

ፌዴራል ልዩ ሰርዲየት ከበረኞች ጋር ምርመራ #125303

Recover tracking devices on Arctic terns

[illegible]

$\Lambda \subset \mathbb{N} \triangleleft \mathbb{N}$

Scientific Research

⁂₆Δ^cḡσ^q₆:

ᐅᑦᓂᕈᖅ ᐃᑦᓂᕈᖅᐅᑦ: 3/27/2018 2:39:13 PM

Period of operation: from 0001-01-01 to 0001-01-01

b6 b7C from 0001-01-01 to 0001-01-01

Λαμβάνονται ως δεδομένα:

Mark Mallory

Acadia University

15 University Ave

Wolfville NS B4P 2R6

Canada

ᐅᓃᓇᐅᓃᓇ: (902) 585-1798, ᓃᓇᓃᓇᓃᓇ: (902) 585-1059

כִּי־יִדְּלֶנּוּ בְּיָדָם

$\epsilon_b \Delta^c \dot{\Pi}_\sigma{}^b \wedge e_\mu \triangleleft \epsilon_b \epsilon_\sigma \triangleleft e_\nu \triangleleft {}^\alpha L^\alpha{}_\sigma{}^b$

⁹⁶ ٢٠١٩: Tiny tracking devices have been deployed on seabirds nesting at Nasaruvaaik Island, the site of a >10 year study on the birds. In 2018, we need to return to the island, find the birds with those tracking units on them, catch them, remove the unit, and release the bird. Then we return south with the tracking units to download them and map where the birds move through the year. This will help us identify what risks they face during migration and in their wintering area. We will also be sealing up much of the camp as there are no plans to return in 2019.

▷ΔÀŃĆ: De minuscules dispositifs de repérage ont été déployés sur des oiseaux de mer nichant à l'île Nasaruvaaalik, site d'une étude de plus de 10 ans sur les oiseaux. En 2018, nous devons retourner sur l'île, trouver les oiseaux avec ces unités de suivi, les attraper, enlever l'unité et relâcher l'oiseau. Puis nous retournons au sud avec les unités de suivi pour les télécharger et cartographier où les oiseaux se déplacent tout au long de l'année. Cela nous aidera à identifier les risques auxquels ils sont exposés pendant la migration et dans leur zone d'hivernage. Nous allons également sceller une grande partie du camp car il n'y a pas de plans pour revenir en 2019.

Δ₃^b∩D^c: urji hN4fbo1i woyJcMs6S t1ux s9l4nq8i NnD? er6bzi, gryQx6F do5 szbk wo8ixDbsMs6g6 t1uxi.
@)!*ao6X5, stExc6gA bw4fx hN4fbo1i t1ux tAQxc6bK, W6lA nN4fb, tqT9lA t1ux. st6lb c9lNo7j uN6lQ
hN4fb x7m csplt Njzhamtz t1ux5 xCABm. b8N xglA cspMg5 hNu xvsqostc6mz5 ko6tlQ srs4f5.
W/EM6g stv8i/Di6mt @)!(u.

Personnel

Personnel on site: 3

Days on site: 10

Total Person days: 30

Operations Phase: from 2018-07-01 to 2018-07-20

ለሮሲያ ልምድ ልማት

ለሮሲያ ልምድ ልማት

| ደረጃ | የቴክኖሎጂ ልማት ልማት | የፋይልድ ልማት | ጋራ ልማት ልማት | ልማት ልማት ልማት | የቴክኖሎጂ ልማት ልማት |
|--------------------------------|--|-----------|---|--|---|
| Nasaruvaalik Island field camp | Scientific/International Polar Year Research | Crown | A field camp has been located here since 2007 | There are two small tent rings outside of where our activities take place. We notified the relevant GN Dept in ~ 2008. | Resolute Bay is >100 km to the south. We have never seen anyone at our camp during the field season. We are >50 km east of Polar Bear Pass NWA and we don't enter it. |

ልማት ልማት ልማት ልማት ልማት ልማት ልማት

| ልማት ልማት | ልማት | ልማት ልማት | ልማት ልማት |
|------------|------------------|------------------|------------|
| የቴክኖሎጂ ልማት | Resolute Bay HTA | Resolute Bay HTA | 2017-01-11 |

ልማት ልማት ልማት ልማት ልማት ልማት

ልማት ልማት ልማት ልማት ልማት ልማት

ልማት ልማት ልማት ልማት ልማት ልማት

| ልማት ልማት ልማት ልማት ልማት ልማት | ልማት ልማት ልማት ልማት ልማት ልማት | ልማት ልማት ልማት ልማት ልማት ልማት | ልማት ልማት ልማት ልማት ልማት ልማት | ልማት ልማት ልማት ልማት ልማት ልማት |
|---------------------------------------|---------------------------------|---------------------------|-------------------------|-------------------------|
| Environment and Climate Change Canada | Banding PermitScientific Permit | Applied, Decision Pending | | |
| ልማት ልማት ልማት ልማት ልማት ልማት | Wildlife Research Licence | Applied, Decision Pending | | |

Project transportation types

| Transportation Type | ልማት ልማት | ልማት ልማት ልማት ልማት ልማት | Length of Use |
|---------------------|---------|--|---------------|
| Air | 0 | Twin Otter to fly in to camp and then again to pick us up and fly out; | |

| | | | |
|--|--|----------------------------|--|
| | | landing strip available | |
|--|--|----------------------------|--|

Project accomodation types

Permanent Camp

[illegible]

$\partial \bar{\partial} f = -\frac{1}{2}(\Delta^c)^2 f$

ΔL^{9b} ΔC^{9b} CΔJ^{9b} ΔC^{9b}

 $\triangleleft^b C d^c$
$$\Delta^b C d \in \mu \sigma \Delta^c \sigma^b$$
 $\Delta^{\circ} \text{O} \Gamma \triangleright C_{\frac{1}{2}}^{\circ} \triangleright^{\circ} \quad \Delta^{\flat} \triangleright^{\natural} C \triangleright \rho L \downarrow^{\circ}$

We have worked here for over a decade. This year we have a small team with no new construction or changes, and we are focused on simply catching birds that we previously banded and removing tracking equipment from them. Hence, we do not expect any negative environmental impacts, and positive impacts include determining migration routes of terns so that we can determine why populations appear to be in decline.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION 11: Municipal Development

[illegible]

This is a flat gravel island where we have worked for over a decade. Other than building a camp, we have made no changes.

ᐱᓪᓇ ᐱᑦᐅᐅᑦ ᑭᓪᓂᐱᑦᐅᑦ ᑕᓪᓂᐅᓂᓪᓴᑦ: ᐅᐱᑭᑦᐅᑦ ᑭᓪᓂᓪᓴᑦ

There are tern and eider colonies at both ends of the island, away from the camp. We rarely see other wildlife (occasional polar bears, and walrus early in the season).

ᐱᓪᓇ ᐱᑦᑎᐅᑦ ᑦᑲᓄᐃᑦ)ᑦᑕᑎᐅᓂᑦᐱ: ᐃᓄᑕᑎᓂᑦᑭᑦᐱᑦᐅᑦ-ᐱᑦᑕᐱᑦᑕᑎᓂᑦᑭᑦᐱᑦᐅᑦ

We have hired people from Resolute Bay or from other communities in most years at the site. This year we intend to hire Uluriak Amarualik, but we will send her in with the team at Prince Leopold Island, not Nasaruaalik Island.

[illegible]

n/a

Cumulative Effects

n/a

Impacts

$\Delta^{\text{fb}} \text{CD} \sigma^{\text{fb}} \Gamma^{\text{C}} \quad \Delta^{\text{C}} \text{N} \Gamma \text{D} \text{C} \dot{\sigma}^{\text{C}} \text{D}^{\text{C}} \quad \Delta^{\text{b}} \text{D}^{\text{fb}} \text{CD} \Gamma \text{L} \dot{\Gamma}^{\text{C}}$

[illegible]
$$(P = \langle b \rangle \Delta \cap \langle a \rangle^\perp, N = \langle b \rangle \Delta \cap \langle c \rangle \langle a \rangle^\perp, M = \langle b \rangle \Delta \cap \langle c \rangle \langle a \rangle^\perp, U = \langle b \rangle \Delta \cap \langle c \rangle \langle a \rangle^\perp)$$