

A necrophilic copulation by a Bridled Tern *Onychoprion anaethetus*

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Abstract. A Bridled Tern *Onychoprion anaethetus* was observed copulating with a deceased conspecific on an offshore island, Penguin Island, in south-western Australia. The copulation lasted for c. 30 seconds, in contrast with the usually 3–10 seconds observed in this species. This unusual copulation may simply be the result of a strong breeding drive present in colonially nesting Bridled Terns.

Necrophilia is not unheard of in birds. It has been observed in various taxa, including Adelie Penguin *Pygoscelis adeliae* (Russell *et al.* 2012), European Swallow *Hirundo rustica* (Libois 1984), Mallard *Anas platyrhynchos* (Moeliker 2001), Sand Martin *Riparia riparia* (Dale 2001) and Stark's Lark *Calandrella starki* (Ryan 2008). There is a great deal of phylogenetic and geographical variation in these accounts and my account adds to both.

On 31 December 2010, I observed a Bridled Tern *Onychoprion anaethetus* copulate with another recently deceased Bridled Tern (Figure 1). This occurred on the western beach at Penguin Island (32°18'22.0"S, 115°41'23.7"E) in south-western Australia. The copulation was more strenuous than usual, lasting >30 seconds. In this species at this site, copulations usually last between 3 and 10 seconds (pers. obs.). The living bird flew away as I approached within 5 metres.

This observation was part of a larger study of birds in the region (see Fulton 2010a,b, 2014, 2015). It occurred at the beginning of the breeding season, when many birds were sitting on eggs and a few early starters had small day-old young (uncounted). Bridled Terns had built up their numbers quickly at the start of the breeding season, increasing from 102 individuals on 4 December to 3892 by 31 December. Garavanta & Wooller (2000) studied Bridled Terns on Penguin Island and found that most eggs were laid in the first fortnight of laying. Similarly, on One Tree Island, off the Queensland coast, Bridled Terns were recorded laying in a relatively synchronised fashion over 15 days (Hulsman & Langham 1985). This level of simultaneous breeding suggests that a significant breeding drive is present. Simultaneous breeding is an anti-predator defence, typically seen in colonially nesting birds, that lowers the probability of any one nest being predated, given that so many nests are active. An increased sex drive is thus likely to be present at this time.

Necrophilia in birds is not analogous with that in humans, where it is considered a paraphilia, an abnormal or deviant sexual desire. I suggest that in birds it is a response to an increased drive to mate. Other reported cases of necrophilia in birds appear to support this suggestion. Adelie Penguins are colonial nesters (Marchant & Higgins 1990). According to Dr George Murray Levick (in Russell *et al.* 2012), they exhibit numerous aberrant sexual behaviours including instances of necrophilia, with Levick (p. 3) stating, "There



Figure 1. Bridled Terns, one living and one dead, photographed immediately following necrophilic copulation. Photo: G. Fulton

seems to be no crime too low for these Penguins". In six experimental trials with flocks of 50–500 Sand Martins, Dale (2001) found flocks formed around road-killed carcasses of Sand Martins and he observed one–five necrophilic copulations per trial, at these carcasses. This occurred outside the breeding season, and Dale (2001) postulated that a lack of rejection by the recipient may drive necrophilic copulation. At first this may seem an oversimplification. Yet, Ainley (1978), following on from Levick's work, noted that female Adelie Penguins lay on the nests in a submissive posture to facilitate copulation. He then developed a dead penguin model along these lines, which attracted voluminous copulations, resulting in the dead penguin becoming damaged. Subsequently, a frozen head with adhesive white 'O's for eye-rings attached to a rock was sufficient stimulus to have penguins deposit sperm on the rock. In Africa, Stark's Lark breeds in vast numbers in response to rainfall. Ryan (2008), who witnessed a necrophilic event in this species, suggested that high hormone levels may prompt the birds to attempt mating with any acceptable model. Such speculations—high hormone levels and females adopting receptive positions—appear to be conceivable explanations for necrophilia. These assumptions match the observation of

the Bridled Terns reported here; where a high sexual drive from a colonially nesting bird led to a necrophilic copulation with another bird in a prone position.

The duration of copulation in the present instance lasted much longer than was observed between living Bridled Terns, and may have continued longer had I not approached too closely. A possible explanation for the longer duration may simply be that without any rejection from the recipient, or interjection from another male, then the copulation will last longer. Moeliker (2001), in reporting a homosexual and necrophilic event, which lasted 75 minutes in Mallards, argued that the recipient Mallard was dead and surely this must have influenced the duration of copulation.

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