

## OBJECT PLAY IN THE ROYAL TERN

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Play behavior has been documented in a variety of bird species, especially among the families Corvidae and Psittacidae (Ficken 1977, Ortega and Beckoff 1987, Diamond and Bond 2003, Burghardt 2005, Emery and Clayton 2015, Kaplan 2020). Play behaviors are often classified into three categories: locomotor play, object play, and social play. Object play, the manipulation of an object for no apparent survival function (e.g., foraging or reproduction), has been reported in at least nine species of terns (Sterninae): the Sooty (*Onychoprion fuscatus*; Feare 1975), Gull-billed (*Gelochelidon nilotica*; Sabne et al. 1997, Molina et al. 2020), Caspian (*Hydroprogne caspia*; King 1981, Cuthbert and Wires 2020), Inca (*Larosterna inca*; Ashmole and Tover 1968), Roseate (*Sterna dougallii*; Shealer and Kress 1994), Common (*S. hirundo*; Arnold et al. 2020), Arctic (*S. paradisaea*; Hatch et al. 2020), River (*S. aurantia*; Kasambe 2011), and Sandwich (*Thalasseus sandvicensis*; Hollom 1955, Shealer et al. 2020). In this note we report the first documented instance of object play in the Royal Tern (*Thalasseus maximus*).

On 28 October 2020, Walker-Roseman was observing and photographing a mixed flock of gulls and terns resting at the water's edge at Ocean Beach Park, just northwest of Lompoc, Santa Barbara County, California (34° 41' 29" N, 120° 36' 14" W), when one of the Royal Terns suddenly picked up a small stone with its bill and grasped it for several seconds (Figure 1). The stone was brown, smooth, and somewhat flattened, and approximately a third the length of the tern's bill from the gape to the tip. After dropping the stone, the tern stared at it for a few seconds until a passing jogger flushed all the birds away. The tern did not interact with any other birds during the incident. An attempt to find the stone failed because it was quickly buried in the wet sand. Given the frontal view of the tern in the photos we are uncertain whether it was in formative or definitive basic plumage.

Several lines of evidence suggest that the tern's manipulation of the stone had no apparent survival function. Geophagy, the consumption of clay or grit, occurs in many taxa of birds but has not been reported among terns (Downs et al. 2019), and the tern did not attempt to swallow the stone. Terns are not known to move stones to find food or use stones as tools to kill prey (Shealer 2002). Royal Terns have not been reported to pick up stones during courtship or nest building, and this observation occurred during the nonbreeding season (Buckley et al. 2021). Object play can be confused with neophilia, which is the exploration, inspection, or manipulation of a novel object (Emery and Clayton 2015), but small stones are ubiquitous on beaches frequented by terns and hardly novel. Thus the tern's manipulation of the stone appears to be a classic case of object play.

Because object play is observed more frequently among juveniles than adults, it is often hypothesized to serve as practice for vital adult skills such as foraging, investigating novel objects, and tool use (Hall 1998). However, object play has been reported in adults of the Caspian Tern (King 1981, Cuthbert and Wires 2020) and Sandwich Tern (Hollom 1955, Shealer et al. 2020), plus many other animals (Hall 1998).

Previous observations of object play in terns involved algae, dead vegetation, small sticks, molluscs, and fish (Hollom 1955, Ashmole and Tover 1968, Feare 1975, King 1981, Shealer and Kress 1994, Sabne et al. 1997, Kasambe 2011, Arnold et al. 2020, Cuthbert and Wires 2020, Hatch et al. 2020, Molina et al. 2020, Shealer et al. 2020). Our report represents the first documented instance of a tern playing with

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FIGURE 1. Sequence of a Royal Tern playing with a small stone at Ocean Beach Park, Santa Barbara County, California, on 18 October 2020. The tern beside the gull in photo A subsequently walked out of view to the left (wingtip visible in photo B).

Photos by Lisa D. Walker-Roseman

a stone. Playing with stones has been reported in at least six other families of birds, including the Phalacrocoracidae, Pelecanidae, Accipitridae, Alcedinidae, Corvidae, and Sylviidae (Ficken 1977, Burghardt 2005). In previous reports the terns often manipulated the objects repeatedly, as typically occurs during object play (Burghardt 2005). Although the Royal Tern did not manipulate the stone repeatedly, the approach of a jogger on the beach, which caused the tern to flee, may have prevented it from doing so. Much remains to be learned about the play behavior of terns.

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