodywhorl and the spire. The living specimens inhabit pools and ponds generally containing aquatic vegetation.

## 13. *Lymnaea* (*Pseudosuccinea*) *luteola* Lamarck

1838. *Limnaea luteola* Lamarck, *Hist. Nat. Anim. sans. Verteb.*, **8**: 411.

1969. *Lymnaea luteola*: Ray and Mukherjee, *Rec. zool. Surv. India*, **61**(3 & 4): 427.

*Material*.—Solan Dist.: Coll. *M. Chandra*: 10 exs., Ashni Khud, 19.vi.1970; 115 exs., Kuthar, 16.i.1971; Coll. *H. P. Agrawal*: 6 exs., Kuni Khud, 3.viii.1971. Sirmour Dist.: Coll. *M. Chandra*: 18 exs., Jamuna river in Ponta, 12.iv.1970; 13 exs., Renuka lake, 7.iv.1970; Coll. *R. N. Mukherji*: 184 exs., Naina-

tikkar, 19.xii.1970; Coll. *H. P. Agrawal* : 100 exs., a pond near Cirvadhar 5 km. from Rajgarh, 27.vii.1971. Simla Dist. : Coll. *H. P. Agrawal* : 12 exs., a pond in Taradevi, 17.iii.1971; 16 exs., Mashobra, 8.xii.1971; 14 exs., Taradevi, 10.iv.1972. Bilaspur Dist. : Coll. *M. Chandra* : 232 exs., Bilaspur, 11.iv.1972; Coll. *K. K. Mahajan* : 64 exs., Berryghat, 12.viii.1972; 15 exs., Alikhud, 13.viii.1972; 21 exs., Ghagas village, 14.viii.1972; Coll. *H. P. Agrawal* : 150 exs., Old Bilaspur, 11.iii.1973.

*Distribution.*—Throughout India, Pakistan, Nepal, Burma and Sri Lanka.

*Remarks.*—This species is represented by a good series. The largest specimen measures : height, 20.5 mm., diameter, 14 mm. There is considerable variation in the proportion of the width to the height of the shell in this species. Alive specimens were found sticking to stones, blades of grass, leaves and stem of plants in water.

Family (vi) FERUSSACIIDAE

Genus *Glessula* Martens, 1860

14. *Glessula paupercula* (Blanford)

1861. *Achatina paupercula* Blanford, *J. Asiat. Soc. Bengal*, **30** : 362, pl. 1, fig. 16.

1960. *Glessula paupercula* : Satyamurti, *Bull. Madras Govt. Mus.* (Nat. Hist. Series), **6**(4) : 78.

*Material.*—Solan Dist. : Coll. *M. Chandra* : 1 ex., Kunihar, 19.ix.70.

*Distribution.*—Himachal Pradesh (first record) : as above. Elsewhere : India : Kolamullays, Patchamullays, Travancore Hills and Kurnool Hills.

*Remarks.*—The shells are spindle-shaped and glossy; somewhat horny brown in colour. Whorls are seven in number.

Family (vii) SUBULINIDAE

Subfamily OPEATINAE

Genus *Opeas* Albers, 1850

15. *Opeas annandalei* Godwin-Austen

1917. *Opeas gracilis* (?) Godwin-Austen, *Rec. Indian Mus.*, **13** : 351.

1960. *Opeas annandalei* : Satyamurti, *Bull. Madras Govt. Mus.* (Nat. Hist. Series), **6**(4) : 85.

*Material*.—Bilaspur Dist. : Coll. *K. K. Mahajan* : 1 ex., Oyal village, 15.viii.1972; Coll. *H. P. Agrawal* : 1 ex., Lakhanpur, 6.iii.1973. Solan Dist. : Coll. *H. P. Agrawal* : 4 exs., Saproon, 5.i.1973.

*Distribution*.—Himachal Pradesh (first record) : as above. Elsewhere : Barkuda Island, Chilka lake, Orissa.

*Remarks*.—Specimens were found in earth under the stones.

Family (viii) UNIONIDAE

Genus *Parreysia* Conrad, 1853

### 16. *Parreysia favidens* (Benson)

(The yellow-toothed mussel)

1862. *Unio favidens* Benson, *Ann. & Mag. Nat. Hist.*, (3) 10: 188.

1969. *Parreysia favidens* : Ray and Mukherjee, *Rec. zool. Surv. India*, 61(3 & 4) : 429.

*Material*.—Simla Dist. : Coll. *H. P. Agrawal* : 15 exs., Kufri, 18.vii.1971.

*Distribution*.—Himachal Pradesh (first record) : as above. Elsewhere : Throughout India. Also Pakistan and Bangla Desh.

*Remarks*.—Shells are small, pale olive-green to olive-yellow in colour. Specimens were found at the bottom of a big tank.

### 17. *Parreysia wynegungaensis* (Lea)

1860. *Unio wynegungaensis* Lea, *Proc. Acad. Nat. Sci. Philadelphia*, p. 331.

1960. *Parreysia wynegungaensis* : Satyamurti, *Bull. Madras Govt. Mus.* (Nat. Hist. Series), 6(4) : 145.

*Material*.—Simla Dist. : Coll. *H. P. Agrawal* : 11 exs., Tara-devi, 17.iii.1971.

*Distribution*.—Himachal Pradesh (first record) : as above. Elsewhere : India : Bengal, Maharashtra, Gujrat and Assam.

*Remarks*.—Young specimens could be collected from the muddy bottom of the tank.

Family (ix) CORBICULIDAE

Genus *Corbicula* Megerle von Muhlfield, 1811

### 18. *Corbicula occidens* Deshayes

1854. *Corbicula occidens* Deshayes, *Cat. Brit. Mus. Conchifera* : 223.

1960. *Corbicula occidens* : Satyamurti, *Bull. Madras Govt. Mus.* (Nat. Hist. Series), **6**(4) : 153.

*Material*.—Bilaspur Dist. : Coll. K. K. Mahajan : 7 exs., Bhakra-Nangal, 26.viii.1972.

*Distribution*.—Himachal Pradesh (first record) : as above. Elsewhere : India : Uttar Pradesh, Madhya Pradesh, Bengal, Bihar, Orissa and Assam, Sikkim.

*Remarks*.—The shell is moderately small, triangularly ovate, almost equilateral, rather inflated, and with the surface regularly and closely concentrically striated throughout.

#### SUMMARY

The present paper is the first comprehensive account of the molluscs of Simla Hills, based on collections made by the various tour parties from High Altitude Zoology Field Station, Solan. A total of eighteen species belonging to eleven genera of nine families are recorded. Out of eighteen species, sixteen species are recorded for the first time from this area. Brief field ecological observations, wherever possible, are included under respective species. Note on distribution of each species is made as complete as possible.

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