

**Ukiuqtaqtum Avatiqaqatigiingniq Qauyiharnirnut iluani Ahiak Tingmianut
Utuqtaqtunut Unaguirvia**

**Ukiunganut Unipkaarnut
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Havaariyauyunut Nainaaqhimayut Hivunikhautikhangillu

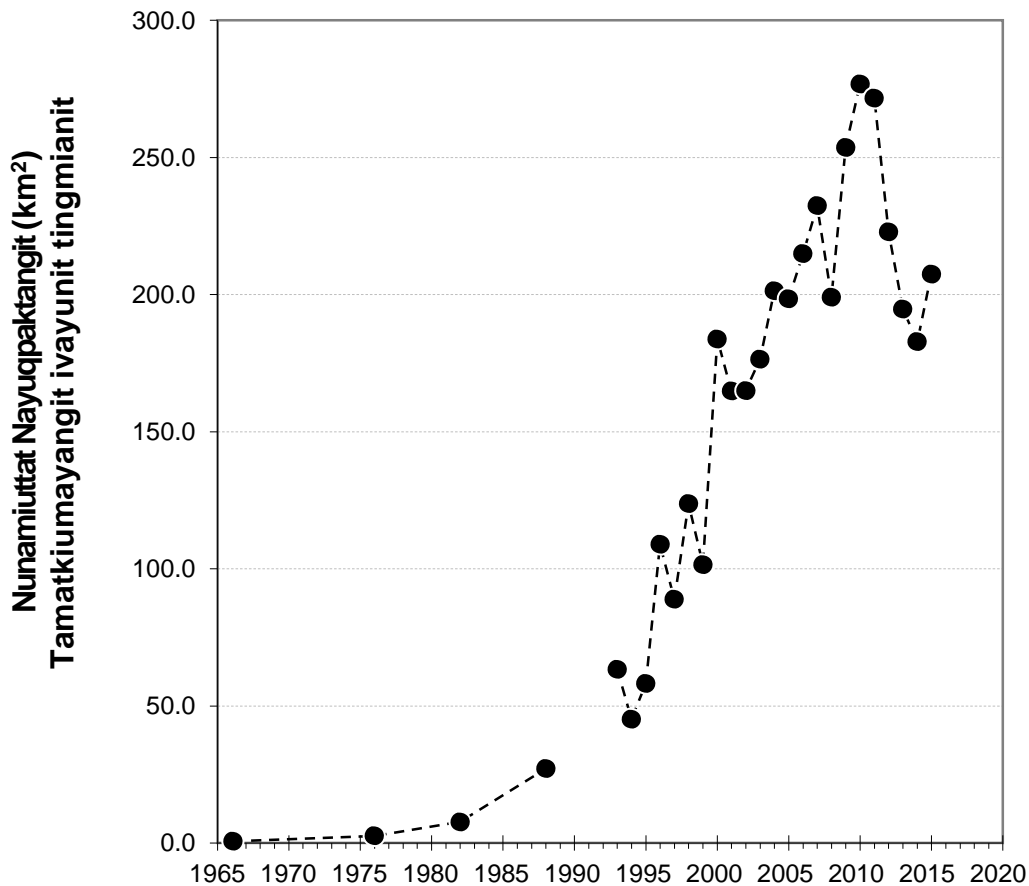
Aturaaqtakhait – hivitunianit qauyiharnikkut amihuuningit avataita haffumani ukiuqtaqtum ivayunit imarmiuttati tingmidjat, ihumagiyangit ikittunit kanguit (*Chen caerulescens*, kinguanit, aputit), Ross'ip (*Chen rossii*), qakuqtaqaligit hivuani (*Anser albifrons*) unalu uluagulliit (*Branta hutchinsii*), qingaliit (*Somateria spectabilis*) aahangiq (*Clangula hyemalis*), tautungnaqhunilu ukiunganit Ahiak Tingmianit Utiqtaqtunut Unaguiqhirvingmi (QMGMBS) 1991- ngutillugu. Hamna hivunngani manirarmi nayuqpagaat (1) Karrak Tahiq, nayugaat anginiqhauvluni (tadja naahimayungnaqhiyuq ikivallianinga 1 milian tingmidjat) ilihimayauyuq kanguit Rossi'p kangua (kititiqhimayangit taiyauliqpagaat ikitturaliit kanguit) ivayuktut amihuryuarnit iluani Unaguiqhirviani, unalu (2) Kuugyuami. Ukiunnguraangat, amihuryuit ukunangat tamaat niplautigihimayangit uumayuit ivavaktut iluani Karrak Tahia naahimayungnaqhivaat, unalu/uuminngaluuniit uktuutingit ilagihimayangit amihuuningit Aallannguqtauvaktut, aktingniagut, manniit inuuhianit, ubluat inuuhiannit, inirniup inuuhiannillu. Tahapkuat uktuutigiyangit kiulluaqhutik amiqhainirnit ihumaaluutinit anguniarnikkut uumayungit, tamarmi iluani Kanatami hilataanilu iluani Nuat Amialikami. Kinguani, akihautiqaqhutik ihumagiyauyut aktuqhimayangit amigaittuliurahuarnikkut avatingit, uuminngattut upinngaami ikaarutaat, hilaliqinikkut qanurilinganingit, mikiyumiktauq huraaat niryutillu amaammaktittiyuktut amihuuningit, amiriyauhimayut tutqiqhinahuaaraangat ukiunganit aallatqiit amigainnahuarlugit. Hamanngat hapumminahuarnigut kiuviniit, angiklivallialiqhuni amihuaryuit ikittumik kanguit hivulliuliqhutik qauyihainirnut hivunikhangit Nuat Amialikami.

Amihuuyut amihuaryuit taimaa aallannguqpallialiqhuni uuminngat ukiuqtaqtum nauhimayut unalu qaangani maniraa aviktuqhimayumi, ihumaaluutigiyauvlunilu inuuhianit haffumani ihumagiyauyut aktuqtauhimaningit nayuqpaktangit aallannguqtiqtauhimayut aahiit aallatqiinguyut, qauyihaqhutik QMGMBS kiugiangani ihumaaluutingit. Ilagivluniuk nayuqpaktangit ihivriqtangit iluani ivayunit amihuaryuit Karrak Tahiani unalu Unaguiqhirvia, kititiqhimayangit mikiyunit Huraat niryutillu amaammaktittiyuktut, amihurluangillu taryurmiuttat tingmiat ihumagiyauvagaat qanuq amihuuningit nayuqhimayangilluuniit aallaugumik ukunangat hiqumihimaittut manirarmiuttait nayuqpaktangit nutaannguqtiqtaugumik angmaumayumit ahivaqtauhimayut iviit kangurnit.

Qauyihagtut amihuuningit avatingit haffumani ukiuqtaqtum tiriganniat aulapkaivaktut, uuminngalu ayurnaittut qauyihavagaat nauyait, imitqutailat, qaqhaut, taryurmiuttat tingmiat, unalu passerineslu. Parnauqatigiyait ukunangat Dr. Emily Jenkins (Ilinniarvigyuangat Saskatchewan-mi), naunaiyaviniit aallatqiit qauyihainingit qauyihaqtauhimayut iluani tiriganniat, mikiyumik huraaat niryutillu amaammaktittiyuktut, kanguillu.

Kiuviniit

Ublunganit, 70 nit avatquttunit makpiraaliuqhimayut ukpiruhuutingillu iliaqhimavlutik qauyihahutik unalu ilagiyait ihumagiyauvaktut haffuminngat 2015 mi manirarmi havakhutik, ikittumik makpiraaliuqhimayait kiuyangillu takugakhaliuyut qauyihagtunit katimavlutik titiraqhimayut naittumi nainaaqhimayauvlutik iluani unipkaarunmi. Tunngahuktittiyugut piyumayainnit tamainnit ilitquhingit qauyihahimayavut, quviahuktugut ilaliutiyumayavut qauyihainirnit makpiraaliuqhimayut ilagiyangillu naunaiyaqhimayut tukhiutaugumi.



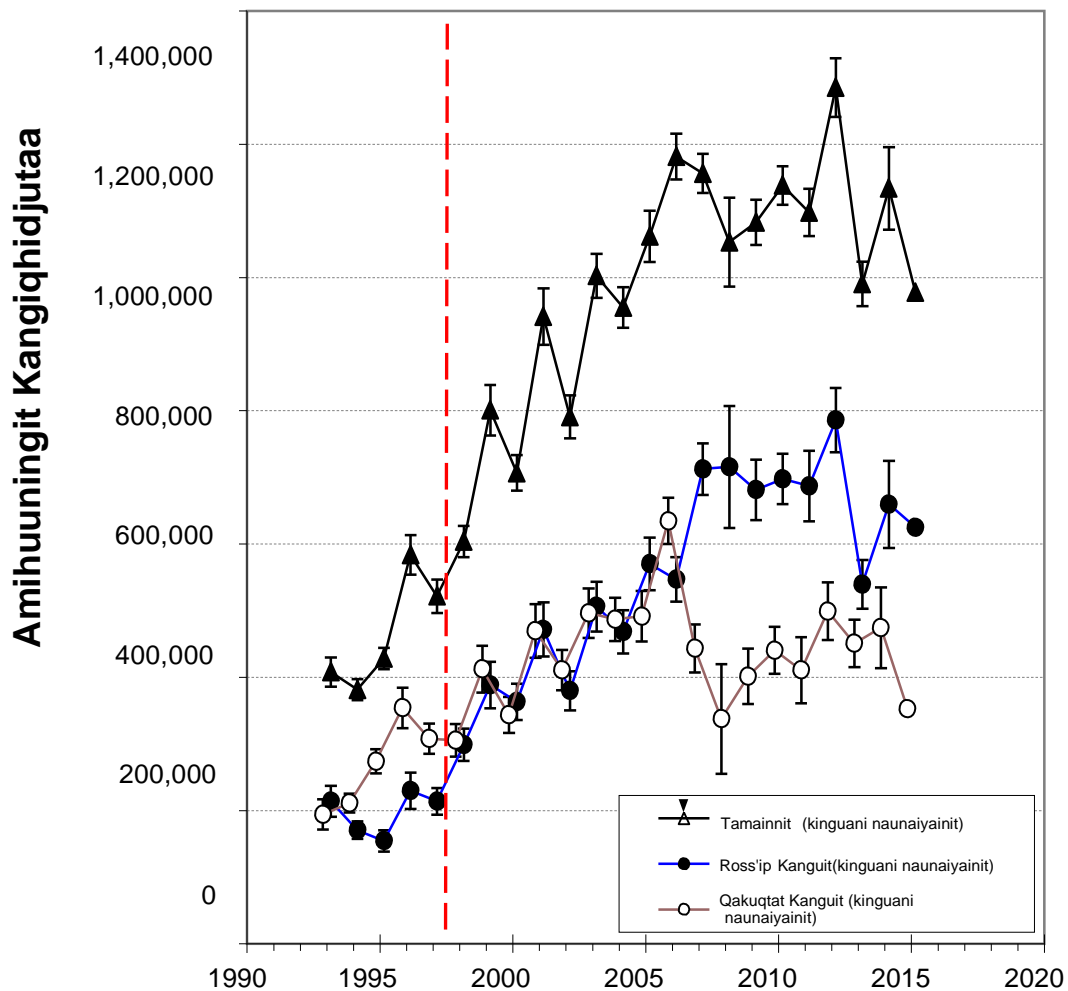
Ilitquhia 1. Nunamiuttait nayuqpaktangit (kikkariktukkut kilamiitas ingahingnia) nayuqtauvaktut ivayunit kanguit unalu Rossi'p kanguit uvani Karrak Tahia amihuaryuit, 1966-2015.

Ross'ip kanquit qakuqtait kanquillu: amihuuningit inilingnit aktinqnia ivayunit amihuaryuit
Karrak Tahia

Qaffiuningit nunamiuttat nayuqpaktangit (imarmiuttat ilaliutauhimaittut) tamatkiumayait ivayunit qakuqtait unalu Ross'ip kanguit amigaitpallialiqhuni qangaraalungmi (Ilitquhiq 1),

amihuuningit ivayunit kanguit (Ilitquhiq 2 mi). 2006 nguqtumi, hamna ilanganit uuminngat Ross'ip qakuqtallu kanguit ivayunit uvani Karrak Tahianit aadjigiikhimayut, talvangaanit, Ross'ip kanguit amigaitqiyauvlutik qakuqtat kangurnit.

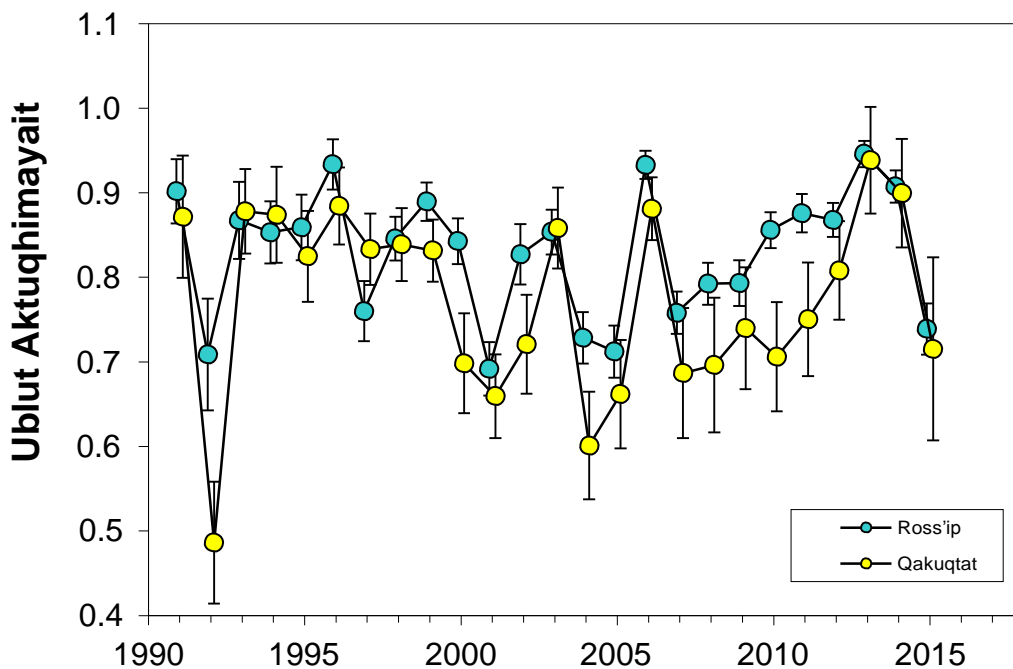
Iluani amihuryuanit kiglinga, 252 ublut naunaitkutit ihivriuqtauhimayut uvani 2015 mi, ublut hivuniat ublunganit, tigummivangniat aktilaangit, ublut nakuudjutaat, ivayunit amihuuningit aktingniat kangiqhiyauvlutik. Kihiani



Ilitquhia 2. Kangiqhiyauhimayut amihuuningit qakuqtat unalu Rossi'p kanguit ivayut uvani Karrak Tahia amihuuningit, 1993-2015. Hamna aupayaaqtumi titiraqhimayut naunaiqtau yut pilihaaqhimayangit Hapummiyaunirnit Aulapkainingit, ilaliutauhimayut angmaqhimayunit anguniaqtut maliguarutit hivunnigiyangit nailihimayangillu amihuaryunit ikittunik kanguit.

Hamna takimuarutaat aktingnia amihuaryuit angitqiyauvluni 2015 mi uvanngat ukiungani 2014 mit, amihuuningit haffumani ivayunit ikitqiyaangit kanguit Karrak Tahianit 2015 mi

ikivalliahimayuq 977,900 tingmianit. Ivayut nakuuqpiangit tamarmit uumayut Karrak Tahianit tautungnaqtut ukiunnguraangat aallatqiinguyut (Ilitquhianit 3), kihimi amigaitpalliavluni (hivituniat tukiquaqhutik (1991-2015) 77% unalu 83% nguvlutik qakuqtait Ross'ip kanguinnit, ahikkut). 2015 mi, amihuuningit ivayunit amihuuvlutik tamarmik ilitquhingit ikivalliahimayut hivituraalungnit akitilaanga, uvani 72% unalu 74% qakuqtait Ross'ip kanguillu, ahikkut (Ilitquhia 3).



Ilitquhia 3. Naahimayangit takunnaqtut ublu aktuqhimayait (amihuuningit nakuudjutigut ublut avvautihimayut tamatkiumayangit amihuuningit ublut) qakuqtat unalu Ross'ip kanguit ublunganit uvani Karrak Tahianit amihuuryuit, 1991-2015.

Hamna aktilaangit amihuuningit angiklivalliavlutik uvani Karrak Tahianit takunnaqhutik ikivalliahimayut qangaraalungmi, kihimi aulayuitutik ikivallianngittutiktauq malikhugit pilimmakhaivlutik Hapumminahuaqhugit Maliktakhanmit, ilaliutauvlutik angmaumavlugillu anguniarnikkut maliguarutainit aullaqtilihaaqhugit ukiunganit 1998-1999 anguniarvikhanut. Kihiani, ikivalliahimayuq amihuuningit ubluit haffumani qakuqtat kanguit 2007 mi takunnaqhuni ilagivluniuk amihut kingulliuvakhutik aputit auktulihaarnirnit uvani ukiunganit, ikittunilu ukiunganit malikhugu 2007 mi. Qakuqtat kanguit uvani Karrak Tahianit hakuiqtuqaramik ubluit uumani Ross'ip kanguit, aktuqtauhimagamiktauq kingulliuvaliagami upinngalihaarmat. Tamainnit, amihuuningit, aallatqiit ubluqaqtut uvani Karrak Tahianit aulahimainnamik ukiungani 2005 mit, ilitquhiqarunghavlugit nailivalliahimangmadjutik havaktunit iluani Karrak Tahianit ublunganit amihuuningit.

Qakuqtat, Ross'ip, hivuani qakuqtalgit, aahannqiiit tingmiat: tiquyauvaktaat-naunaighiivlugit-

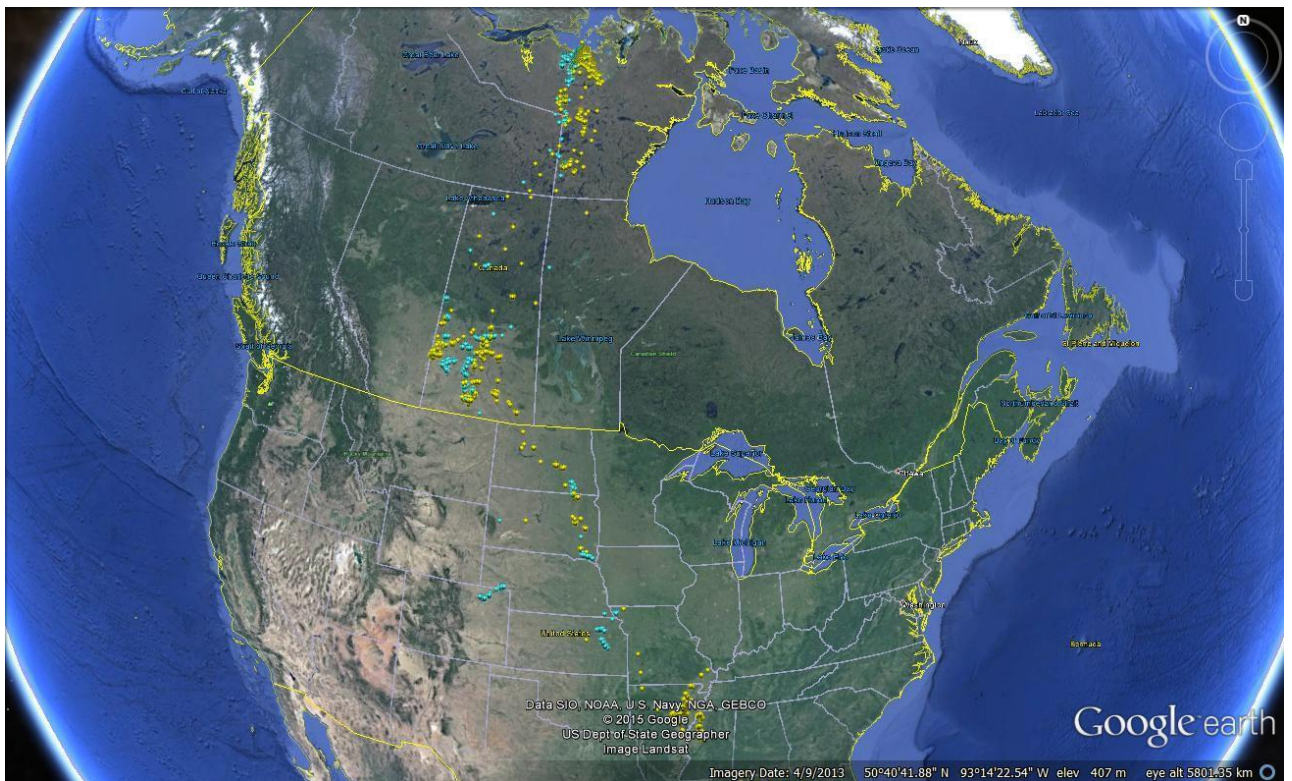
greater white-fronted, and cackling geese: capture-mark-recapture armibluqit / himmauhiyut

Ublunganit, avatquumayangit 257,000 tingmiat naunaiyaqtauhimayut naunaidjarikhihimayangit kanaangit mikilgiaqhimayuyut iluani QMGMBBS ukiungani 1989-2015. Amihuuyut tingmiat tiguyauffaarmiyut qanguqtumik ukiungani, anguyauvlutigluunniit anguniaqtunit tamainnut Nuat Amialikami. Talvangaanit arlingnaqpiapakhunilu ihumagiyaouvaktangillu naunaiyaiyunit ihumaaluutiginnaqhuni qauyihaiyakhait amiqhaiyainikkut ukpiruhuutainnit anguniaqhimayangit aallatqiit huraat, ihumagiyangillu qauyiharnikkut havagluaqtangit pilimmakhaiyut nainaarnahuaqhugu qitqanit kiglinganit ikitturaliit kanguit amihuuningit.

Ukiunganit inuuhirngit qayangningit qitqanit kiglinganit ikitturaliit kanguit kangiqhiyauhimayangit naunaiyaqtauhimayut iluani Kanatam ukiuqtaqtum malrurnik avvautingit: ukiuqtaqtum ikitturaliit kanguit (haffumanngat Ahiak, Southampton Qikiqtanga unalu Qikiqtaalungmi) unalu tununngani ikitturaliit kanguit (hamanngat La Perouse Bay, Cape Henrietta Maria, unalu Akimiski Qikiqtaq). Inuuhirngit naahimayungnaqhiyaat kiuyakhaat anguniaqtunit ikitturaliit qakuqtat kanguit, uuminngalu iniqhimakpiaqtumik angmaumayunik anguniarnikkut maliguarutit, ikitpiaqtumik nainahuaqhimayait inuudjutaanit nainaaqtauhimayut 0.80. Kihiani inuudjutingit taunanirmiuttat tingmiat, 10% nit tuniyauvaktut haffumani qitqani kiglingani amihuuningit, ikivalliahimayut humiliqaak 1989 mit 2006 mut (hamanngat 0.89 mit 0.83mut), inuudjutaanit ukiuqtaqtum tingmiat nainaaqhimaittut kihimi aulahimaittut 0.88 mit. Hamna tununnganirmiuttat tingmiat ivayuit pukkitqiyaanit avatait, ingilravaktut qilamiuqtumik taimaa amihunit anguniayuktaittauq hamanngat ukiuqtaqtum tingmiat. Anguniaqtut haffumani tununnganit tingmiat takunnaqhutik 10 nit ublunganit hivuanit ahinit amihuryuanit ukiuqtaqtumit amihuuningit.

Tahapkuat mikilriaqtaqtangit naunaiyaiyut atuqtauhimayait kangiqhiivlutik ingilrayunit haffumani Ross'ip qakuqtallu kanguit hamanngat ilagiyangit-pamiqhaiyut nunaani Karrak Tahirmi. Kanguit amigaitqiyanit ukturautinit haffumanngat ingilrayunit ukunanngat angutinit tamarmit aallatqiinit uumayunit. Uvani tamarmik aallatqiinguyut uumayut, utiqtaqhutik angiklivalliahimayuq ukiutigut amigaitqiyauliqhunilu ivayunit Karrak Tahiani, kihimi kinguani ikivallialiqtut ivayunit amihuuningit ukiungani alraarunmi, utiqtaqtut ikivallialiqhuni. Uuktuqhimayaqqut humiliqaak ikivallaaqhimavluni kanguit ivayunit Karrak Tahiani 2007-2008 mut (Ilitquhia 2) ilagihimayavut amihuryuanit utiqtaqhimayunit, kihimi aallangayunit utiqtaqtuit nalvaanngittavut utiqtaqtuni ukiungani kihimi hivunigihimayavut ikivalliahimayut kanguit takunnaqhiyauvaktut ivahimanngittunit, kihimi utiriakhaat tuqtaugumigluuniit.

Niqiliqivik 2014 mi, GPS anik turaarutait iliyauhimagaluaqtut uvani 10 qakuqtat 10 Ross'ip kanguit iluani Ahiap Utiqtaqtut Tingmianit Unaguiqhirviat QMGMBs, nayugaanilu (uvani kinguani Ubluirvia 2014 mi amihuuyut turaarvikhait ahiruqhutik ikilaiqhutik) tautungnaqhuni uvani Ilittuqhia 4 mi. Qakuqtaq Ross'ip kanguit ahinunngaqhutik manirarnut nunaanut uvani 9 Apatilirvik ± 3 ublunganit, atuqhugu taiga nayuqpauhingit uvannat 13 Apatilirvik ± 3 ublunganit, tikittunilu iluani prairie Saskatchewan uvani 11 Apatilirvik ± 3 ublunganit. Una atuinnaqhugit utiqhimayut ublungani hamannat tununngani Saskatchewan-mit unalu ublungani 12 Hikutirvia ± 3.4 ublunganit, tukiqaqhutiktauq tikittukhaat hamunga Mississippi Alluvial Valley uvani 13 Hikutirvia ± 3.8 daysublunganit, tamarmik tingmiat nutqallakhimayut ilainnaatigut ukiungani uvani Arkansas uvaniluuniit Mississippi. Nainarahuariangani, tingmiat atuqpakhugit nayuqpauhiangit ukiakhami utirnahualiraangat (pilihaaqhimavaktut 1 Niqiliqivik): 42.2 ublungani iluani ukiuqtaqtumi, 2.4 ublungani iluani taiga, 0.4 ublungani iluani ivilgyuami, unalu 59 ublungani iluani prairie nayuqpauhianit. Ikaarutigut uvani prairies mit Kanatamiitpakhutik, ukiiffunuaqhutiktauq hivunngani U.S. mi (Hivunngani Tununnganilu Dakotami). Kanguit niriliqpakhutik ivilingnit maniraani uvani Kanatam prairie-mi uvanilu Mississippi Alluvial Valley. Atuqtangit ukiuqtaqtum nayuqpauhianit ihumagiyaulluaqpagaat hivuraanit utiqtaqhutik prairies-nut, ivilingnit taiga nayuqpaktangit nayukaffukhimayangit.



Ilittuqhianit 4. Nayugaat uuminngat kanguit (quriiqtami kaimalluriktumi) unalu Ross'ip kanguit (ariiqtami kaimalluriktumi) aulapkaiyangit ukunngat GPS anik turaarutaata havaktauhimayut iluani Ahiak Tingmianut Utiqtaqtunut Unaguiqhirviat QMGMBs Niqiliqivik 2014 mi.

Qingalit Aahannqiillu: ivayunit avataita tiqyaulihaaraanqat – tiqyauuffaaqtauqaanqallu

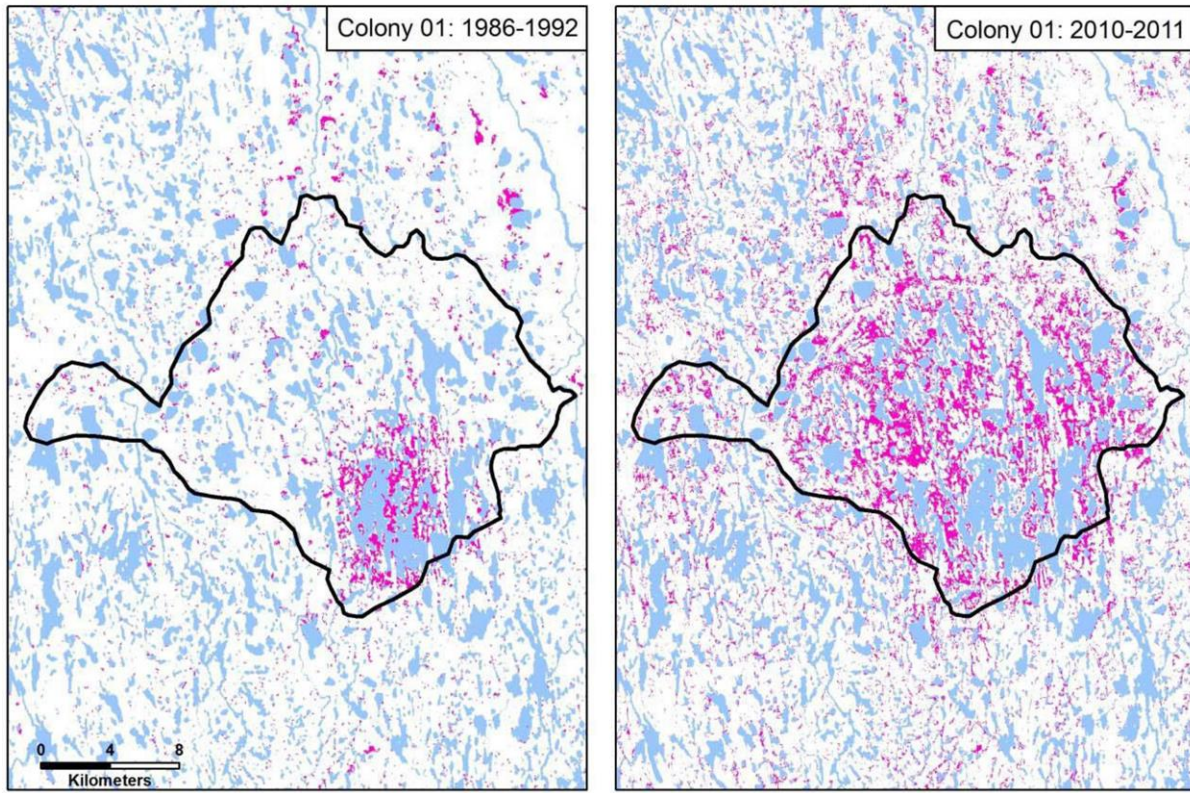
Uvani 2015, 258 qingalit unalu 36 aahangiit ubluit amiriyauhimagaluaqtut qikiqtami Karrak uvanilu Adventure Tattit. Kihimi, akhait niriliqpaktangit amihut ubluit 2015 mi, talvangat, ublut nakuudjutingit qingaliit aahangiit ikittuunniqhutik 4.7% unalu 6.9%, ihumagiyaattiaqhugit, ikivalliahimayauyuq hivitunianit uuminngat 38.7% qingaliit unalu 21.2% aahangiillu.

Unattaug kinguani uumani hunngiqpagaat akhat, ikittut inirniit qiqqaangillu annaiyauyut ubluanit naunaiyaivlugillu ukunanngat kanaangit nalunaitkutaqayuktut mikilraqtauvlutik (16 inirniit 16 qiqqaat qingaliit, unalu piqanngittullu inirniit qiqqaallu aahangiinnit). Uvani 1995 mi, 595 avaliqanngittut inirniit arnat unalu 2795 qiqqaat qingaliit annaiyauhimagayut ubluannit, unalu 74 qiqqaat annaiyauhimagayut ivahimagayut arnat kinguani ukiunganit. Uvani 1998 mi, 81 inirniit arnat unalu 89 qiqqaat aahangiit annaiyauhimagayut ubluannit, kihimi qiqqaat annaiyauhimagayut ukiunganit.

Tahapkuat ivayuit annaiyauhimagayut naunaiyaivlutik annaiyauyut naunaiyaqtunit kangiqhiyaungmat tigummivingit aktinngianit, ivayut inuudjuhiatigut, inirniit inuudjuhiatigut, ukiungat havakhugit, ivayuniinginnaqhutik nunaanit. Haffuminngatut, naunaiyaivlutik atuqhimayangit qanuq kangiqhiinnaqhutik ukiunganit hivuanit havalihaaqhutik ivayunit amihuuningit amaamangit ivavlutik hivuanit ivatinnatik.

Nayuqpauhingit aallannquqtigtauhimayut ikitturalqit kanquit

Iluani Ahiak Utigtaqtut tingmiat unaguqhirviat QMGMB, anginiqhauvluni nayuqpaktangit aallannquqhimayuuq ukunanngat ikitturalqit kanguit angiklivalliahimayuuq iluani anginiqhaa ivayunit amihuayuit uuminngalu iluani amihulgut ivayut nunaanit. Aadjigiingittut uumani LANDSAT tautungnaqtut uvani 1986-1992 uvanilu 2010-2011 (Ilitqhia 5) naunaittuni angiklivallialiqhuni takunnaqtut ivilgit maniraa Karrak Tahiq amihuayuit. Tautungnaqtut iviit maniraat taimailittiyauyuq ahivaiyaivlutik qaangani nauhimayut (uuminnqallu nauhimayut), taimaa naunaittunilu qaanganiittut maniraat *Sphagnum* spp. (uqyuk), taimaa hiqumilaanginnaqtut ikhinnalaaqhugittauq. Kihiani, ilangit iviit itkumi, taamna atuqhimayait nauhimayait aulanngitpat nauviniit takunnarumik taimaa utiffaarnaqhuni utiqtaraangat tingmiat. Iluani kivataanit ilanganit haffumani Ahiak Utigtaqtut tingmiat unaguqhirviat QMGMB ialiutauhimayut angiyulluaqtumi ivayunit amihuayuit mitquniliraangallu inugiakhiliraangallu iningat, takunnaqhuni iviit angiklivallialiqpaktut 411% hamanngat 1986-1992 2010-2011, hamanngat 269 km² to 1373 km². Anginiqhaat pusaatigut (25%) takunnaqtut iviit ittit inianit naunaiyailiqpagaat kiniupayumik ivilingnit, qaliriiqhimagayut ikivallialiqhuni kiniupayumik iviit nayuqpauhingit.

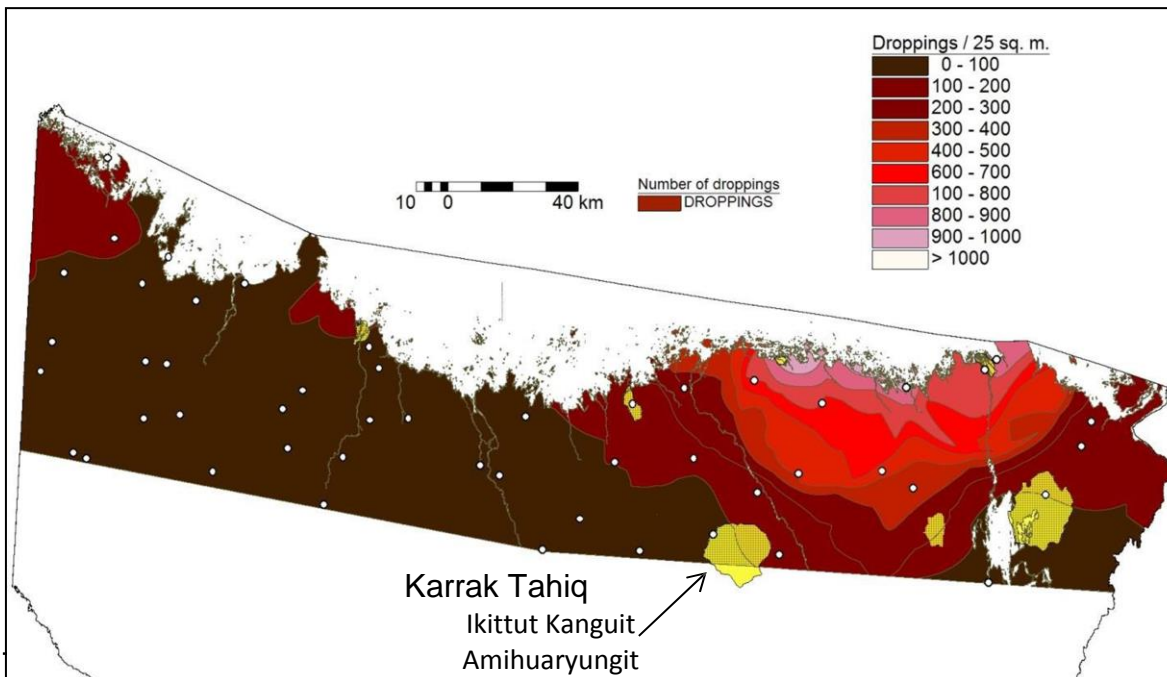


Ilitqulia 5. Angiklivalliahimayut takunnaqtut nauhimayakhat Karrak Tahiani amihuaryuit hamanngat 1986-1992mit 2010-2011 mut. Una 2011 amihuaryuit kingiat tiliuqhimayut qirnariktumi, takunnaqtut nauhimayakhat imailu timingit ariiqtarmiittut.

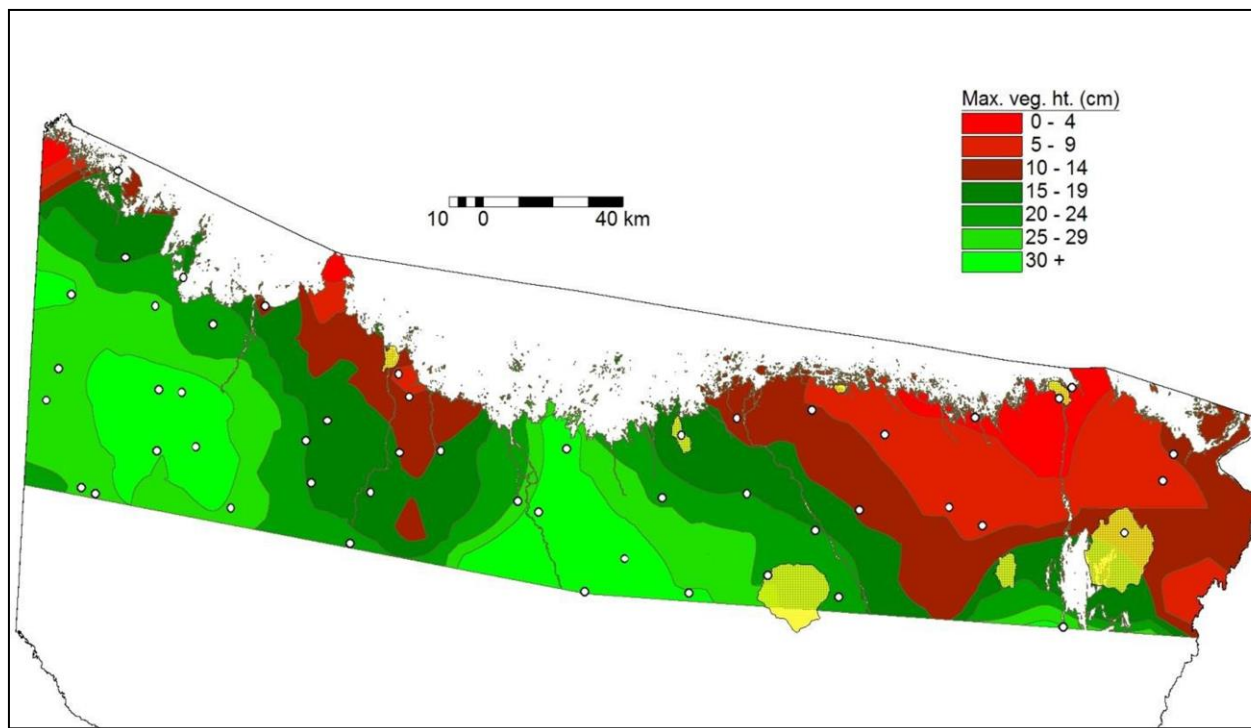
Nauhimayut tukiqaqtut huli aulayuitut uvani 0, 15, 30, 45, unalu 60 km hivuraanit Karrak Tahirmit amihuaryuit uvani qitqanit-1990t (Ilitqulia 6). Uvani 2013, 50 ilaita havaktauhimagaluaqtut kingikrumik nunani nayuqpauhiannit (tingmidjat nayugaanit) tamainni ilainnaani Unaguiqhirviannit (Ilitqulia 7), qauyihavakhutik naunaiyaqhimayut aturiakhaita tingmidjanit (naunaiyaqhimayut nampaitigut kanguit anarningit) nauhimayullu qauyihailiqpagaat havaktauhimayut uvani 2013-2014. Qauyihainingit huli havainnaqpagaat, ihivriuqhvakhutiktauq tahapkuat tingmiat nayuinnaqhugu kivataanit ilanganit Unaguiqhirviannit (Ilitqulia 7), unalu nauhimayut puqtunia ikivalliahimayut iluani nunaani (Ilitqulia 8).



Ilitqulia 6. Nauhimayut ilaliutihimayait nayugaat uvani 60 km hivuraani Karrak Tahi q amihuaryuit.



Ilitqulia 7. Aallatqiiit nampaitigut kanguit anarnangit tamainnit hivuraanit ilanganit Ahiak Utiqtaqtut tingmiat unaguiqhirviat QMGMBs. Amigaittut ivayunit amihuaryuit naunaiyaqtauhimayu quriiqtami.



Ilitqulia 8. Aallatqii puqtuyunit nauhimayut nampaitigut tamainnit hivuraanit ilanganit Ahik Utiqtaqtut tingmiat unaguiqhirviat QMGMBs. Amigaittut ivayunit amihuayuit naunaiyaqtauhimayu quriiqtami.

Imarmiuttat Tingmianqunqittut-qauyihaghimayut

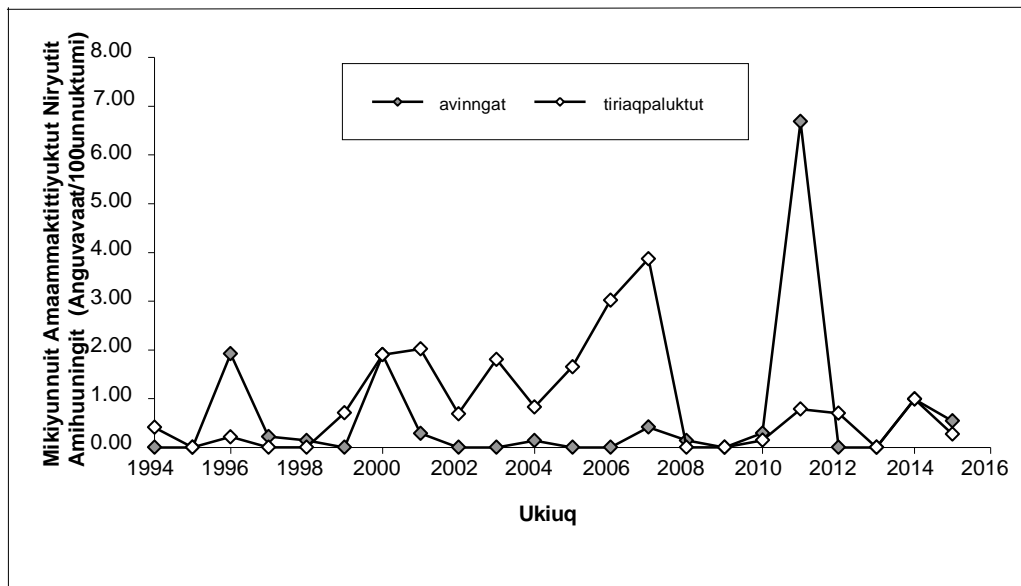
Qauyihaiyut imarmiuttaunngittut aallatqii havaktauhimagaluaqtut ukunanngat 296 nit unalu 342 nit ivayut nayugaanit 2014 mi 2015 milu, ihumagivluniuk, avatquttumik 7100 qunniaghutik titiraqtauhimavlutik. Amihut hapkuat nayukaffuinnaqhimayangit (5405 tamtkiqhutik, ilaliutauvlunilu 4742 pittulaat, 341 amaulikkat, 187 tingmiat, 109 qupanuat, aahiillu), kihimi aallat qunniyaqtauhimayut ilaliutauyut aqilgit (224), imarmiuttat tingmiat (374, amihuuyut tuituaaryuit), ihunngat (124), niqikhaqhiuyuktut (39). Tahapkuat naunaiyaiyangit parnautihunnguvaat naunaidjarikhinahuariami aktuqtaunikkut nayuqpauhingit aallannguqtaugumi ivayunit ikitturaliit kanguit uvani nunami maniraani tingmiat nunallaanit kangiqhihunnarlugit amihuuningit nayuqhimayangillu aallatqii nayuqpauhiit. Naunaiyaiyut qagliyuugaluaq.

Mikiyunnuit amaammaktittiyuktut niryutit amihuuningit

Mikiyunnuit amaammaktittiyuktut niryutit amihuuyut Karrak Tahiani aallatqiinguvlutik ingattaqhunilu uvani 1994-2015. Mayuqqat uvani mikiyunnuit amaammaktittiyuktut niryut amigaitpakhutik 3-5 ukiunnguliraangat (Ilitqulia 9). Anguhimayaqqut 232 mikiyunnuit

amaammaktittiyuktut niryutit uvani 14,320 naniriaqhimayavut unnuktumik ublumimut; aupayaaqtut tiriaqpaluktut amigaitqiyavlutik 137 anguyauhimayut (59%), hapkualu avinngait 69 anguyauhimayut (30%), tahapkuat 26 anguyauhimavlutik (11%).

Amihuuningit ukuningat tiriganniat takunnaqhutik katilviunginnaqhugit aallatqit mikiyunnuit amaammaktittiyuktut niryutit amihuuningit amigaitpiaqhutik ivayunit uumingat imarmiuttat tingmiat ilagihimaittangit mikiyunnuit amaammaktittiyuktut niryutit amihuuningit. Ihumagiyavut angitqiyaat amihuuyut tingiat ivayut Karrak Tahiani anguniaqtailihimayangit tiriganniat niqikhaqhiuqtut Karrak Tahiani.



Ilitqulia9. Amihuuningit (amihuuyut anguyauhimayut 100 unnuktumi) avinngait tiriaqpaluktullu iluani Karrak Tahia amihuaryuit, 1994-2015.

Anguyangit naunaitkut-anguyaffarmiyangit avinngait uvani kikkariktumi anguvikhami uvani hitamat nayuqpauhiannit (kingiktumi maniraanit, iluani hilataanilu ikitturaliit kanguit amihuaryuit) taimaa ihivriurningit haffumani aktuqtaunianit nayuqpauhianit aallannguqtauhimayut ivayunit ikitturalingnit tingmiat uvani mikiyunnuit amaammaktittiyuktut niryutit amihuuningit amigainninganillu. Uvani 2015 mi, 74 avinngait (73 kayuqtut unalu atauhiq qunguhilingni) anguyauhimayut uvani 352 huliblutik. Kiuviniit takunnaryuqiliqhuni.

Tiriganniat: anquyaqtanqit naunaitkutat anquyaffaarmiyangit hulivlutik ukunannqat aanniarutilgit

Uvani 2000-2015, 148 unalu 159 nanminiliit inirniit inuuhuktullu tiriganniat, ihumagiyaavlutik, anguyauhimayut naunaiqtaavlutik Karrak Tahiani. Amihut tiriganniat anguyaffaarmiyayut qangannguraangat. Ilagiyait tirigannianit tautungnaqhutik uvani Qausuittumi, Iqaluktuuttiami, Qurluqtumi, Talurjuamilu. Qauyiharningit anguyaffaarmiyangit naunaiyaivlutik tirigannianit ukiunganit 2000-2015 Karrak Tahia naunaittunilu inuudjutaanit inirniinut angiklivalliahimayut qanganngurmat (hamannqat 0.40 uvunga 0.50), niqiqarnirmihimagamik amigaittunilu tingmiat nayugaanit. Inirniit inuunahuarniq ilagihimayangit aulahimaittuni havaatigut, taimaa aallannguqpalliahimayut qangannguqtumi. Aallat havakhimayut katilviuhimayut aallannguqhimayut avinngait amihuuningit nunaumlu hilaup aallannguqtiqhimavluni.

Parnauqatihimayaat uuminngat Dr. Emily Jenkins ilihaqtingillu uvani Ilinniaryigyuangat Saskatchewan, amihuuyut kumait ilaliutauyut *Toxoplasma gondii*, *Neospora caninum*, *Toxascaris* spp., *Cryptosporidium* spp., *Giardia* spp., *Echinococcus multilocularis*, taeniids, naunaiqtauhimayangillu qupilruayuit ihivriutauhimayut tirigannianit Karrak Tahianit. Ilitturnaqtut haffumani qupilruayuit *Toxoplasma gondii* uvannqat tirigannianut amihuuningit qauyimayayut ikittumi nunaanit, kihimi unipkaariyauhimayut tuqulipakhutiglu. Elmore et al. (2016) unipkaariyayut *Toxoplasma gondii* iluani tirigannianit Karrak Tahiani, titiraqtauhimavluni nutaami nunauyarvingmi naunairutaa qupilrulgut tirigannianit. Kinguani, Elmore et al. (2014) unipkaariyauhimayut qakuqtat Ross'ip kanguit utiqtaqhutik Karrak Tahianut naunaiqtauhimayangit *Toxoplasma gondii* uuminngalu, hiamitpallialiqhutiktauq hapkuat qupilruit.

2014-2016 Makpiraaliuqtauhimayut Takugakhalgillu uvani Qauyihainirnut Katimayut

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Iltaridjutingit

Una qauyiharniq tadjja manngit ikayuutiqaqhutik ukunanngat Ukiuqtaqtuq Tingmiat Ilaqatauhimaningit, California Pilirivvingat Iqalungnut Niryutinillu, Central Flyway Katimadjutingit, Delta Imarmiuttat tingmiat Timingat, Ducks Unlimited Canada, Avatingnut Kanatami, Mississippi Flyway Katudjiqatigiit, Ukiuqtaqtum Avatingat Iniliugait, Ukiuqtaqtum Qauyiharnirnut Ilihautiyut Piliriakhaq, Nunavunmi Uumayuliyit Katimayit, Ukiuqtaqtum Taryup Kiglinguyaa Havaangit, Taryum Tingmiat Ilaqatauhimaningit, unalu Ilinniarvigyuangat Saskatchewan. Ublumimut, 200 haniani ikayuqhimayut ikayuliqpakhutik manirarmiittut qauyihavlutik iluani QMGMBMS Ahiak Tingmidjanut Utiqtaqtut Unaguiqhirvinga, quviahukpiaqhuta ikayulluaqpakkami hulilluaqpakkamiktauq.