

Hivulliq kititakhaq taphumunga Ikaluktutiak Tahiq, Kiilingup

Qikiqta:

2015 maniqami ukiup ilaani tuhaqhit

Milla Rautio,
PhD Kanatamilu Naunaiyaiyi Ikhivautalia
Timinga atuqtut naunaiyaiyt,
Université du Québec à Chicoutimi (UQAC),
Chicoutimi QC G7H 2B1,
Hivayauta : (418)5455011 ext. 5084
milla.rautio@uqac.ca

Connie Lovejoy
Ilihaiyiqpiaq,
Timinga Uumayuligiyyit
Universté Laval
Quebec QC G1K 0A6
Kanata
Hivayauta 1 (418) 656 2007
connie.lovejoy@bio.ulaval.ca

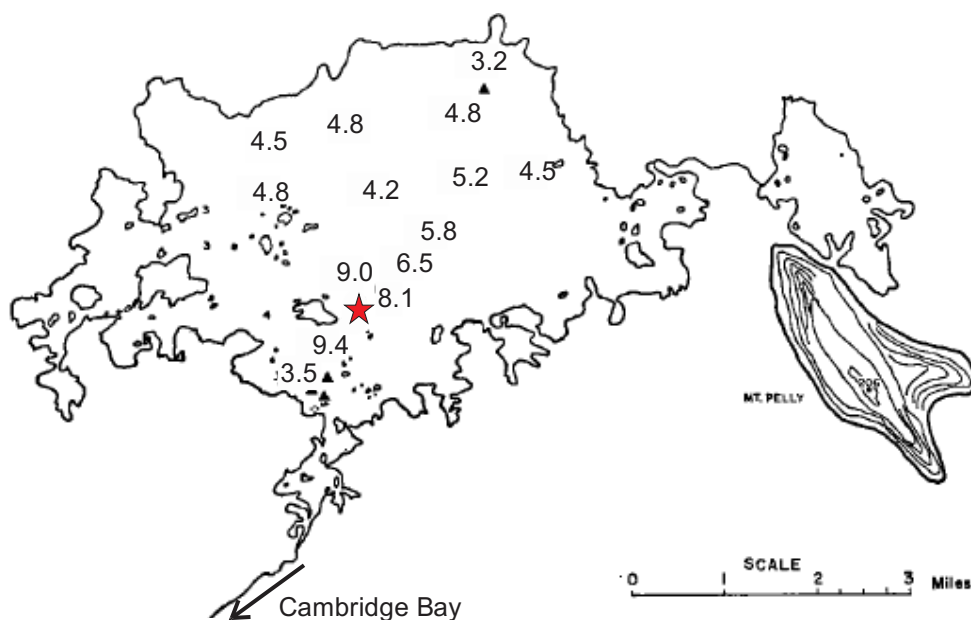
Tapkuat Kanatamiut Quttiktuq Ukiurtaqtumi Naunaiyaivik (CHARS) Ikaluktutiakmi, Nunavut, hakugikhivalliqniaqtat Kanataup havagiyai hivuliqtiunit Ukiurtaqtumi naunaiyainiq pipkaqlugitlu naunaiyainit tatyamun ayurnaqqhimayut ayurnagutilgitluniit atugiangi Ukiurtaqtumi piplugit ihuaqhautai ayugutainut. Tamna pilgua nutanguqpiaqtut naunaiyainiqmun havagutit atuqtauvaktutlu pityuhit uuktugaqninut munaginilu amihut avatiliqutit pityuhit pittailitauyut pilaqninik pivaliatitni ihumagiyaayut havagutit ilaliutyalat qanuqtut ahianguqnit Ukiurtaqtumi nunagiyaayut atatyutaulat uumatyutit amigaitni havagiyauttiaqnilu tahapkuat havagutit.

Ilagiplugu tamnahivulliqpamik aturtakhaq hugiaqninik tapkuat ilihimanit pittailitit naunaiyainiqmun havaginit talvani Ikaluktutiak Tahiq haniani Ikaluktutiak atuqtauyut auyani 2015. Ukiup ilainani naunaiyainiq talvanga Juni tikitlugu Saptaiqa atuqtauyut piqaqtitninut huniumaititlugit ilitquhi unniqtuqni tapkuat uumatyutit atulaqnit imaup nakuunit, uumayuvaluit allatqikni, nauhimayut- tamnaluk angutikhatlu piqaqnit qanugitni, piqalaqnilu carbon ahiangurtaqni uumatyutit aaniaqtailiniqmun. Ilagiplugit, pingahut mikhaani 50 cm takinilgit halumailgut ikutarniqkut piyaayut itiniqhanit tahiup. Tapkuat avguqtauyut tapkuninga 1 cm ahivakuinit naunaiyagauniaqhutiklu hunaqagiangit allatqiknilu carbon piqaqnit tapkuatlu iniliqhimanituqainik huniumailgui aqayainik tapkuningalu uunaumanivaluinik hivuagut imaqmiutanit hanahimanilu tahiqmi.

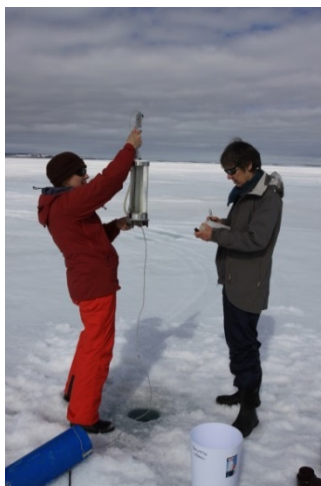
Tapkuat naunaiyaqni ikayuqhiutikmiyut tapkununga Ukiurtaqtumiutaqatigit Uumayuvaluinut Munagiyauni Havagutit (CBMP) tapkuat pinguqtauni ikayuqtigikni tamaita tapkuat 8 ukiurtaqtumiutaqatigit nunaqyuat. Atuni nunaqyuat piniaqhmayut malikninik ayyikkinik naunaiyainiq havakhat pinahuaqhugit piqaqtitiniq nakuuniqpanik hutqiknilu tuhagakhat allatqini avatigiyaayuni Ukiurtaqtumi uumayuvaluinilu. Tamna naunaiyaqni naunaiqtutit piyaayut talvani Naunaiyivikmi Imaqmiutanut Naunaiyainiq (LASA) talvani UQAC talvanilu Universté Laval.

Naunaiyagaq

Tamna naunaiyaut atuqtauyuq akungani Juni 10 tamnalu Saptai 9, 2015. Hivullik malguk naunainaivikhak pivikhai, ilautitlugit tapkuat halumailgut ikuutaqnikut, piyauyut tamna tahiq huli hikuhi matitlugu ilaili naunaiyagaq piyauyut hikuiqaqtitlugu. Atuni naunaiyaivit pivigiyaini tamna itiniqhaq inigiya tahiqmi (10 miitat, Titigauya 1) naunaiyaqhimayuq tapkunanga pingahunit itiniqpanit. Naunaiyagaq mikhaanit 10 L imaqmin katitauyuq atuni itiniyunit hivulli qpamik havakni naunaiyaivikmi qilamik naunaiyagauninit. Ilagiplugu, uumayuvaluit naunaiyagauyut nauhimayutlu kupyainit amukpugit kupyat hanimun natqata hanianit qulaanut. Tapkuat naunaiyagaq agyaqtauyut talvunga Ukiurtaqtumi Hilattuqhaivik Naunaiyaivianut Ikaluktutiakmi tapkunani imaq pihimayuyuq niqauvakninut naunaiyaqni halumaqhagaunilu uumayuvalunnuaqnut RNA, carbon qanugittuninut, uuqhuvaluqaqni acids tapkuatlu chlorophyll. Tamna mikiyuq avikhimania (100 mL) piyauhimayuq yaphumunga Lugol-min avuyaunia tapkununga nauhimayut naunaiqni kititaunilu. Uumayuvaluknut pihimani) pihimayuyut taphumunga formaldehyde hunauyanginut kititaunilu tamnal b) nunguttailihqhimaittumik uqhuvaluinut acid naunaiyaqni qiqitittugulu. Ilagiya tamna halumailguq ikutaqnikut aviktauplutiklu Ikaluktutiakmi huli malguk huniumaittuk ikutaqnikut agyaqtauplutik qablunaani naunaiyaiviknut huli havakhat.



Titigauya 1 Nunauyaq takukhautita tamna Ikaluktutiak Tahiq piqaqhuni ilaitnik itininik naunaipkutai. Tamna ublugiamik titiqnilik mikhaani naunaiyagaup inaani takuyauyuq 8-nik kingutqinik akungani Juni 10 tamnal Saptai 9, 2015.



Titigauyaq. 2. Naunaiyaqnia Ikaluktutiak tahi q talvani Juni 2015. Hikup ibyunia tikittugu 205 cm.

Naunaiyainit

Tapkuat naunaiyaqnit qauyihaqnilu pihimayut atugahuaquninit titiqnit talvani Ukiurtaqtumi Imigaulat Uumayuvaluqaqni Munagiyauni Upalungaiyautit taphumunga ukiurtaqtumiuqatigit Ukiurtaqtumi imigaulat uumayuvaluqaqnit naunaiyaqni. Atuni qauyihaqni naunaiqtauhimayut atuqpiagutai allatqit naunaiqhugit tapkuat avatiliqutit qanugitnit naliaknut imaqaqniuyut.

Qauyihaqnit	Pityutai atuqpiaqni Piyaovit Uumatyutauyut Ilagiyat (FEC)
Unaqnit, apqutaulaqqit, niqauvaknit (TP), DOC/CDOM	Atuqpiaqtuq hunaunia, tugangayuq hilap ahianguqnianut. Hakugiktuq piqatiginia tapkununga uumayuvaluknut. Naunaipkutat tamaitnut havanguni havagutit. Atuguminaqpiaqnia naunaiyaut piplogu ayurnaitnia katitigini akikitnilu; tuhagakhat akuttuyut atukhallalatlu
Uumayuvalunnuit qauyihaqni (piplogit DNA tamnal RNA)	Atuqpialat naunaipkutat ahianguqninut akhugutaunilu aktuanit, tugangayut pityuhiqnut akulagutai. Tamaitnut ilihimattiangitnit ayuittuqtaitnilu. Tuhagakhat piyaulat tamaitnut pukkitumik akutunit atulalaqnilu. Ayurnaitpiaqnit naunaiyaqni kihimik ayuqnalat havagininik. Atqupialat pityuhit naunaiqninik pitaqvut ahianguqnit.
Nauhimayuvaluit	Atuqpiaqtut piplogit tapkuat pihimani niqit atuqpakvi, qanugililaqnit ahianguqniqnut, naunaiqtuqni ilia qanugittuni ahianguqnit, uuktutit pivaliahimayut naunaiqninut akhugutaunit aktuani, allatqikpalangitni havagutauyuni; ilia hivituyumut munaqhityutit tuhagakhat piyaulat.
Immap Natqani aqayait	Atuqpiaqtut piplogit pihimani niqauvakninut, qanugililanut ahianguqniqnut; tuhagakhat piyaulat pukkitniqhauvaknit, naunaipkutat ikipyaktut akuttuyut, chl a atuqtauyuyuk uuktutaunia uumayunnuaqnut hananit; atuguminaqpiaqnit piplogit ayuqnaitpiaqni naunaiyaqni akikitnilu, tutqumayaulaqnilu qauyihaqnit
Uumayuvaluit	Niqit puqtuqpiani atuqtauvakninut, atuqpiaqni atuqtigiyai aipainutlu hanayaunit niqauvakninut; nunalikni qanugitnit pityutauni avatigiyainut ahianguqnit; naunaiyaguminaqni naunaiqhagaitnilu; ilia hivituyumun munagininut tuhagakhat piyaulat.

Uqhuvalulgit uqhuqaqnitlu acids/ikumatyutit aulanit	Atuqpiaqtut nunaliuyunut havagutai uumayuvaluitlu, atuqpiaqtut naunaiqninik ahianguqnit tahamani avataanilu havagutit, atuqpiaqtut naunaiyautit tugagauninut allatqikni uumayut naunaigiangi uumatyutai piyaunit (immap natqanit tapkuatlu imainnaqhiqtut); ikittut tuhagakhat piqaqtut.
Taimanitaqyuaqnit	Pipkaini hivituniqhamun atulaknit qauyihaqnit piqaqtitilatlu akhut naunaiyaqni hivituyumun atullakni pitquhit.

*DOC= Akuhimani hunat carbon, CDOM = Taqhaligutauyuq akuhimania takukhauyumut piyaunia

Naunaiyainiq ublui titiqatlu taihimayut naunaiyagat katitiqni

Juni 9, 2015

Juni 15, 2015

Aagasi 11, 2015

Aagasi 18, 2015

Aagasi 25, 2015

Aagasi 31, 2015

Saptaipa 9, 2015

Imaq atuqnia:

Apqutaulaqnia uunaqnialu piyaunit taphumunga CTD

DNA tapkunanga hunaunit 3-50 μm tamnal $<3\mu\text{m}$ (halumaigipkutini)

Chlorophyll-a naunaipkutaunia nauhimayut katihiimanit (halumaigipkutini)

Uqhuvalulgit acids talvanga seston tamnal uumayuvaluit (halumaigipkutini hikuliannuaqnilu)

Nauhimayuvaluit ilavaluit taphumunga HPLC qauyihagait (halumaigipkutini)

Katitlugit phosphorus (TP) (imaq nauniayagat)

DOC/CDOM (imaq nauniayagat)

Nauhimayuvaluit naunaiyaqnit, amigaitni uumayuqtaqaqnitlu naunaiyagat (imaq nauniayagat)

Uumayuvaluit naunaiyaqnit amigaitnilu naunaiyagat tapkuat ilaliutyaqni imait piyaunit (katiqhuqhimayuq imaq nauniayagat)

Halumailgut:

Talvani Juni 9, 2015 pingahut halumailgut ikutaqnit (mikhani 30 cm atuni) hunavaluqaqnit, aqayavaluit, chironomids tapkuatlu carbon qauyihagait.

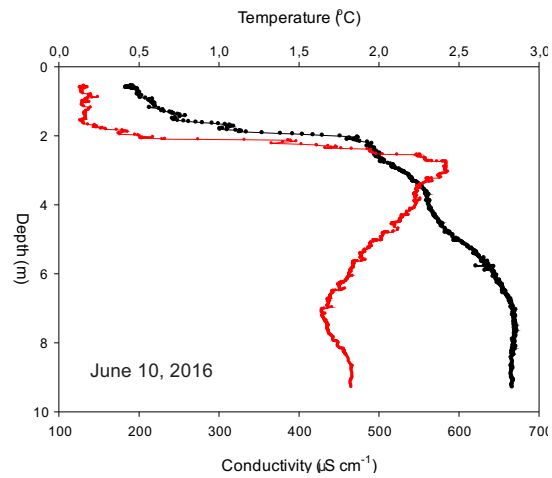


Titigauyaq 3. Halumaigipkutit ahiilu havagauni naunaiyagaq imaq naunaiyaivikmi qiqiniahaqtitlugu kinguagut qauyihagait talvani UQAC talvanilu Université Laval.



Titigauyaq 3. Halumailguq ikutaqnikuq. Tamna aalliq piksa takukhautita tunguqnia uviluq nalvaq itiniani 10-11 cm. Malikhugu tamna 14C-ubluliqnia utuqaunia tamna uviluq tamna 2000-nik ukiulik.

Titigat 1. Unaqnia apqutigiyaulaqnialu unniqtutai talvani Ikaluktutiak tahi q talvani Juni 10 tamna tahi q pihimatitlugu 2 miitat hikuqania, talvani Agasi 11, mikhaani 10 ublut hikuiqaqtitlugu, tamnal u Saptai pa 9 tamna kingulli qpaq naunaiyaqnia ublu a taphumunga 2015 ukiup ilaani.

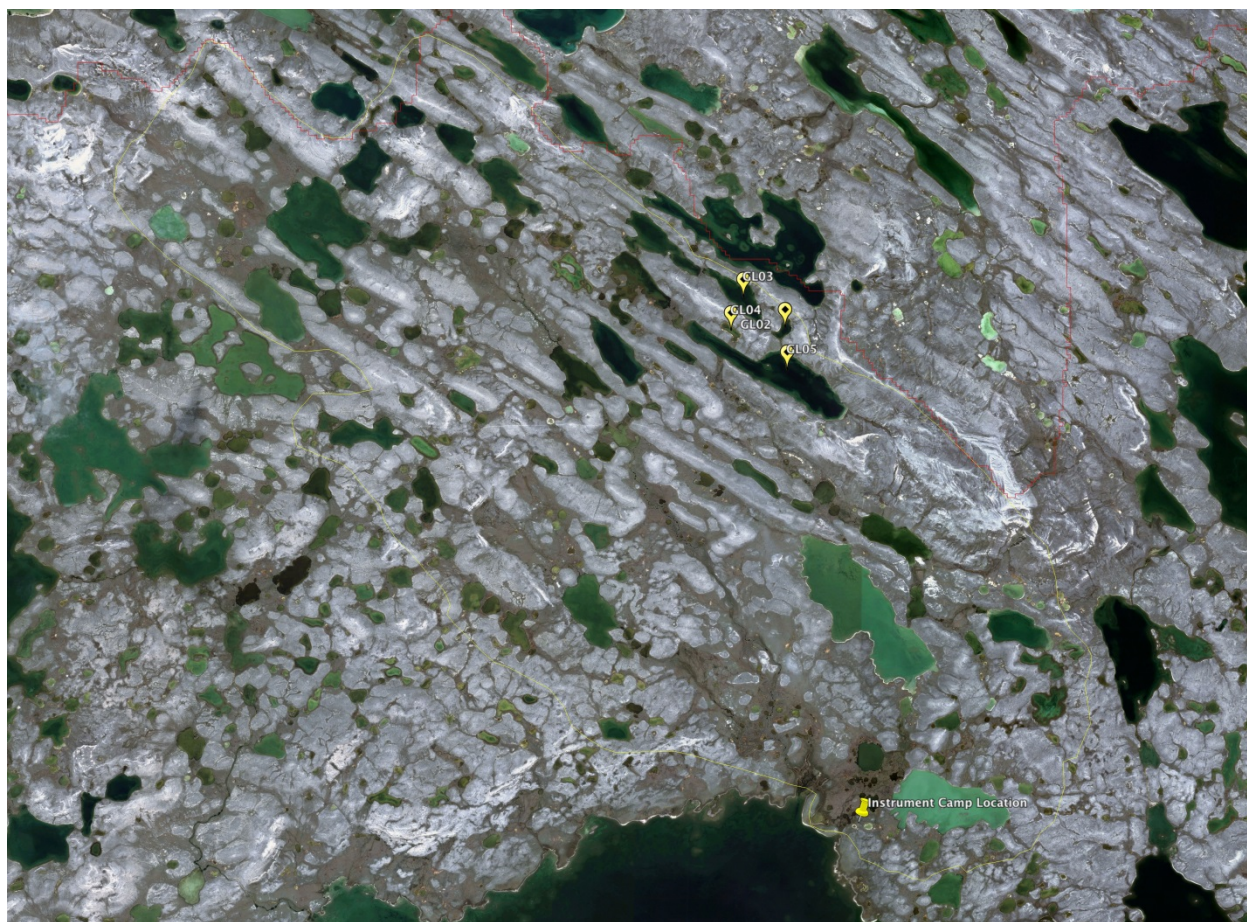


Titigauyaq. 4. Ikaluktutiak nunagiya Ikaluktutiak Tahi q avataanittuq.

Nailiyauhimayuq unipkaarut unalu ihivriutqangit parnautingit 2017 nut

Havaaq havaktauniaqtuq uvani 2014-2015 mi, havaktiqarlutik pingahunik. Ihivriutqakhait pivalliahimayangit, CBMP ilangillu kiuviniit ilaliutauhimayuq qauiyhaqhutik titiqqainit turaaqtitauhunnguyuq qakugunnuaq Freshwater Biology. Malruk qunnialiuqtut takunnaqtut qunnialiuqhimayuq ihivriuqhilitik ingilraa naunaiyaivlutik Ukiuqtaqtumiuttat hivituyunullu kitunuliqaak havakhimayavut. Hamna havaariyaayukhaq tukimuarniaqtangillu uvani AANDC Makpiraaliuqtunut hamanngat titiraqti Janet Hunter uvani 2015 mi.

Una amiqhaiyut 2017 nut huli havaffaariniarmiyavut havaktivut 2014 tamnalu 2015 mit kiuhimalugit ilitturiyavut ikivallialiqtumik halumayumik imait avatiqatigiiktunut Kiillinirmi iluani Iqalukttuutiak Tahianit imaita. Tamatkiumayunut aturnaqtut haffuminngat qaritauyanut iliurarnaqtuq pilimmakhautauniaqhuni ilaginiaqhuni tukhiutauhimayuq amiqhainirnut 2017 mi hivituyumik amihuuyut ilagiyaayunut ihivriutqangit uuktuqhimayangillu



Titigauyaq 5. Nunauyaq takunnaqtuq iniit haffuminngat 4 tahiit ihivriutqauhimayut uvani 2017 mi.