

Kleptoparasitism of Magellanic Flightless Steamer-ducks (*Tachyeres pteneres*) by Kelp gulls (*Larus dominicanus*)

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Abstract

Observations of kleptoparasitism on Magellanic Flightless Steamer-Ducks by Kelp Gulls in the Beagle Channel are described. We discuss the possibility that this rarely seen interaction between these two common species may become more frequent as gull populations rise in response to increases in the availability of human waste products in remote areas of southern South America.

Key words: Kelp Gull, kleptoparasitism, *Larus dominicana*, Magellanic Flightless Steamer Duck, *Tachyeres pteneres*.

Resumen

En este artículo describimos observaciones sobre kleptoparasitismo en *Tachyeres pteneres* por *Larus dominicanus* en el canal del Beagle. Discutimos la posibilidad de que esta interacción, la cual es raramente vista entre estas dos especies, pueda llegar a ser más común al aumentar las poblaciones de *Larus dominicanus*, favorecidas por la disponibilidad de basura generada por el hombre en áreas remotas de Suramérica.

Palabras Clave: Canal del Beagle, Kleptoparasitismo, *Larus dominicana*, Suramérica, *Tachyeres pteneres*.

Kleptoparasitism has been defined as food theft (Shealer et al. 2004) or more precisely: the stealing of food by one or more individuals from another individual (Brockmann & Barnard 1979). It occurs among species utilizing a common resource (Galván 2003). Kleptoparasitic behavior is favored when it becomes less costly to carry out than obtaining the material of interest by oneself (Brockmann & Barnard 1979). Avian species have been shown to have a greater propensity to be kleptoparasitised when food is carried conspicuously in beaks or talons (Grant 1971). Species that consume their food away from where it is obtained are more vulnerable to kleptoparasitism than those that consume their food immediately (Vinicombe 1976). Although more frequently observed in species that consume large prey, kleptoparasitism also impacts species that do not exhibit food items prior to consumption (Schnell et al. 1983).

Kelp Gulls (*Larus dominicanus*) are opportunistic scavengers and kleptoparasitic birds (Steele & Hockey 1995) that can be found throughout the southern Hemisphere in a variety of habitats. They breed in southern Africa, Australia, New Zealand, South

America, and Antarctica (Burger & Gochfeld 1996). In southern South America, Kelp Gulls are sympatric with Magellanic Flightless Steamer-Ducks (*Tachyeres pteneres*) (Livezey & Humphrey 1992). This flightless duck is one of the most characteristic of the coastal marine birds found from Chiloé Island to Cape Horn on the Pacific side of South America (Jaramillo 2005) and on the islands of Tierra del Fuego and Staten on the Atlantic side (Livezey & Humphrey 1992).

Magellanic Flightless Steamer-Ducks exhibit strong territorial behavior (Livezey & Humphrey 1986a,b). This species feeds either by diving below the water, dabbling on the surface, or searching in exposed mud flats for mollusks, crabs, and other small marine animals (Blaauw 1916, Livezey 1989, Weller 1980). Conversely, Kelp Gulls are generalist feeders that appear to be increasing their numbers because of an increase in the availability of anthropogenic food sources, particularly refuse at garbage dumps (Petracchi et al. 2004). Kelp Gulls have been observed preying upon young Falkland Flightless Steamer-Ducks (*T. brachypterus*) (Pettingill 1965), but only one record of kleptoparasitism

on this species by Kelp Gulls has been reported (Livezey 1989).

The observations were made along the northern coast of Navarino Island, Chile (54°55'18N, 67°35'41W) near Puerto Williams, Chilean Antarctic Province, located in the southern side of the Beagle Channel. The Beagle Channel supports a large population of Flightless Steamer-Ducks (Raya-Rey & Schiavini 2002). On 20 February 2006, near the Puerto Williams public boat ramp, an individual of *T. pteneres* was observed approaching the surface of the water with a crab in its beak, while two Kelps Gulls were floating 10 m from the duck. One of the gulls stretched its wings, rose on a current of air and landed on the duck's head. It grabbed the crab, flew to the beach, and consumed the crab. Over the next hour, five additional gulls joined the first and the kleptoparasitic behavior was repeated twice. On two occasions, the duck surfaced with an empty beak, which elicited no response from the gulls. The duck finally responded by abandoning its feeding area.

On 31 March, three Magellanic Flightless Steamer-Ducks separated by 10 m were seen floating while a Kelp Gull flew in circles above them. When one of the steamer ducks surfaced with a crab in its beak it was struck on its head by the Kelp Gull's feet. This caused the crab to be dropped at which time the gull grabbed it, landed nearby and consumed the crab by swallowing it whole. Following an unsuccessful dive by the same duck, which elicited anticipatory attack behavior from the gull, the duck was driven away by agonistic behavior from the other two steamer ducks. The gull then left the area.

Magellanic Flightless Steamer-Ducks are common, permanent residents along the coast of Puerto Williams (McGehee unpub. data) and Kelp Gulls are observed foraging up and down the coast daily (González pers com.). Kelp Gulls often congregate around the boat ramp, most likely because crab-fishing boats dock there to unload their catch. Unwanted crabs and fish are often thrown overboard. This attracts gulls, albatrosses, giant petrels, caracaras, vultures and sea lions, which feed on the carrion. Most of the diet of steamer ducks consists of easily swallowed items, and only a small percentage consists in large items that require additional handling on the water surface (Livezey 1989). This may explain the rarity of kleptoparasitic events observed in this species.

Flightlessness in a coastal marine species does not make it more susceptible to avian kleptoparasitism, if it forages, catches, and consumes prey underwater. In addition, because prey items that are too large for a steamer duck to swallow underwater are ephemeral, it is unlikely that this rare occurrence would elicit a high incidence of kleptoparasitism by gulls. Gulls are extremely observant and will engage in kleptoparasitic behavior when it is energetically profitable (Steele & Hockey 1995). In the two observations reported here, gulls were already present at the boat dock, responding to the regular presence of anthropogenic refuse. Consequently, an artificial scenario was created which made conditions energetically profitable for kleptoparasitic behavior by gulls on steamer ducks. These instances of kleptoparasitism represent examples of a scavenging omnivore taking advantage of an artificial food source. If this is a rare opportunistic occurrence it should ultimately have little negative effect on steamer duck numbers.

Kelp Gulls have increased in number in areas containing artificial food sources from humans, leading to risks of increases in competition with other species (Bertelotti et al. 2001), as observed in the case of the Lesser Black-backed Gull (*Larus fuscus*) in Spain (Galván 2003). The populations of Kelp Gulls in Argentina have increased during the last two decades, which could negatively affect other coastal species through increased kleptoparasitism. (García-Borboroglu & Yorio 2004).

The habitat of the Magellanic Flightless Steamer-Duck is limited to the relatively few areas of marine coast devoid of tidal flats (Livezey & Humphrey 1992) and high tides (Weller 1976), meaning that there is a finite amount of habitat for this specialist species (Bertelotti et al 2001). More comprehensive monitoring of Magellanic Flightless Steamer-Ducks populations is needed to understand if these potentially negative interactions are, in fact, increasing in frequency, and what effects they may have on the distribution and habitat use of this poorly known duck.

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