

# Swan News

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# Dietary habits of the Black-necked Swan *Cygnus melancoryphus* in a Ramsar wetland of southern Chile

Carlos Velásquez & Eduardo Jaramillo

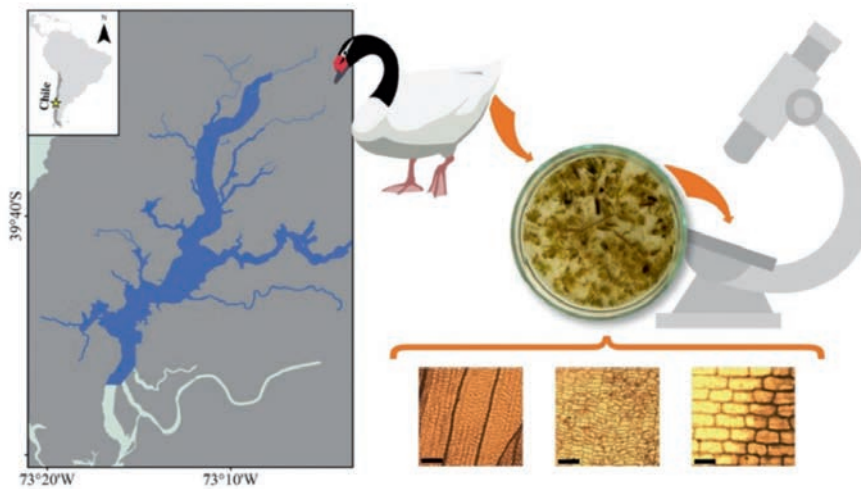


Figure 1. Location of the Río Cruces study area in Chile, and cell structure for vegetation from swan faeces inspected under a microscope.

The Black-necked Swan *Cygnus melancoryphus* is an aquatic herbivorous bird, native of the southern tip of South America. Faeces collected from 152 swans during six dates between 2012 and 2017 at the Río Cruces wetland, a Ramsar site in south-central Chile (ca. 39°S; Fig. 1), were examined under the microscope (micro-histological analysis), to test the hypothesis that the swans' consumption of food is related to macrophyte cover within the wetland.

Results of the faecal analyses showed that dietary items were composed of six macrophyte species representing four life forms. However, remains of just the submerged *Egeria densa* and *Potamogeton pusillus*, as well as those of the floating *Potamogeton lucens*, were always present in the examined faeces. The pattern of macrophyte occurrence in the swans' faeces correlated positively with the spatial cover of those macrophytes, inferred from analysis of remote sensing data. Since the swans consume macrophytes in accordance with their abundance, it is argued that food items consumed by Black-necked Swans can be used as proxy to monitor spatio-temporal variability in the cover of those plants along coastal wetlands, where *C. melancoryphus* used to live as a permanent resident. Moreover, the close relationship found in this study between the swans' food and macrophyte cover highlights the need to preserve shallow-bottomed lakes, since these provide the habitat where most of aquatic macrophytes – the primary food source for swans in Chilean wetlands – flourish.

The full paper (Velásquez *et al.* 2019) is available online, and can be read on the PLOS ONE website at <https://doi.org/10.1371/journal.pone.0226331>

## References

Velásquez C, Jaramillo E, Camus P, Labra F, San Martín C (2019) Dietary habits of the black-necked swan *Cygnus melancoryphus* (Birds: Anatidae) and variability of the aquatic macrophyte cover in the Río Cruces wetland, southern Chile. *PLOS ONE* 14(12): e0226331. <https://doi.org/10.1371/journal.pone.0226331>

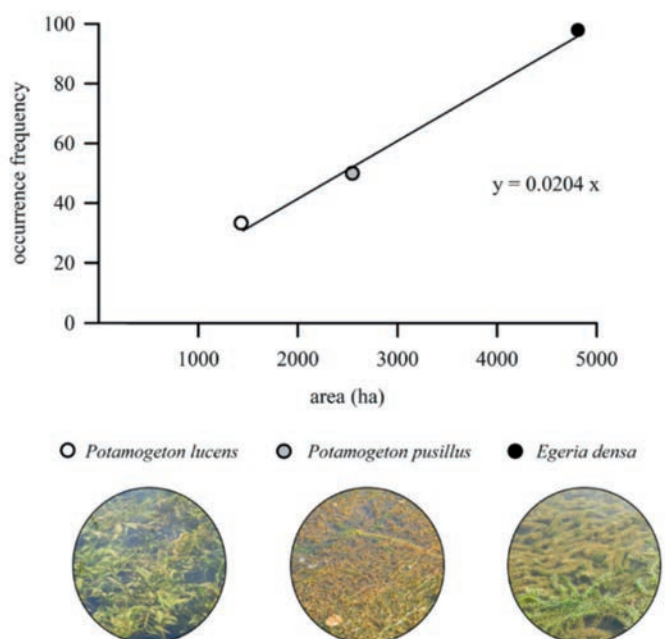


Figure 2. Frequency of occurrence of different plant species in the swans' faeces, in relation to the area of macrophyte cover at the site.