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PRESENCE OF THE WHITE-THROATED HAWK (*BUTEO ALBIGULA*) IN THE TEMPERATE RAINFOREST OF AYSÉN, SOUTHERNMOST CHILE

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Presencia del Aguilucho Chico (*Buteo albigula*) en el bosque lluvioso templado de Chile austral.

Key words: White-throated Hawk, *Buteo albigula,* temperate rainforest, habitat, distribution, Patagonia, Chile.

The White-throated Hawk (*Buteo albigula*) is distributed from Venezuela and Colombia to Chile and Argentina (del Hoyo *et al.* 1994, de la Peña & Rumboll 1998), with preference for the temperate rainforests of the Andes mountain range (Olrog 1985, Navas & Manghi 1991, Casas & Gelain 1995, Thiollay 1996). It has been listed as rare along its entire geographic range (Fjeldsa & Krabbe 1990). Particularly in Chile, the White-throated Hawk's populations seem decreasing due to the loss of the native forests (Jaksic *et al.* 2001). The natural history of this Hawk is virtually unknown (Bierregaard 1998) and only recently have migrations (Pavez 2000), nesting (Gelain *et al.* 2001), nest characteristics (Trejo *et al.* 2001), hunting methods and movements (Figueroa *et al.* 2001) been described.

According to Pavez (2000), the current distribution of the White-throated Hawk in Chile extends from the Atacama province in the north to the Llanquihue province in the south (22º to 41ºS). The presence of the species has not been previously documented for the Aysén region (Mella 1999). Here we report for the first time the presence of the White-throated Hawk in Aysén, and we comment the extension of its southern distribution range in Chile.

The Aysén region (hereafter called Aysén) lies roughly between 44º and 49ºS. In this region, the Andes range decline, in height

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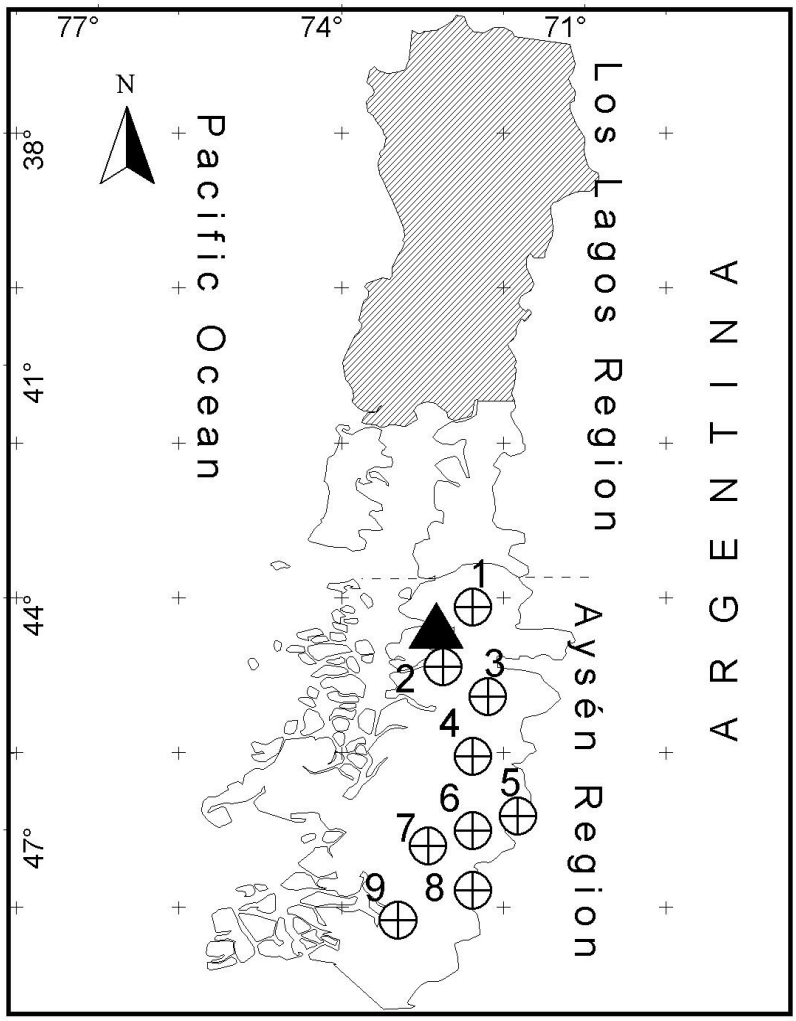

FIG. 1. Extension of the southern distribution range of the White-throated Hawk (*Buteo albigula*) in Chile. The black triangle points out the new record place in Aysén and the cross-lined area indicates the southern distribution range according to Pavez (2000), in Petrohué. The numbered dots point out the studied localities: (1) La Junta, (2) Queulat, (3) Cisne Medio, (4) Lago Atravesado, (5) Chile Chico, (6) Mallín Grande, (7) Puerto Tranquilo, (8) Valle Chacabuco, (9) Lago Vargas.

towards the south and the average elevation of passes is c. 1000 m. Precipitation declines from 4300 mm at Puerto Cisnes (44º31'S, 72º50'W) to roughly 240 mm at Chile Chico (46º33'S, 71º43'W), an east-west distance of roughly 200 km (Cruces *et al.* 1999). A marked vegetation gradient parallels the climatic trend, with the diverse and evergreen Valdivian temperate rainforest on the western slope being replaced on the eastern slope by deciduous *Nothofagus* forests, park-like woods, shrubs, and finally the steppe and bunch-

grass that is characteristic of Patagonia (Gajardo 1994). The entire Aysén has been heavily impacted by human activities in recent years. Widespread clearing of forests with fire in the 1930s and 1940s led to the creation of extensive areas of pasture (Grosse 1974).

In 1998, we began a long-term study of distribution and abundance of rodents and raptors throughout Aysén. Between 1998 and 2001, we made 11 surveys from Palena river (43º46'S, 72º26'W) to Vargas river (47º40'S, 73º00'W). Surveys were undertaken in nine localities (Fig. 1) during winter, winter-spring, and spring 1998, autumn, winter, and spring 1999 and 2000, and autumn and spring 2001. Total time surveying varied from 15 (winter 1998) to 19 days (remaining surveys), and two or three days for each locality. In addition, we made observations from a vehicle (30–70 km/h) during our movements among localities. Detections were made using naked eyes and binoculars or by vocalizations of the birds. In addition, we asked to villagers to learn about the presence of inconspicuous or rare raptors, e.g., Chilean Bicolored Hawk (*Accipiter chilensis)* and White-throated Caracara (*Phalcoboenus albogularis*).

On 3 May 2001, at 12:13, during an inspection in a forested area where a villager told us having seen "peucos" ("peuco" is a generic name used for hawks by the local people), we sighted for the first time a White-throated Hawk in Aysén. The site is near the Schilling stream (44º05'S, 72º17'W), 12 km south-west of La Junta (Fig. 1), in the Risopatrón Valley.

The hawk, an immature bird, was perched on a bare branch of an old (15 m height, 0.8 m diameter) arrayán (*Luma apiculata*) 30 m from the Austral Highway. General characteristics of the specimen corresponded to those described by Johnson (1965) for hawks observed in central-southern Chile. We observed it by means of binoculars and naked eyes for 24 min (12:13 to 12:37). During our observation, a Chimango Caracara (*Milvago chimango*) unsuccessfully attempted to chase the hawk away by persistent, harassing flights for at least five min. In addition, the White-throated Hawk appeared not alarmed by our presence, until we approached to within 7 to 8 m of the perching tree, when the bird flew away and perched on the branch of a nearby old arrayán (20 m tall), at a distance of 8 to 9 m. When we approached again, the bird flew away and landed on a branch of an old tepa (*Laureliopsis philippiana*, 25 m tall), 10 m away. The hawk remained there until we left the site. During the spring of 2001, we visited the site again, but no White-throated Hawk was observed.

The habitat where the White-throated Hawk was recorded was impacted by humans, as described above. Currently, the site supports an evergreen second-growth forest composed mainly of dispersed stands of coihue (*Nothofagus dombeyi*), arrayán, and tepa. The understory was relatively diverse and was composed of luma (*Amomyrtus luma*), arrayán, canelo (*Drymis winterii*), michay (*Berberis darwini*), chilco (*Fuchsia magellanica*), calafate (*Berberis buxifolia*), maqui (*Aristotelia chilensis*), and aromo (*Azara* spp.).

The landscape around the site was composed of fairly high hills (500–1500 m in elevation) and extensive flat areas in the valley. The most elevated hilltops and slopes (1000 to 1500 m in elevation) were covered by old deciduous *Nothofagus* forest dominated by lenga (*Nothofagus pumilio*). In the highest areas there were shrub-sized *Nothofagus* forests ("krumholz") composed of either lenga or ñirre (*N. antarctica*) and wide areas covered by high Andean shrubs (e.g., *Chusquea* spp., *Berberis* spp., *Baccharis* spp., *Pernetia* spp.). The low slopes were covered by evergreen forests. The valley was composed of wide pastures with scattered old trees, small meadows, and small patches and peninsulas of forest with

varying degrees of degradation.

Although historically scarcely recorded, the number of registered sightings of the White-throated Hawk have increased significantly in the Andean-Patagonian region during the last two decades (Casas & Gelain 1995, Pavez 2000, Gelain *et al.* 2001). Johnson (1965) documented the first sightings for the species in Chile in 1899 and 1949. Much later, Johow (1992) documented three new sightings from central Chile. Recently, Pavez (2000) documented 16 records from Calama (22°30'S, 69°00'W) to Petrohué (41°10'S, 72°25'W), totalling 35 hawks observed between 1990 and 1998.

White-throated Hawks initiate migrations toward northern South America during the early fall (March–April, Pavez 2000). On only one occasion, one White-throated Hawk has been observed migrating northward in May (Pavez 2000), in Calama, 2400 km north of La Junta. Thus, our record of this hawk in Aysén during the late fall (May) is noteworthy. Because of a lack of knowledge about its natural history, it is difficult to explain this finding. Perhaps lengthy favorable weather conditions facilitate its presence into late fall in Aysén. On the other hand, the specimen observed could belong to a resident population. Prior to Pavez (2000), this hawk was considered a resident in Chile by Goodall *et al.* (1957). Newton (1979) mentioned that, if prey are sufficiently available, a fraction of the migratory hawks populations may stay in its breeding territory during winter, which could be supported by the record of a White-throated Hawk made by Casas & Gelain (1995) during mid-winter (July 1987) in Bariloche, Argentina. In the evergreen forests around the site where we observed the White-throated Hawk, there is a relatively abundant supply of prey, such as small rodents and birds (authors, unpub. data).

Although the food habits of this hawk are unknown, some authors have documented that it preys on insects, rodents, and birds (Pavez 2000, Figueroa *et al.* 2001, Trejo *et al.* 2001). Prey remains of Austral Thrush (*Turdus falcklandii*), House Wren (*Troglodytes aedon*), Thorn-tailed Rayadito (*Aphrastura spinicauda*) and Black-chinned Siskin (*Carduelis barbatus*) have been found in nests of White-throated Hawks in Argentina (Trejo *et al.* 2001).

The presence of the White-throated Hawk in an human-altered site in the valley may be related to the hawk's hunting behavior. Probably the beginning of snowfalls on the hill tops and upper slopes during the late fall (as we confirmed in the field) would force this hawk to move down to the valley to obtain prey, where milder conditions occur. The White-throated Hawk utilizes mostly the hilltops and upper slopes during the summer to obtain its prey. The low and sparse vegetation and the use of the thermal updrafts on these sites facilitate better access to prey at less effort (Figueroa *et al.* 2001).

Up to now, our observation represents the southernmost documented sighting. Previously in Chile, the southernmost record had been made in Petrohué (41°10'S, 72°25'W) (Pavez 2000), 300 km north of our site (Fig. 1). In Argentina, the southernmost record corresponds to Lago Krügger, Los Alerces National Park (42°49'S, 72°14'W, Casas & Gelain 1995), 130 km north of our site. Thus, we propose extending the southern distribution range of the White-throated Hawk. Probably, Aysén represents the southern limit of the distribution of this little-known hawk in Chile. Only a more extensive monitoring will confirm this speculation.

Considering its rarity (Rottmann & López 1992, Jaksic *et al.* 2001) and migratory behavior (Pavez 2000), its association with *Nothofagus* forests (Casas & Gelain 1995) – which are seriously endangered (Fuentes 1994, Lara *et al.* 1996) – and scarce data on its natural history and biology (del Hoyo *et al.* 1994),

the White-throated Hawk deserves urgent priority in studies.

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