Bull. Sugadaira Montane Res. Cen. No. 9, 69-72 pp. (1988)
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A Preliminary Report on the Observation and Collection of Cladocera (Arthropoda: Crustacea) in Six Lakes of Inner Mongolia.

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Synopsis

Cladocera samples were collected from six lakes in Inner Mongolia. As a result of rough identification at Huhehot 14 genera were detected from the samples. All the samples were kept in the Scientific Reseach Institute of Environmental Protection of the Inner Mongolia at Huhehot.

Introduction

Samples of Cladocera were collected from six lakes in Inner Mongolia and roughly observed under a portable microscope (Nikon). Three of the lakes are located in glasslands around Xilinhot City and the remainder three are located along the River Huang He. The former lakes are resulted from a scooped basin and the latter are river-bed lakes. These are situated in the Mongolia Steppe with a semi-arid cold climate and at the altitude of 700-1300 m above sea level. Most of them play an important role as watering places of livestocks, and also are utilized for fish cultivation. Consequently every lake was shallow and more or less eutrophicated.

The samples were collected with a 15cm wide conical net of 94 μm Nitex webbing protected by a hinged screen of stainless steel hardware cloth to keep out larg items of debris. By means of a 150cm sectional pole the net was worked vigorously in beds of aquatic macrophytes and over other kinds of substrate in the littoral zone. The samples were preserved in 5% formalin and stored in glass vials. At the same time, water temperature, pH and electric conductivity were measured.

The samples of Cladocera were identified at genus level in the Scientific Research Institute of Environmental Protection of the Inner Mongolia Autonomous Region at Huhehot. Table 1 lists all the genera of Cladocera found in the samples. All samples were kept in the Institute. Consequently this report is composed of the brief descriptions on the look of lakes, the environmental factors measured and the genus of Cladocera occurred at the time of researches.

1. Lake Zhagacitainor (札格斯台諾尔)

August 5, 1987 at 4:20 p. m.; water temperature: 20.5℃, pH: 8.2, electric conductivity: 270 μs.

The lake is situated 35 km to the south-east from Baiinxile Livestock Farm (Inner Mongolia Grassland Ecosystem Research Station). The lake basin is oval. It receives no rivers or streams, and the inflowing water is coming from springs on the bottom. It also has no outflow rivers. The substratum of the littoral zone is sand without macrophyte vegetations. The water color of the lake was visible green because of the bloom of phytoplankton. A lot of gammalid was observed on the bottom of the littoral zone.

Only one species of Cladocera, *Daphnia* sp. belonging to *longispina* group, was collected.

2. Lake Baiinkurnor (白音庫倫諾尔)

August 6, 1987 at 11:00 a. m.; air temperature: 14.0℃, water temperature: 15.8℃, pH: 9.0.

The lake is situated 70 km to the south from the center of Xilinhot City. The lake was exceedingly shallow and the water level at the time of research was low. At the sampling position about 50 meters away from the shoreline, the depth was no more than 15 cm. The substratum of littoral zone is sandy mud without macrophyte vegetations. The lake water was transparent.

Only one species of Cladocera, *Moinodaphnia* sp. was collected.

3. Unnamed lakes

August 6, 1987 at 1:30 p. m.; water temperature: 18.0℃, pH: 7.5.

Two lakes are situated 105 km to the south from the center of Xilinhot City and located on both sides of the main road connecting Xilinhot and Zhangjiakou. The dense emerged and submerged vegetations covered on the littoral zone of the lakes.

9 genera of Cladocera occurred; *Daphnia* (including at least two species one belongs to *longispina* group and the other belongs to *pulex* group), *Simocephalus*, *Ceriodaphnia*, *Scapholeberis*, *Acroperus*, *Alona*, *Oxyurella*, *Graptoleberis* and *Chydorus*.

4. Lake Hasuhai (哈素海)

August 10, 1987 at 11:15 a. m.; water temperature: 22.0℃, pH: 7.2, electoric conductivity: 1,115 μs.

The lake is situated 65 km to the west from the center of Huhehot. The surface area of the lake is 29.7 km^2 and mean depth is about 1 m. The lake is connected by many drainages with the Hwang Ho. The lake water was turbid with suspended sediments. The Cladocera sample was taken at the central part of the lake using a boat. A few

emerged vegetations grew thinly spaced at the sampling position.

Three genera of Cladocera were occurred; *Sida*, *Diaphanosoma* and *Bosmina*.

5. Nanhai at Baotou (包頭南海公園)

August 13, 1987 at 11:00 a. m.; electric conductivity: 1,803 μs.

The lake is located by the side of the Hwang Ho at Touho Region of Baotou City. The lake is utilized for a recreation area of peoples. The surface area of the lake is about 2 km^2. The lake water was turbid and tinged with dark-green color. The sample was collected at the central part of the lake using a boat. There was sandy mud bottom with a vegetation of cattail.

Two genera of Cladocera occurred; *Moinodaphnia* and *Ilyocryptus*.

6. Lake Wuliangsuhai (烏梁素海)

August 18, 1987 at 9:35 a. m.; water temperature: 21.0℃, pH: 6.8, electric conductivity: 3,040 μs.

This lake is located in the most east side of Houtao Plain. The lake water comes from many drainages originated from the Hwang Ho. The water flows into the lake after irrigating over Houtao Plain. It is the largest lake of the Hwang Ho River System. The surface area is 293 km^2 and the maximum depth is 2.5 m. The samples were collected at a central part of the lake by using boats. The dense vegetations of reed and cattail grew over the lake and many webbing water ways existed through the vegetations. The water was transparent but the color was brownish because of humic materials deposited thickly on the bottom. So the water of the bottom layer contained low or no oxygen.

Five genera of Cladocera occurred; *Simocephalus*, *Scapholeberis*, *Ceriodaphnia*, *Pleuroxus* and *Chydorus*.

Acknowledgement

I am indebted to Dr T. Katoh, Institute of Environmental Science and Technology, Yokohama National University, and to Mr Zhang Ke Wei, Fishery Research Institute of Inner Mogolia, for the assistance of field surveys. I am also most grateful to Mr Lian Hao, Director of Construction and Environmental Protection Bureau of Inner Mongolia Autonomous Region, and to the members of the Scientific Research Institute of Environmental Protection of Inner Mongolia, for their help and encouragement throughout the researches.

Table 1. List of Cladocera collected from six lakes of Inner Mongolia. Numbers indicate the lakes in the text respectiverly.

	1	2	3	4	5	6
Sididae						
Sida				*		
Diaphanosoma				*		
Daphniidae						
Daphnia longispina group	*		*			
Daphia Pulex group			*			
Simocephalus			*			*
Ceriodaphnia			*			*
Scapholeberis			*			*
Bosminidae						
Bosmina				*		
Moinidae						
Moinodaphnia		*			*	
Macrothricidae						
Ilyocryptus					*	
Chydoridae						
Acroperus			*			
Alona			*			
Oxyuertla			*			
Graptoleberis			*			
Pleuroxus						*
Chydorus			*			*