

**Comparative studies of macroinvertebrate communities
between the Poyang Lake,
the largest freshwater lake in China,
and neighboring reaches of the Changjiang (Yangtze) River**

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Abstract – Comparative ecological studies on benthic macroinvertebrates were conducted both in the Poyang Lake, the largest freshwater lake in China, and in its adjacent reaches of the Yangtze River. Field investigations were carried out twice, both in March–April, 1989 and April, 1998. Altogether 80 species were identified, among which, 1 nemertea, 1 nematoda, 1 polychaeta, 14 oligochaetes, 3 hirudineae, 25 molluscs, 29 insects, and 4 miscellaneous animals were reported. The occurrence of some marine-nature invertebrates in Poyang Lake implies that the lake should have been historically affected by marine fauna. The mean density (ind. m⁻²) and biomass (wet weight, g m⁻²) in the entire lake was 553 and 228.4 in 1989, 555 and 151.2 in 1998, respectively; whereas in the river was 302 and 27.49 in 1989, 188 and 1.32 in 1998 respectively. In terms of functional feeding groups, collector-filterers and scrapers were predominant in the lake, whereas collector-gatherers and shredders were relatively rich in the river. Community analysis based on K-dominance curves, Shannon-Wiener, Margalef's, and Simpson diversity indices demonstrate that the zoobenthic fauna are more diverse in the Poyang Lake than in the mainstream of the Yangtze River.

Key words: macroinvertebrates, Poyang Lake, Yangtze River.

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