

## Status and Occurrence of Dovekie (*Alle alle*) in British Columbia.

By Rick Toochin. Submitted: April 15, 2018.

### Introduction and Distribution

The Dovekie (*Alle alle*) is a small, but abundant alcid species that breeds in coastal Greenland, Iceland, Bear Island, Novaya and Severnaya Zemlya, Svalbard, Jan Mayen, and Franz Josef Land, with major breeding concentrations in Thule District of northwestern Greenland (Brown 1984d, Brown 1986d). Large breeding colonies in northwestern Greenland are associated with rich plankton production of North Water Polynya, an area of open water amidst sea ice, between Greenland and Ellesmere Island (Falk *et al.* 2000, Hobson *et al.* 2002a). There are a few, small colonies documented in North America. There are small numbers of Dovekie known to breed on Little Diomedes Island in the Bering Strait (Gaston and Jones 1998). This species is also seen near, and possibly breeding on, St. Lawrence Island and King Island in the Bering Strait, and St. Matthew Island and the Pribilof Islands in the Bering Sea (Day *et al.* 1988). The Dovekie is a casual visitor to the Aleutian Islands as far east as Kodiak Island (West 2008). There are small numbers, less than a 1000 pairs breed in Home Bay on east Baffin Island, the only known colony in the Canadian Arctic, but may also breed on Ellesmere Island (Finley and Evans 1984, American Ornithologists' Union 1998a). The Dovekie could also breed elsewhere in North America (Harrison 1983, Gaston and Jones 1998).

There are 2 subspecies of the Dovekie. The nominate subspecies of Dovekie is (*Alle alle alle*) which is found breeding on Baffin Island, Greenland and Iceland to Novaya Zemlya. The second subspecies of Dovekie is (*Alle alle polaris*) which is found breeding from Frans Josef Land to St. Lawrence Island (Gaston and Jones 1998)

The Dovekie is a high-latitude breeder, found 68–80°N, in cold high- and low-arctic ocean regions (Gaston and Jones 1998). The largest colonies are in the High Arctic, where Dovekie nests are found among steep scree, talus slopes, and rubble at the foot of cliffs of coastal mountains (Gaston and Jones 1998). Most colonies face the sea, but may be on sides of fjords or inland mountains; also nests on rocky outcrops surrounded by glaciers, also called nunataks (Norderhaug *et al.* 1977, Roby *et al.* 1981, Harris and Birkhead 1985, Boertman 1994, Stempniewicz 1995, Boertmann and Mosbech 1998). This species appears to prefer areas of early snowmelt, sheltered from high winds (Stempniewicz 1981). Low-arctic colonies are small and usually located on low-lying islands (Boertman 1994). The Dovekie nests at these sites generally in talus or crevices in firm rock, near shore (Montevecchi and Stenhouse 2002). This species may share larger breeding islands with other alcids, unlike large high-arctic colonies that rarely mix species (Montevecchi and Stenhouse 2002). Boulders at lower edges of large colonies are often covered with thick, nitrogen-tolerant vegetation, due to auk guano (Harris

and Birkhead 1985). The lack of Dovekie breeding colonies in North America is likely related to the availability of open water early in the breeding season, rather than a lack of suitable nesting sites (Hobson *et al.* 2002a).

The Dovekie has high energy requirements during chick-rearing and is the only Atlantic seabird to prey mostly on copepods (Montevecchi and Stenhouse 2002).

The Dovekie abandon colonies late August (Freuchen and Salomonsen 1958) and begin leaving the northern Baffin Bay area between August–September, remaining at the edge of the pack ice in Baffin Bay and the Davis Strait, as far as the eastern entrance to Hudson Strait (Montevecchi and Stenhouse 2002). By October, this species is rare in northern Baffin Bay, but still common in the Davis Strait, with individuals dispersed south to the Labrador Sea and east Newfoundland waters (Brown 1986d). The Dovekie remains extremely abundant on the Grand Banks region throughout the winter (Tuck 1971). During 1971, this species was found to be particularly concentrated around the western slope of the southern Grand Bank (Brown 1980f). Dovekie generally reach the Scotian Shelf and Georges Bank in November–December (Brown 1986d); from this time, small numbers are seen off the northeast coast of the United States, particularly the coastal waters of Maine and Massachusetts (Montevecchi and Stenhouse 2002).

Northerly return starts in April, with birds departing the Scotian Shelf and the Grand Banks (Montevecchi and Stenhouse 2002). The exact timing varies, however, as access to Labrador Current waters is dependent on the breakup of pack ice in the spring (Montevecchi and Stenhouse 2002). Dovekies breeding in Thule District move through deep water east of the Labrador Shelf in May and reach northwestern Baffin Bay around early to late May (Renaud *et al.* 1982, Harris and Birkhead 1985). Some are found on the Grand Banks until June, these are mostly sub-adults, although there are rare sightings of birds in breeding plumage around the Newfoundland coast in the spring (Rankin and Duffey 1948, Brown 1986d). There is no information about the wintering range of Dovekie in the North Pacific (Montevecchi and Stenhouse 2002).

Dovekies that were banded in the colonies of northwestern Greenland have been recovered in eastern Newfoundland (Salomonsen 1952, Salomonsen 1979a, Tuck 1971). When this species is in molt it becomes temporarily flightless immediately after breeding (Evans 1981a); prevailing southward-flowing currents apparently facilitate movements to wintering areas around Newfoundland, on Grand Banks, and in the Gulf of St. Lawrence (Stenhouse and Montevecchi 1996). These currents would also carry both the Thule and east Baffin Island breeders down the east coast of Baffin Island to the mouth of Hudson Strait (Montevecchi and Stenhouse 2002). Here, the waters of Davis and Hudson Straits form the Labrador Current that helps transport

Dovekies south along the coasts of Labrador and eastern Newfoundland (Tuck 1961, Brown 1985g, Nettleship and Evans 1985).

Dovekies winter in low-arctic and boreal oceanographic regions, where distributions at sea appear to be influenced by oceanographic currents, shelf edges, and fronts that concentrate prey and induce vertical mixing (Powers 1983, Brown 1988c).

In the Atlantic, most Dovekie winter in the low-arctic waters of the Labrador Sea, Grand Banks, and coastal Newfoundland (Stenhouse and Montevecchi 1996). Distributions of this species are associated with planktonic prey and sea ice, with concentrations reported near shelf edges, particularly on the southern Grand Banks (Renaud *et al.* 1982, Brown 1985g). Dovekie generally reach as far south as the Scotian Shelf, the Gulf of Maine, and the northern and eastern edges of the Georges Bank, with a few venturing to Long Island (Montevecchi and Stenhouse 2002). South of Long Island, this species has been observed most frequently in the Atlantic Ocean south to Virginia (Montevecchi and Stenhouse 2002). The Dovekie has been recorded in Atlantic Ocean during the winter as far south as southern Florida, Cuba, the Bahamas at Grand Bahama, and Bermuda (Amos 1991, American Ornithologists' Union 1998a, Raffaele *et al.* 1998). Major storms have occasionally blown Dovekies to inland locations in eastern North America (Montevecchi and Stenhouse 2002). Birds breeding at Franz Josef Land and Novaya Zemlya may winter at polynyas in the area, rather than moving into North Atlantic with the Svalbard population (Stempniewicz *et al.* 1996).

There is no information on the grounds of Dovekie in the North Pacific Ocean (Montevecchi and Stenhouse 2002).

Large numbers of Dovekies periodically appear during the winter along immediate coast of the northeastern United States (Montevecchi and Stenhouse 2002). These occurrences are generally called "wrecks," believed to be caused by changes in Dovekie food supply and often associated with sustained strong easterly winds or by the changes in overall size of Dovekie population (Gaston and Jones 1998).

During strong storms Dovekies are occasionally observed also at inland locations. Storm-driven birds have been recorded inland to Manitoba, Ontario, Minnesota, Wisconsin, Michigan, New York, and S. Carolina (Post and Gauthreaux 1989, American Ornithologists' Union 1998a, Sealy and Carter 2002). A particularly large number of inland records occurred in eastern North America during November 1932 as a result of 2 storms; these records are summarized in detail by Murphy and Vogt (1933). Smaller wrecks have documented as occurring fairly regularly

along the northeastern United States and eastern Canadian coastline since the 1950s (Stenhouse and Montevecchi 1996).

Along the west coast of North America, south of Alaska, the Dovekie is an accidental vagrant species. In British Columbia, the Dovekie is an accidental vagrant migrant with 2 provincial records that both come from the North Coast (Halpin and Willie 2014, P. Hamel Pers. Comm.). There are no other records for this species from the west coast from Washington State to California (Hamilton *et al.* 2007, Wahl *et al.* 2005, OFO 2016, WBRC 2016).

### **Identification and Similar Species**

The identification of the Dovekie is covered in all standard North American field Guides. This is a small alcid measuring 21 cm in length, with a wingspan of 38 cm, and weighing 160 grams (Sibley 2000, Dunn and Alderfer 2011). The Dovekie is an alcid with a compact, stout body shape and very short, compact bill (Gaston Jones 1998). This species often sits low in the water, and typically swims in a horizontal position (Montevecchi and Stenhouse 2002). The Dovekie appears almost neckless at most times and flies with rapid, insect-like, whirring wing beats at sea (Harrison 1983). All adult plumages are black and white, with some seasonal variation in colouration on the head and neck (Montevecchi and Stenhouse 2002). This species is very distinct looking and should not pose any difficulties if encountered in provincial waters.

Breeding (Alternate) plumage is held from April to September (Sibley 2000). The head and upperparts are entirely black with white underparts from belly to undertail coverts, small white arc above eye, short white streaks on scapulars, and white trailing edge on secondaries (Cairns 1986). The bill is stout, thick and all black (Gaston and Jones 1998). Birds sitting on the water show a white triangle on the sides of the breast (Sibley 2000). In flight both the upperwings and the underwings are dark with rounded wingtips (Sibley 2000).

Nonbreeding (Basic) plumage is held from October to March (Sibley 2000). Birds in this plumage are similar to birds in breeding plumage except white extends from the breast to the chin and the throat, and in a wedge up along the rear side of head (Gaston and Jones 1998, (Montevecchi and Stenhouse 2002). Also shows a dark thin neckless on the sides of the neck (Sibley 2000, Dunn and Alderfer 2011). Usually swims with head low to the water giving a neckless appearance (Sibley 2000).

Juvenile plumage is held from August to the following May (Sibley 2000). Birds at this age resemble adults in breeding plumage, but black areas less glossy and more brownish, especially on the throat and the upper breast, and the white spot above the eye is much smaller (Montevecchi and Stenhouse 2002).

On the east coast, the Dovekie is not easily confused with any other species of alcid found in the Atlantic Ocean because of its small size and compact shape as all other alcids in this region are larger and have longer bills (Montevecchi and Stenhouse 2002). In the North Pacific, there are many small species of alcid that might create confusion with the Dovekie (Montevecchi and Stenhouse 2002). This species has a stouter body shape and fairly distinctive black-and-white plumage pattern (Montevecchi and Stenhouse 2002). It is important to note that the Dovekie is distinctly larger than the smallest species of alcid in the region, the Least Auklet (*Aethia pusilla*) (Gaston and Jones 1998). The Least Auklet has light underwings, a different body and head shape, and a completely different flight style to that of the Dovekie which should make separation of this species possible if given good views (Gaston and Jones 1998).

### **Occurrence and Documentation**

The Dovekie is an accidental migrant vagrant anywhere in British Columbia. This is a recent addition to the avifauna of the province (Toochin *et al.* 2014). The first record was an adult in breeding plumage found and photographed by Luke Halpin and Megan Willie off Campania Island, southeast of Banks Island along the North Coast on August 21, 2013 (Halpin and Willie 2014). The second record was an adult in breeding plumage seen at point blank range by Peter Hamel and Margo Hearne from a B.C. Ferry, just before Dog Shoals, in Hecate Strait, off Haida Gwaii on April 18, 2017 (P. Hamel Pers. Comm.). The movements of Dovekies found in the North Pacific is not well studied or known (Montevecchi and Stenhouse 2002). It is possible that there will be future records of Dovekie in British Columbia from the north coastal region. Keen observers should watch for this species along the entire west coast of British Columbia as it could reoccur again in the future.

### **Table 1: Records of Dovekie for British Columbia:**

- 1.(1) adult breeding plumage August 21, 2013: Luke Halpin and Megan Willie (photo) off Campania Island, southeast of Banks Island along North Coast (Halpin and Willie 2014)
- 2.(1) adult breeding plumage April 18, 2017: Peter Hamel and Margo Hearne: B.C. Ferry, just before Dog Shoals, Hecate Strait, off Haida Gwaii (P. Hamel Pers. Comm.)

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