

POLYDACTYLY IN AN INDIVIDUAL OF THE WHITE MONJITA (*XOLMIS IRUPERO*)

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Abstract · Polydactyly is a skeletal malformation which is evidenced by the presence of extra digits in hands or feet. A polydactylous White Monjita (*Xolmis irupero*) was photographed at Xangri-Lá, Rio Grande do Sul, Brazil on 8 February 2015. An additional inverted hallux was present on each foot, located distally relative the original digits. The bird could perch properly, did not seem distressed, and was in apparent good health. This anomaly could have been caused by spontaneous mutation due to teratological conditions, environmental factors, or by the lack of essential nutrients during development.

Resumo · Polidactilia em um indivíduo de noivinha (*Xolmis irupero*)

Polidactilia é uma má-formação esquelética que é evidenciada pela presença de dígitos extras em mãos ou pés. Uma noivinha (*Xolmis irupero*) polidáctila foi fotografada em Xangri-Lá, Rio Grande do Sul, Brasil em 8 de fevereiro de 2015. Um dedo hálux adicional invertido estava presente em cada um de seus pés. A ave conseguia pousar propriamente, não parecia estar em condições de estresse e aparentava estar em boa saúde. A anomalia pode ter sido causada por mutação espontânea devido a condições teratogênicas, fatores ambientais ou pela falta de nutrientes essenciais durante o desenvolvimento.

Key words: Anomaly · Hallux · Malformation · Tyrannidae · *Xolmis irupero*

Polydactyly is a congenital skeletal malformation present in the hands and/or feet, adding extra digits to the normal number present (Martinez-Silvestre et al. 1997). Polydactyly is common in vertebrates, mainly documented in humans and domestic animals, but sometimes also found in wild animals, especially in birds, such as falcons, owls, ducks, snipes, swifts, gulls, and nighthawks (Fogarti 1969, Forsythe 1972, Ryder & Chamberlain 1972, Cooper 1984, Sakai 2006).

On 8 February 2015, an adult polydactylous individual of the White Monjita (*Xolmis irupero*) was observed perched on the branch of a tree close to the beach in an urban area of the seaside city of Xangri-Lá (29°48'3"S; 50°3'5"W), located east of Rio Grande do Sul, Brazil (Figure 1). Normally, the White Monjita has anisodactyl feet with four digits, the first digit – the hallux – oriented backwards and the three other oriented forwards (Botelho et al. 2014). The polydactylous bird observed had five digits on each of its feet, the extra digit being a hallux, located distal to the body in relation to the original hallux (Figures 1–2). The additional digits had the same size of the original, but they could not grasp the branch as they were in an inverted position (Figure 1). The bird seemed to be healthy and behaved normally, cleaning its feathers while perched, singing and later flying away. The individual was molting tail feathers. It was alone and did not interact with any other bird.

Some teratological causes of polydactyly are UV-B radiation (Blaustein et al. 1997), the action of parasites (Johnson et al. 2001) and pollution (Ohlendorf et al. 1986). Polydactyly and other anomalies in wild animals can be caused by environmental conditions, genetics, and unknown reasons (Poullis 2011). It is unclear what may have caused this individual's anomaly. One possibility could be the effect of environmental pollutants, leading to mutations in the embryo (Ohlendorf et al. 1986) during development (Poullis 2011). Alternatively, anomalies could have been due to a deficiency of essential nutrients required for normal embryonic development (Cash & Briskie 2012).

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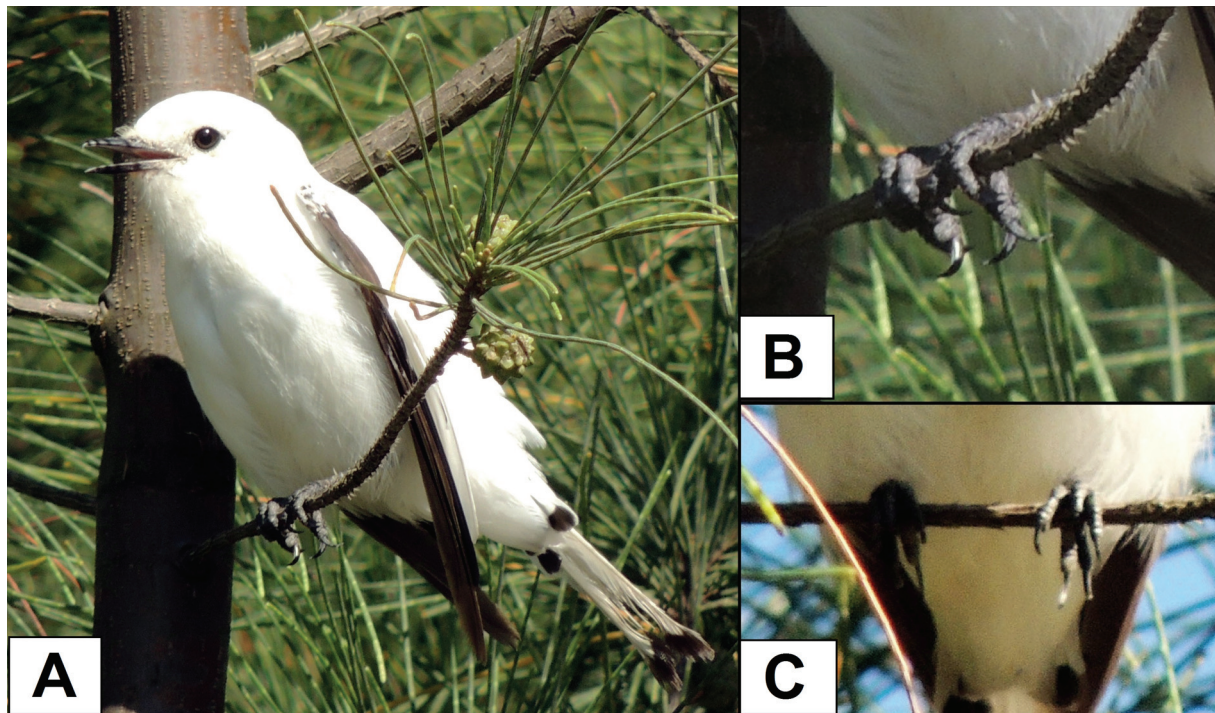


Figure 1. A) A polydactylous White Monjita (*Xolmis irupero*) with additional inverted hallux in both feet, photographed in Xangri-Lá, Rio Grande do Sul, Brazil on 8 February 2015; B) lateral and C) frontal view of the feet. Photograph by the author.

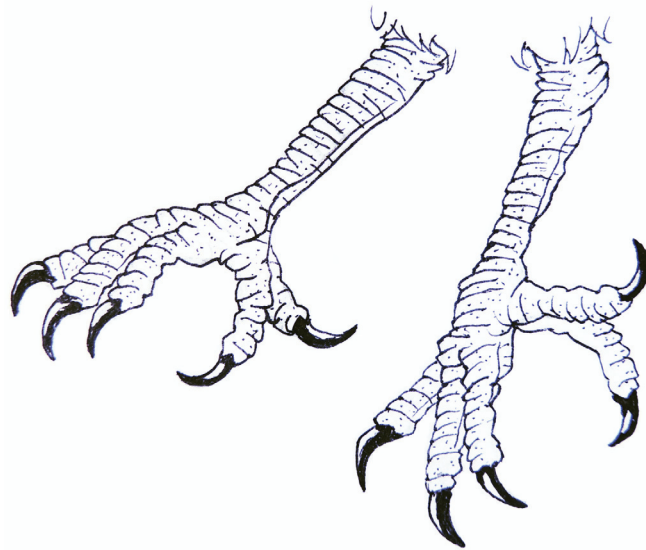


Figure 2. Detailed drawing of the feet of the polydactylous White Monjita (*Xolmis irupero*) from Figure 1. Drawing by the author.

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