

Scientific note

Some like it hot – hummingbirds making use of hot springs in Chilean Patagonia

(Neornithes, Apodiformes, Trochilidae)

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With a wide latitudinal (Chile, Argentina: ~28–56°S) and altitudinal (0–2000 m) distribution range, the green-backed fire crown *Sephanoides sephanioides* (Lesson, 1826) represents the southernmost hummingbird species of the world. Recently an amplification of its distribution in Argentina has been reported which is probably due to its plasticity in the use of different habitats as well as its use of flowers and tiny insects as food source (Marinero et al. 2012). The species can be found in forests and different open environments including urban areas.

A. Bräuning and M. Könnecke have observed approx. 10 hummingbirds bathing in a hot river in a half open environment in Northern Chile, at the Socos hot springs (30.732234°S, 71.493837°W), close to Ovalle, during a cold winter morning around 9 a.m. on August 15, 2008 during 16 minutes (Fig. 1). The birds were sitting in the hand warm river for up to approx. one minute, shooing each other out of the water to enter the river again a short time later. Between baths they were resting on the branches of a fallen dead tree, on rocks and on a fence next to the river. They had been already bathing before and kept bathing after the observation. V. Häussermann and G. Försterra have seen three birds of the same species bathing in a small, shallow, hand warm pool which is part of the hot Porcelana river (up to 62 °C) in the Valdivian rain forest in Comau Fjord, Chilean Patagonia (42.458222°S, 72.466080°W) in late April 2004 (autumn), during the late afternoon (approx. 6 p.m.). Between baths the birds have been resting on the trees above the hot springs.

Due to its small size but proportionally major exposed body surface this hummingbird species loses major amounts of heat, and also dehydrates fast, especially during the night or during periods without food or water intake (Hartmann Bakken & Sabat 2007). During night time its body temperature drops from nearly 40 °C to 18–20 °C (Hainsworth & Wolf 1972). The consumption of cold liquid food, typical for humming birds and practically all other nectarivorous birds, also has high energetic costs (Lotz et al. 2003). The bath in hot springs could help the birds to warm up and save energy during times of lower environmental temperatures.



Fig. 1. The green-backed fire crown, *Sephanoides sephanioides*, bathing in a hot river at Termas de Socos, northern Chile. Photo: Markus Könnecke.

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