

# DEPREDATION OF A SNOWY EGRET *EGRETTA THULA* BY A POMARINE JAEGER *STERCORARIUS POMARINUS* IN VIRGINIA

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Received 30 July 2018, accepted 12 September 2018

## ABSTRACT

HELLER, E.L., KARPANTY, S.M. & FRASER, J.D. 2019. Depredation of a Snowy Egret *Egretta thula* by a Pomarine Jaeger *Stercorarius pomarinus* in Virginia. *Marine Ornithology* 47: 29–31.

We report a case of an adult Pomarine Jaeger *Stercorarius pomarinus* attacking, drowning, and eating a Snowy Egret *Egretta thula* on 24 May 2018, Myrtle Island, Virginia. After the jaeger abandoned the carcass, we observed that the egret had recently eaten, as evidenced by fish found both in the crop and adjacent to the carcass, indicating that the egret was likely in good physical condition. Pomarine Jaegers are known to capture small birds, primarily during the non-breeding season, though we found few records of them depredating birds as large as a Snowy Egret.

**Key words:** Pomarine Jaeger, Snowy Egret, depredation, Virginia

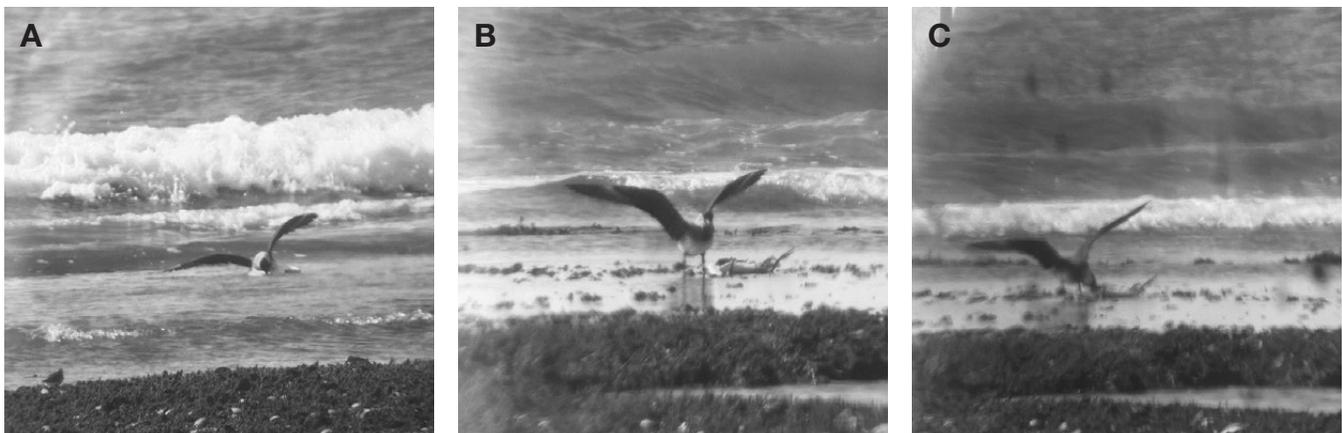
## INTRODUCTION

The Pomarine Jaeger *Stercorarius pomarinus* is a large seabird that breeds in the Arctic, May–July, and is predominately pelagic for the remainder of the year (Olsen & Larsson 1997, Wiley & Lee 2000). During spring migration from wintering grounds south of the Equator to Arctic breeding grounds, Pomarine Jaegers are occasionally observed off Virginia's coast; however, they are rarely seen in view of shore (Wiley & Lee 2000, eBird 2012). The largest of the three jaegers—Pomarine Jaegers—weigh an average of 700 g and primarily consume Brown Lemmings *Lemmus trimucronatus* during their breeding season (Pitelka *et al.* 1955, Maher 1970, Wiley & Lee 2000). However, while at sea, Pomarine Jaegers eat fish, marine invertebrates, insects, small birds, and carrion, and are known as aggressive kleptoparasites of gulls, petrels, and shearwaters (Maher 1970, Wiley & Lee 2000). Here, we provide the first record, to our knowledge, of a Pomarine Jaeger attacking, drowning, and eating an adult Snowy Egret *Egretta thula*. Adult

Snowy Egrets weigh an average of 370 g, which is approximately half the average weight of a Pomarine Jaeger (Palmer 1962, Parsons & Master 2000).

## OBSERVATIONS

At 08h35 on 24 May 2018, ELH and SMK observed a Pomarine Jaeger attacking and attempting to drown a Snowy Egret in the intertidal zone on Myrtle Island, Virginia, part of the Virginia Coastal Reserve (37.1916°N, 75.8196°W; Fig. 1A–C). The jaeger grasped the egret with its feet and held it under water as the egret struggled with vigorous wing flapping to escape the jaeger's grasp (Fig. 1A). By 08h43, the egret ceased moving, presumably dead. For the following two hours, as the tide fell, the jaeger alternated between eating the egret and resting along the shore (Fig. 1B–C). At 10h45, the jaeger flew north and was not observed again. We examined the egret's carcass after it was abandoned by the jaeger (Fig. 2A–C). One intact fish was found in the egret's crop



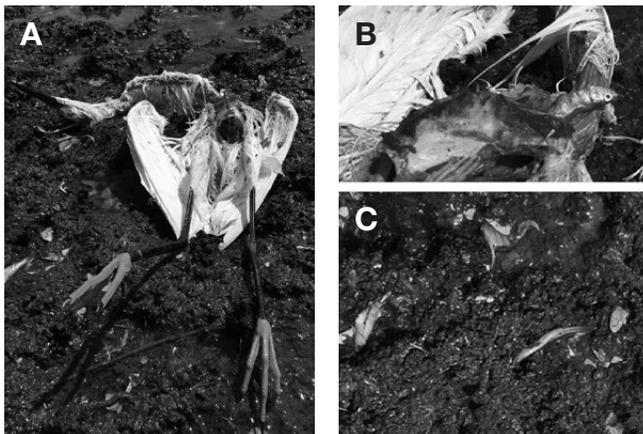
**Fig. 1.** Predation in which an adult Pomarine Jaeger attacks, kills, and consumes an adult Snowy Egret on Myrtle Island, Virginia, 24 May 2018. The jaeger (A) drowning the egret, (B) standing over the egret, and (C) eating its kill. Photos taken by E. Heller through a scope (magnification 60×).

(Fig. 2B). An additional two fish were found next to the egret and appeared to have been removed from the egret's stomach (Fig. 2C).

## DISCUSSION

Though not the mainstay of their diet, Pomarine Jaegers eat a variety of small birds, primarily during the non-breeding season (Olsen & Larson 1997). For example, they are frequently observed capturing Red Phalaropes *Phalaropus fulicaria* (48 g), which are much smaller than both Pomarine Jaegers and Snowy Egrets (Pitelka *et al.* 1955, Maher 1970, Olsen & Larson 1997). Maher (1970) found the remains of a ptarmigan *Lagopus* spp. (which weigh up to 540 g) in a Pomarine Jaeger's gut; however, there was no indication that the jaeger killed the ptarmigan. We found only one study that discussed a Pomarine Jaeger attacking and killing a bird as large as a Snowy Egret. Divoky *et al.* (1979) observed, in the Bering Sea, a Pomarine Jaeger attack, drown, and consume a Black-legged Kittiwake *Rissa tridactyla*, which have an average weight comparable to Snowy Egrets (393 g; Hatch *et al.* 2009). In Oklahoma in 2013, a close relative of the Pomarine Jaeger, the South Polar Skua *Stercorarius maccormicki*, was observed attacking and drowning Cattle Egrets *Bubulcus ibis* and Yellow-crowned Night-herons *Nyctanassa violacea*, which weigh up to 512 and 716 g, respectively (Watts 2011, Shackford 2013, All About Birds 2017a). However, South Polar Skuas are much larger than Pomarine Jaegers, weighing 899–1560 g (Young 1963, Olsen & Larson 1997).

Although Pomarine Jaegers will attack and kill weak birds as large as Black-headed Gulls *Larus ridibundus* (190–400 g; Meininger 1977, Olsen & Larson 1997, All About Birds 2017b), this Snowy Egret did not appear to be in poor health. Before the attack, the egret had been foraging for at least an hour in the intertidal zone. Successful foraging can be an indicator of good health, and upon examination of the carcass, we found that the egret had recently caught at least three fish. One intact fish was found in its crop (Fig. 2B), and two additional fish were found next to the carcass,



**Fig. 2.** Snowy Egret that was attacked, drowned, and depredated by a Pomarine Jaeger on Myrtle Island, Virginia, 24 May 2018. (A) The egret with its entire stomach contents removed by the jaeger. (B) The egret with an unidentified intact fish in its crop. (C) Two unidentified fish directly next to the egret's carcass. Photos taken by E. Heller.

presumably removed from the egret's stomach by the jaeger (Fig. 2C). Interestingly, the jaeger consumed the entire body of the egret, including the visceral organs. However, it ignored the three fish, a more common staple to its diet, perhaps because it was satiated (Wiley & Lee 2000; Fig. 4A).

Although Pomarine Jaegers are regular migrants along the East Coast, they are rarely observed within sight of shore (Wiley & Lee 2000, eBird 2012). The Pomarine Jaeger observed hunting along Virginia's barrier islands may have been attracted by the wild nature of these islands; the islands are 0.1–12 km from the mainland coast (Raymond *et al.* 1979) and possess high abundances of fishes, wading birds, and shorebirds—all potential prey to predatory birds. Healthy adult wading birds are seldom predated, which has resulted in waders having relatively few antipredator adaptations (Milstein *et al.* 1970, Kushlan 1981). This could make them especially susceptible to attack from predators rarely present in their foraging areas (i.e., alien predators; Salo *et al.* 2007). However, given the presence of smaller shorebirds foraging in the same area (i.e., Dunlin *Calidris alpina*, Sanderlings *Calidris alba*, Ruddy Turnstones *Arenaria interpres*), it is interesting that a Pomarine Jaeger attacked such a large species.

## ACKNOWLEDGEMENTS

This observation was made during routine Red Knot *Calidris canutus rufa* surveys conducted during every spring migration since 2006 by the Virginia Tech Shorebird Program, supported by the National Science Foundation (NSF) Virginia Coast Reserve Long Term Ecological Research Grant DEB-1237733 and by the NSF Graduate Research Fellowship grant DGE-1651272. Any opinion, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation. This research was also funded by the Virginia Society of Ornithology, Virginia Academy of Science, and Graduate School at Virginia Tech. Boat transportation was provided by J. and D. Fraser. A special thank you to M. Donahue for assisting in bird identification. All research was conducted in compliance with the laws of the United States of America and followed the protocols of Virginia Tech IACUC permit number 16-244 (FWC). This note was improved by addressing comments from Dr. Patrick Jodice and an anonymous reviewer.

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