

Update of moulting areas for seabirds

Scientific briefing from DCE – Danish Centre for Environment and Energy

Date: 12 December 2022 | 84
(UK)



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Greenland Institute of Natural Resources

Data sheet

Scientific briefing from DCE – Danish Centre for Environment and Energy

Category: Scientific briefing

Title: Update of moulting areas for seabirds

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External comment: No external comments

Claimant: The Environmental Agency for Mineral Resource Activities (EAMRA), Greenland Government.

Please cite as: Boertmann, D., Johansen, K.L., Mosbech, A., & Merkel, F.R. 2022. Update of moulting areas for seabirds. – Aarhus University, DCE – Danish Centre for Environment and Energy, 9 s. – Scientific briefing no. 2022|84 (UK).
https://dce.au.dk/fileadmin/dce.au.dk/Udgivelser/Notater_2022/N2022_84UK.pdf

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Photo on front page: Moulting king eiders in Melville Bay, Aug. 5, 2012. Photo D. Boertmann

Number of pages: 9

Background

The document *Rules for field work and reporting regarding mineral resources (excluding hydrocarbons in Greenland)* ('Field Rules') (Anon. 2000) provides special provisions for field work related to mineral exploration activities. The provisions are applied to activities within areas and periods of particular significance to wildlife.

The areas and provisions in the Field Rules were defined based on the existing biological knowledge of the time. EAMRA is the responsible agency for the protection of nature and environment in relation to mineral exploration has requested a revision of Field Rules' chapters 2 and 3 including report and digital map to be available in NatureMap (<https://naturemap.eamra.gl>). NatureMap is an online mapping portal for environment and nature of Greenland. Information from NatureMap can be viewed in NunaGIS (<https://nunagis-asiaq.hub.arcgis.com>) and in LicenseMap on GovMin (<https://govmin.gl>) as direct data link service.

This brief is an update of the text on seaduck moulting areas in section 2.03.03 of the Field Rules, including an updated map of the areas and an appendix listing them all.

General description and sensitivity

In Greenland, a number of marine associated diving ducks assemble in discrete coastal areas to moult their plumage (Table 1). These moulting birds shed their flight feathers simultaneously and become flightless for a period of three weeks until new feathers have developed. During these three weeks, the flightless birds are extremely sensitive to human disturbance of any kind and disturbance may lead to reduced fitness of the exposed birds (Frederiksen et al. 2017). The moulting period is usually in July and early August for post-breeding males and non-breeders, while a lower number post-breeding females typically arrive a month later depending of species and site (see Mosbech & Boertmann 1999).

Table 1: Seaduck species breeding and moulting in Greenland, including their national and international Red List status (LC: least concern, NT: near threatened, VU: vulnerable (Boertmann & Bay 2018, <https://www.iucnredlist.org/>).

English name	Danish name	Greenlandic name	Scientific name	Greenland Red List status	IUCN global Red List status
Common eider	Ederfugl	Miteq siorartooq	<i>Somateria mollissima</i>	LC	NT
King eider	Kongeederfugl	Miteq sioraqi	<i>Somateria spectabilis</i>	LC	LC
Long-tailed duck	Havlit	Alleq	<i>Clangula hyemalis</i>	LC	VU
Harlequin duck	Strømand	Tornarviarsuk	<i>Histrionicus histrionicus</i>	LC	LC
Red-breasted merganser	Toppet skallesluger	Paatsiaq	<i>Mergus serrator</i>	LC	LC

All species of birds are protected under the Executive Order of the Government of Greenland no. 17 of 28th October 2019 on the Protection and Harvest of Birds (Anon. 2019), except for a listed number of species that have a defined hunting season.

Period of importance

The periods when these moulting seaducks are most susceptible to disturbance are when they are flightless and this is typically from early July to late September.

Recommended revision of the Field Rules

In the latest version of the Field Rules (November 2000), regulations regarding moulting seaducks are detailed in section 2.03.03:

2.03.03. Areas with moulting eiders, etc: During the period August 1 – September 30 the activities indicated in section 2.02.01 are subject to BMP's approval, however with the exemptions in sections 2.03.02-2,02.03.

DCE and GINR advise that the period is extended, so it starts in mid-July and extends to end of September, viz. from July 15 to September 30 and that the wording is changed to *Seaducks, moulting area* and that *BMP* is changed to *EAMRA*:

2.03.03. Seaducks moulting area: During the period July 15 to September 30 the activities indicated in section 2.02.01 are subject to EAMRA's approval, however with the exemptions in sections 2.03.02-2,02.03.

Update of designated areas for moulting seaducks

In the latest version of the Field Rules (November 2000), the seaducks moulting areas were designated and shown on printed maps (Figure 1).

In connection with the current revision, all sources published after 2000 describing occurrences of moulting seaducks in Greenland have been checked, new areas have been added, and the current status of the areas designated in 2000 have been evaluated.

As a consequence of the update, ten new moulting areas for seaducks have been added to the map (areas 1-3, 11, 12, 15-19, Figure 1).

One area (area 9, Figure 1) has lost its importance to moulting seaducks, and has been removed from the list.

For many of the originally designated areas there is no new information to evaluate their current importance as seaduck moulting areas, and new surveys of these areas are highly needed.

Note that unrecorded important areas for moulting seaducks might exist, particularly in remote areas, and that the same regulations apply should such unmapped areas be encountered.

DCE and GINR advise that the map showing the protection areas for moulting seaducks in the Field Rules are updated on a regular basis to reflect new data.

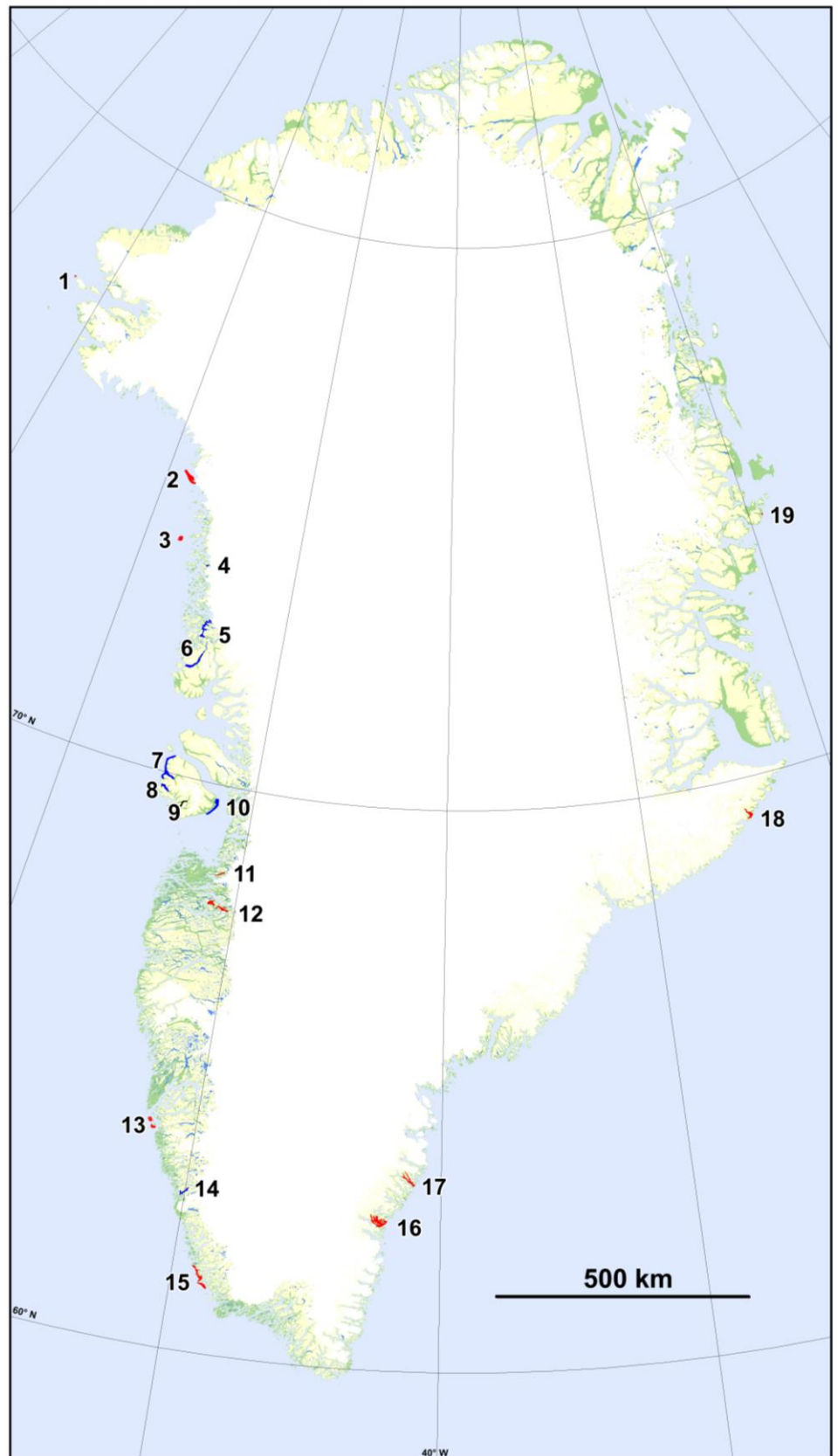


Figure 1: Updated map of moulting seaduck areas in Greenland. Red signature indicates new areas (areas 1-3, 11-13, 15-19), blue signature, areas shown in the printed version of the Field Rules (2000). The black signature (area 9) shows an area, which has lost its importance; and removed from the list.

References

- Anon. 2019. Selvstyrets bekendtgørelse nr. 17 af 28. oktober 2019 om beskyttelse og fangst af fugle. <https://docplayer.dk/218506742-Selvstyrets-bekendtgørelse-nr-17-af-28-oktober-2019-om-beskyttelse-og-fangst-af-fugle-anvendelsesomraade.html>
- Anon. 2000. Rules for field work and reporting regarding mineral resources (excluding hydrocarbons) in Greenland. Bureau of Minerals and Petroleum, Government of Greenland. https://govmin.gl/wp-content/uploads/2019/09/Rules_for_Fieldwork_and_Reporting_regarding_Mineral_Resources.pdf
- Boertmann, D. & Bay, C. 2018. Grønlands Rødliste 2018 – Fortegnelse over grønlandske dyr og planter trusselstatus. Aarhus Universitet, Nationalt Center for Energi og Miljø (DCE) og Grønlands Naturinstitut. <https://natur.gl/raadgivning/roedliste/>
- Frederiksen, M., Boertmann, D., Labansen, A.L., Laursen, K., Loya, W.M., Merkel, F.R., Mosbech, A. & Aastrup, P. 2017. Review af det videnskabelige grundlag for færdselsregler i følsomme områder for dyrelivet i Grønland. – Videnskabelig rapport fra DCE - Nationalt Center for Miljø og Energi, Århus Universitet nr. 242. <http://dce2.au.dk/pub/SR242.pdf>
- Mosbech, A. & D. Boertmann 1999. Distribution, abundance and reaction to aerial surveys of post-breeding king eiders (*Somateria spectabilis*) in western Greenland. – Arctic 52: 188-203.

Appendix 1: Seaduck moulting areas for which Field Rule 2.03.03 apply

Area numbers refer to the map in Figure 1 and reference are found in the reference list above.

1 Waters west of Hakluyt Ø

Important moulting area for king eider (DCE unpublished). New since the printed version of the Field Rules.

2 Waters around Red Head, Depot Øer and N.E. Balle Øer in Melville Bay

Important moulting areas for king eiders (Boertmann & Huffeldt 2013). New since the printed version of the Field Rules.

3 Waters around Ederfugleøer off Nuussuaq, Upernavik district

Important moulting area for king eiders (Boertmann & Huffeldt 2013). New since the printed version of the Field Rules.

4 Kangerlussuaq, east of Kuuk, Upernavik district

Important moulting area for red-breasted mergansers (DCE unpublished).

5 Interior fjord areas between Ikeq/Upernavik Isfjord and Eqaugar-suit/Prøvens Laksefjord, Upernavik district

Important moulting area for king eiders (Mosbech & Boertmann 1999).

6 Umiiarfik, on north side of Siggup Nunaa/Svartenhuk Halvø

Important moulting area for king eiders (Mosbech & Boertmann 1999, Mosbech et al. 2006).

7 Northwest coast of Disko incl. Kangersooq/Nordfjord

Important moulting area for king eiders (Frimer 1993, Mosbech & Boertmann 1999).

8 Akulliit/Mellemfjord, Disko

Important moulting area for king eiders (Frimer 1993, Mosbech & Boertmann 1999).

9. Kuannersiut Sulluat, Disko

This area included in the Field Rules of 2000 has lost its importance as moulting ground for king eiders, and has been removed from the list (Egevang & Boertmann 2001b).

10 Akajarua/Mudderbugten and waters off Qaamassoq/Flakkerhuk, Disko

Important moulting area for king eiders (Mosbech & Boertmann 1999).

11. Tasiussarsuup Qingua, innermost part of Arfersiorfik, Aasiaat

Important moulting area for red-breasted mergansers (Boertmann & Mosbech 2001). New since the printed version of the Field Rules.

12 Nuersorfik, interior part of Nasuttoq/Nordre Strømfjord, Kangaatsiaq

Important moulting area for red-breasted merganser (Boertmann & Mosbech 2001). New since the printed version of the Field Rules.

13 Qissuttuut/Ravneøer and islands south of Qilangarsuit, two separate areas, Nuuk

Important moulting area for harlequin ducks (Boertmann & Mosbech 2001, 2002). New since the printed version of the Field Rules.

14 Ikkattoq-fjord, north of Frederikshåb Isblink

Important moulting area for red-breasted mergansers (Egevang & Boertmann 2001a).

15 Coast between Neria and Arsuk Uummannaq, Paamiut

Important moulting area for harlequin ducks (Boertmann & Mosbech 2001, 2002). New since the printed version of the Field Rules.

16 Timmiarmiit Kangertivat, southeast Greenland

Important moulting area for common eiders (Merkel et al. 2010). New since the printed version of the Field Rules.

17 Graah Fjord and Jætte Fjord, southeast Greenland

Important moulting area for common eiders (Merkel et al. 2010). New since the printed version of the Field Rules.

18 Knighton Fjord, Blosseville Coast

Important moulting area for king eiders (Boertmann et al. 2009, Boertmann & Nielsen 2010). New since the printed version of the Field Rules.

19 Flade Bugt, Wollaston Forland

Important moulting area for long-tailed ducks (Boertmann et al. 2009, Boertmann & Nielsen 2010). New since the printed version of the Field Rules.

Referencer

- Boertmann, D. & Huffeldt, N.P. 2013. Seabird colonies in the Melville Bay, Northwest Greenland. – Scientific Report 45 from DCE – Danish Centre for Environment and Energy, Aarhus University
- Boertmann, D. & Mosbech, A. 2001. Important summer concentrations of seaducks in West Greenland. An input to oil spill sensitivity mapping. – National Environmental Research Institute, Denmark, NERI Technical Report no. 345: 1-48.
- Boertmann, D. & Mosbech, A. 2002. Molting harlequin ducks in Greenland. – *Waterbirds* 25: 326-332.
- Boertmann, D. & Nielsen, R.D. 2010. Geese, seabirds and mammals in North and Northeast Greenland. Aerial surveys in summer 2009. – NERI Technical Report no. 773. National Environmental Research Institute, Aarhus University. 65 pp.
- Boertmann, D., Olsen, K. & Nielsen, R.D. 2009. Seabirds and marine mammals in Northeast Greenland. – NERI Technical report no. 721.
- Egevang, C. & Boertmann, D. 2001a. The Greenland Ramsar Sites, a status report. – National Environmental Research Institute (NERI), Technical Report No. 346, 96 pp.

- Egevang, C. & D. Boertmann 2001b. The Ramsar sites of Disko, West Greenland. A Survey in July 2001. - National Environmental Research Institute, Denmark. Technical Report no. 368.
- Frimer, O. 1993. Occurrence and distribution of King Eiders *Somateria spectabilis* and Common Eiders *S. mollissima* at Disko, West Greenland. - Polar Research 123: 111-116.
- Merkel, F.R., Rasmussen, L.M. & Rosing-Asvid, A. 2010. Seabirds and marine mammals in South and Southeast Greenland, June 2008. - Technical Report No. 81, Pinngorttitaleriffik, Greenland Institute of Natural Resources.
- Mosbech, A., Danø, R., Merkel, F.R., Sonne, C., Gilchrist, H.G. & Flagstad, A. 2006. Use of satellite telemetry to locate key habitats for King Eiders *Somateria spectabilis* in West Greenland. - Pp 769-776 in: Boere, C.G., Galbraith, C. & Stroud, D.A. (eds): Waterbirds around the world. - The Stationery Office, Edinburgh, p 769-776.