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Food algae for Lesser Flamingos: a stocktaking

Lothar Krienitz[1], Doris Krienitz[2], Pawan K. Dadheech[3], Thomas Hübener[4], Kiplagat Kotut[5], Wei Luo[6], Katrin Teubner[7] and Wilferd D. Versfeld[8]

1 Department of Experimental Limnology, Leibniz-Institute of Freshwater Ecology and Inland Fisheries, Stechlin, Germany
2 Großwoltersdorf, Germany
3 Department of Microbiology, Central University of Rajasthan, Kishangargh, India
4 Department of Botany, University of Rostock, Rostock, Germany
5 Embu University College, Embu, Kenya
6 SOA Key Laboratory for Polar Science, Polar Research Institute of China, Shanghai, China
7 Department of Limnology & Bio-Oceanography, University of Vienna, Vienna,Austria
8 Etosha Ecological Institute, Okaukuejo, Namibia

Abstract

Lesser Flamingo, the flagship species of saline wetlands of Africa and India, is a specialised feeder subsisting on microscopic cyanobacteria and algae. To establish the relationship between flamingo occurrence and food algal abundance and quality, an extensive microphyte survey in more than 150 sampling trips to seven countries over a 15-years period (2001–2015) was carried out. The 44 habitat sites included the core soda lakes in eastern Africa (Bogoria, Nakuru, Elmentaita, Oloidien), where the highest numbers of flamingos were observed, and five breeding sites in eastern and southern Africa as well as in north-western India. A reference describing the diversity of microphytes was established including members of three orders of cyanobacteria and nine orders of eukaryotic algae that potentially could act as food source for Lesser Flamingos. Preferred food organisms consisted of filamentous cyanobacteria, mainly *Arthrospira*, as well as benthic diatoms. Further investigation on the suitability of other microphytes as alternative flamingo diet revealed the food potential of chlorophytes and euglenophytes. This paper discusses a phycological perspective in the feeding ecology of Lesser Flamingos. The survey findings can assist scientists and conservationists in evaluating the potential of wetlands to support flocks of this endangered bird.

Keywords

Arthrospira fusiformis; Cyanobacteria; Benthic diatoms; Extreme habitats; Food web interaction; Saline wetlands; Tropical soda lakes