

Drizzle Lake

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Short Communications

The Bald Eagle as a Predator on Aquatic Birds

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In a recent article, McIntyre (1978, Auk 95: 396) discusses aspects of the behaviour in the common loon (*Gavia immer*) including rafting, the tendency to move away from shore in the evening and form loose aggregations in deeper water for the night. She considers, but then broadly discounts, the selective role of predators and notes "I know of no predators on adult loons on freshwater lakes and it is not known what, if anything, preys on loons in the coastal waters". We feel the following information may contribute additional data for these interpretations.

During the last three years on the Queen Charlotte Islands, British Columbia, in the course of a study on interactions between *stickleback* fish (*Gasterosteus*) and piscivorous birds, we were able to observe some of the feeding preferences of the bald eagle (*Haliaeetus leucocephalus*). While the eagles were often observed feeding on carrion, including spawned salmon (*Oncorhynchus*), lingcod (*Ophiodon*), pinnipeds, cetaceans, and mule deer (*Odocoileus*), approximately 60% of the sightings involved active predation on marine fish and aquatic birds. We have documented a small proportion of encounters between eagles and birds in both freshwater and marine habitats (Table 1).

Most of the interactions occurred within 200 m of shore and displayed a similar pattern of reconnaissance, attack, and appropriate evasion. Initially, the eagle made a high pass over the water where the prey were located and then settled on a perch often $\frac{1}{2}$ km away. After ~~a period of time~~ varying from a few minutes to an hour, the eagle left the perch and began a rapid flight a few meters above the water in the direction of the prey. In some cases, the bird was

immediately plucked from the water while the eagle was in full flight and carried to shore. In most situations, however, small ducks took to the air and larger birds dove; single birds, from their slower evasive response, were isolated from the group and became the target prey. Isolated birds which had taken to the air were pursued, and, if overtaken, were forced back onto the water. The eagle then began a series of swooping attacks on the bird from a hover position approximately 6 m above the water surface. The evasive dives of the prey became shorter as the bird tired, until, if the attack was successful, the eagle grasped it and carried it to shore.

The successful attacks we have observed were in situations where the prey was restricted to shallow water (rivers, estuaries) where no shoreline overhangs afforded protection, and where, on the open coast, without depth or space restrictions, the prey was captured before reaching open water. In coastal conditions, the diving bird surfaced further from shore with each dive until the eagle abandoned its pursuit. Presumably, an eagle cannot successfully return a large bird to shore beyond a certain distance.

On the Drizzle Lake Ecological Reserve, as well as attempted predation of eagles on red-throated ^{*Gavia stellata*} and common loons, several examples of more subtle eagle/loon interactions have been observed. The eagle is an occasional visitor to this small, inland lake during those months when the loons are resident (May to August), and its presence coincides with peak numbers of the common loons (35 to 60 individuals). The eagle's arrival initiates extensive loon vocalization, in addition to predictable movement and grouping of the individuals (in prep.).

betw spp?

On neighbouring lakes containing as few as one or two breeding pairs of loons, similar reactions to eagles have been observed.

As the bald eagle was formerly abundant throughout coastal North America, it seems appropriate to consider its potential predatory role when discussing functional aspects of behavior in loons and other aquatic birds.

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 of Alberta kindly provides typing services.

I feel you have more data to add
 not always clear what off loon
 you talking about
 could an eagle carry a common loon?
 BT.
 6/2/70

Table 1. Attacks by bald eagles on aquatic birds on the Queen Charlotte Islands, * Juvenile eagle.

Prey Species	Locality	Distance from shore (m)	Estimated depth (m)	Date mo/yr	Time	Outcome of pursuit
<i>Gavia immer</i>	coastal	75	20	1/76	1400	captured
<i>no more don't record</i>	coastal	30-250	15	2/76	0900	unsuccessful
	estuary	50	1.5	7/76	1500	captured
	F.W. lake	20	4	7/78	0700	unsuccessful
<i>G. stellata</i>	F.W. lake	15	1	7/78	2030	prey injured *
<i>Anas platyrhynchos</i> (♂)	estuary	100	2	5/78	1000	prey injured
<i>A. acuta</i> (♀)	estuary	75	2	5/78	0930	captured
<i>A. carolinensis</i> (♀)	estuary	20	2	5/78	0930	unsuccessful
<i>Bucephala clangula</i> (♀)	river	5	0.3	2/76	1600	captured
<i>B. albeola</i> (♀)	estuary	75	2	11/76	1100	captured
<i>Clangula hyemalis</i> (♂)	river	10	0.3	3/76	1100	captured
	F.W. lake	25	1	5/78	2000	unsuccessful *
<i>Ptychorampus aleutica</i>	coastal	40	4	9/78	2000	injured

how come is deep 1 far from shore