

FAUNA OF THE KASHMIR VALLEY : LEECHES*

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During May-June, 1954, and July-September, 1955, faunistic surveys were carried out by the parties of the Zoological Survey of India. The present note deals with the collection of leeches made by these parties as well as the earlier named material from the Kashmir Valley present in the collection.

I am grateful to the Director, Zoological Survey of India, Calcutta, for facilities. My thanks are due to Dr. M. L. Bhatia, University of Delhi, for his guidance and help in the identifications.

Family GLOSSIPHONIDAE

Genus *Glossiphonia* Johnson

Glossiphonia complanata (Linnaeus)

List of specimens in the Zoological Survey of India

Z. S. I. Regd. No.	Locality.	Collector.
W 1441/1	Pond, Srinagar	Kashmir Survey Party.
W 1442/1	Achhabal Spring	Do.
W 3909/1	Near Dal Lake gate, Srinagar	Do.
W 3910/1	Chichilura Village	Do.
W 3911/1	Achhabal	Do.
W 3912/1	Ganderbal	Do.
W 3913/1	On way to Kukarnag about 6 miles from Achhabal	Do.
W 3914/1	Nagdandi near Achhabal	Do.
W 4915/1	Tangraarg	Do.

Distribution.—This species “is found in the United States and in Europe, where it is often exceedingly common; and its range appears to extend through Asia to Japan, where it has been recorded by Oka. That it wanders into parts of Northern India has now been shown by

*A part of this paper was read before the 42nd Session of the Indian Science Congress at Baroda, 1955.

Moore'' (Harding and Moore)¹. In India it has so far been recorded from Kashmir only.

It is polytypic having a variety *G. complanata concolor* Apáthy in Europe. Regarding the taxonomic status of this variety, opinions are diverse amongst workers. Apáthy assigns it a specific rank while Harding and Moore (*op. cit.*, p. 58), following Blanchard, consider it only a variety of *Glossiphonia complanata* (Linnaeus).

Glossiphonia weberi Blanchard

List of specimens in the Zoological Survey of India

Z. S. I. Regd. No.	Locality.	Collector.
W 1440/1	Harwan	Kashmir Survey Party.

Distribution.—This species is recorded from Sumatra, Burma, besides being widely distributed throughout India. Harding & Moore (*op. cit.*, p. 62) state that *G. weberi* appears to be a tropical form derived from *G. heteroclita* which is widely distributed in North America and Europe besides occurring in Burma. They further state that the former species "has just, and only just, attained to specific rank". The subspecies *G. weberi lata* Oka has been recorded from Hawaii.

Genus **Hemiclepsis** Vejdovsky

Hemiclepsis marginata asiatica Moore

List of specimens in the Zoological Survey of India

Z. S. I. Regd. No.	Locality.	Collector.
W 3916/1	Achhabal	Kashmir Survey Party.
W 3917/1	Ganderbal	Do.

Distribution.—The forma typica *Hemiclepsis marginata marginata* "extends throughout the greater part of Europe to Western Asia" (Harding & Moore, *op. cit.*, p. 86). In India it has been recorded from Kumaon, Nepal, Orissa, Hoshangabad, Bengal and Bombay.

The subspecies *H. marginata asiatica* Moore is recorded in India from Kashmir and Lucknow (Bhatia, 1939, p. 11)². The form appears to be intermediate between *H. marginata* of Europe and *H. casmiana* Oka from China and Japan. It differs from the forma typica in the position of the eyes, annulation and colouration.

Specimens of this species at Ganderbal were found to have their young ones attached to their ventral side along the lateral margins.

¹ Harding, W.A. & Moore, J. P., *Fauna Brit. India*, p. 60 (1927).

² Bhatia, M. L., *Bull. Dept. Zool. Panjab Univ.*, 2, p. 11 (1939).

Family ERPOBDELLIDAE

Genus *Erpobdella* Blainville*Erpobdella octoculata* (Linnaeus)*List of specimens in the Zoological Survey of India*

Z. S. I. Regd. No.	Locality.	Collector.
W 1428/1	Manasbal lake	Kashmir Survey Party.
W 1429/1	Shadipur	Do.
W 1430/1	Dal lake, Srinagar	Do.
W 1431/1	Srinagar	Do.
W 1432/1	Achhabal	Do.
W 1433/1	A nallah from the Dal lake into Jhelum river	Do.
W 1434/1	Srinagar	Do.
W 1435/1	Wular lake	Do.
W 1436/1	7 miles from Gandarbal on road to Sonamarg	Do.
W 1437/1	Gandarbal	Do.
W 1438/1	Stream from water works leading to Harwan hatchery	Do.
W 3918/1	Nishat bagh, Srinagar	Do.
W 3919/1	Sopore	Do.
W 3920/1	Gulmarg	Do.
W 3921/1	Telbal nalla, Dal lake, Srinagar	Do.
W 3922/1	Ganderbal	Do.
W 3923/1	Achhabal	Do.
W 3924/1	Chashma Shahi, Srinagar	Do.
W 3925/1	Near the Dal lake gate, Srinagar	Do.
W 3926/1	Jhelum river, Baramula	Do.
W 3927/1	Banhal	Do.
W 3928/1	Camping ground channel from Verinag Spring	Do.
W 3929/1	Ningle	Do.
W 3930/1	Katpora	Do.

Distribution.—“This species is widely distributed throughout temperate Europe and Asia, from the British Isles to Japan and from Scandinavia and northern Siberia to the Mediterranean” (Harding & Moore, *op. cit.*, p. 134). In India it is recorded from Kashmir and Lahore.

Bhatia (*op. cit.*, p. 12) recorded the greatest height 7,500 ft. from Kaimul, Kashmir. However, specimens have been collected from an altitude of about 9,000 ft. by me from Gulmarg during July-September 1955. This appears to be a new altitude record in India.

Enquiries made at Harwan hatchery show that the species under report is parasitic on the roe of trout. A careful study of these forms is likely to bring out some interesting ecological facts.

Family HIRUDIDAE

Subfamily HIRUDINAE

Genus **Haemopsis** Savigny

Haemopsis indicus Bhatia

List of specimens in the Zoological Survey of India

Z. S. I. Regd. No.	Locality.	Collector.
W 3931/1	Tangmarg	Kashmir Survey Party.
W 3932/1	Sopore	Do.
W 3033/1	Ganderbal	Do.

Distribution.—This species is endemic in Kashmir.

Bhatia' states that this species "is very similar to the typical *Haemopsis* and its genital organs resemble in most of the details with those *H. sanguisuga* (Linnaeus)," which is very widely distributed in the Palaearctic Region.

List of other species known from Kashmir

Besides the above, the following species are also known from Kashmir. These are not, however, represented in the Zoological Survey of India collection. Their range of distribution is given below.

Species.	Distribution.
1. <i>Glossiphonia cruciata</i> Bhatia	Kashmir.
2. <i>G. lobata</i> Bhatia	Do.
3. <i>Helobdella stagnalis</i> (Linnaeus)	Canada, United States from the Atlantic to the Pacific Coast, South America to the greater part of Europe into Western Asia and Kashmir. "It probably occurs throughout the northern and southern temperate regions of the globe."
4. <i>Theromyzon mathaii</i> Bhatia	Kashmir.
5. <i>Theromyzon sexoculata</i> (Moore)	France, Sweden, Russia, Assam and Kashmir.
6. <i>Barbronia weberi</i> (Blanchard)	Java, Sumatra, Celebes, New Guinea, Borneo, Philippines, Pengona, Hoshangabad, Berar, C. P., Nepal Valley, Kumaon, Simla hills, N. W. F. P. and Kashmir.
7. <i>Hirudinaria</i> (<i>Poecilobdella</i>) <i>granulosa</i> (Savigny).	Widely distributed in India.

SUMMARY

An up-to-date list of specimens in the Zoological Survey of India is given. Taxonomic affinities of some species of interest are also discussed. Besides, a list of species known from Kashmir, but not represented in the Zoological Survey of India collection is also appended.

¹ Bhatia, M. L., *Proc. nat. Acad. Sci., India*, 10, part 4, p. 141 (1940).