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Quantitative comparison suggests functional classification for
seed-dispersing waterfowl

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1 **Defining functional groups using dietary data: quantitative comparison**
2 **suggests functional classification for seed-dispersing waterfowl**

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13 **Abstract**

14 Recent years have seen considerable advances in ecological understanding of the functional
15 role(s) of biodiversity and the connections between biodiversity, ecosystem function and
16 ecosystem service provision. Functional approaches have become important tools for
17 simplifying biodiversity-ecosystem function relationships, but they also have some obvious
18 weaknesses. In particular, since analyses that use functional groups treat members of a group
19 as ecologically interchangeable, functional groups must be defined at a level that simplifies
20 ecological complexity yet retains key ecological distinctions between groups of species. We
21 developed a data-driven approach to functional group definition and applied it to a case study
22 of 16 species of seed-dispersing Afrotropical waterfowl for which we created seed dispersal
23 functional groups using both *a priori* categories, as typically done in previous studies, and a
24 hierarchical clustering approach. Relevant functional differences and similarities occur
25 among the waterfowl, particularly in the types of plant family dispersed. We found evidence

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