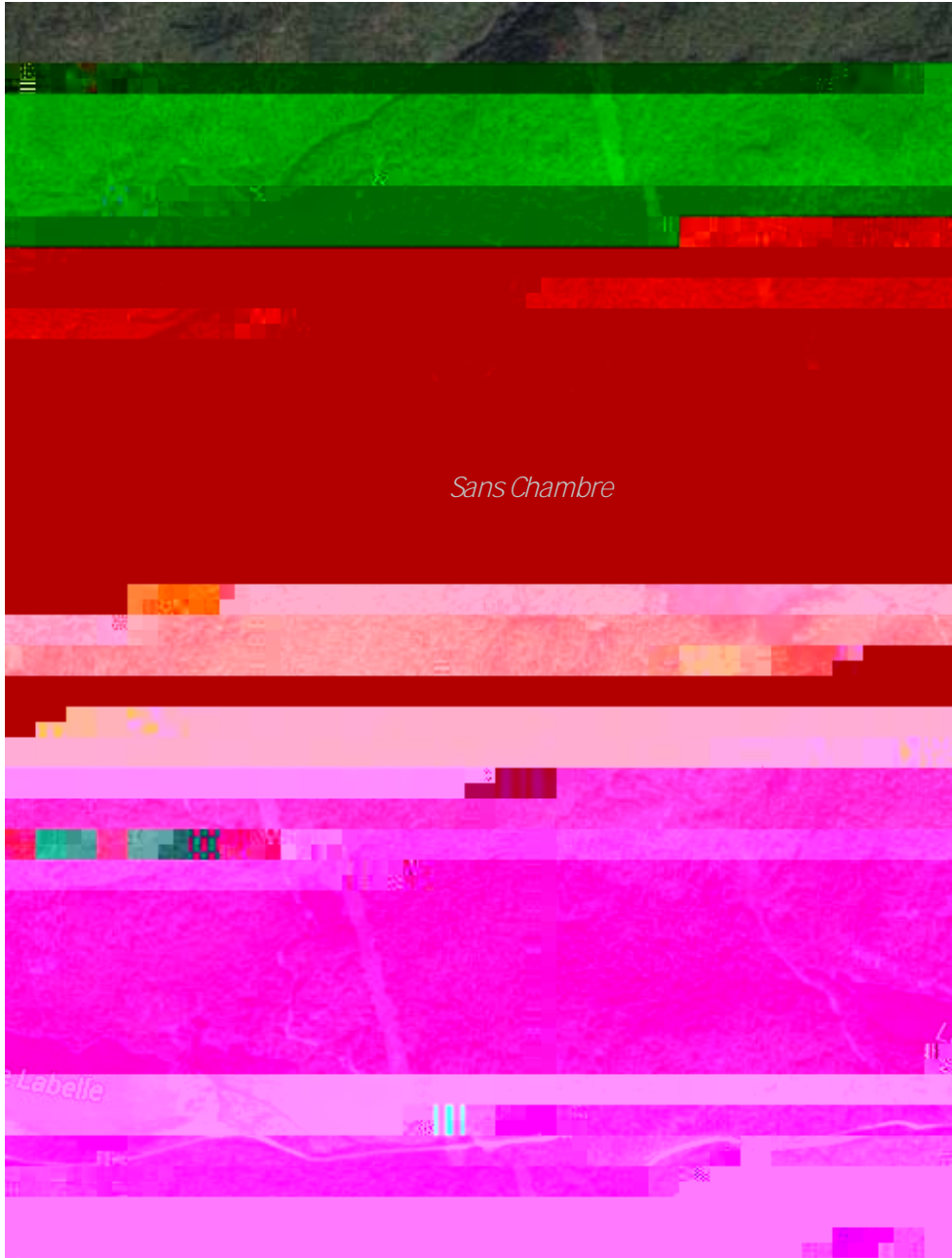


SANS CHAMBRE LAKE
URBAN LAKES FISHERIES STUDY 2014



Fisheries Assessment by:
A. Corston and G. Burrows

Report by: A. Corston, M. Gillespie and J. Gunn

Xcng"Nkxkpi" ykvj"Ncmgu"Egptg."Ncwtgpkcp"Wpkxgtukv{"Uwfdwt{"Qpvctkq"
Hqt"hwtvjgt"kpht o cvkqp."rngcug"eqpvcev" Ft0"Lqjp" I wpp"*li wpp Bncwtgpkcp0ec+0"

**SANS CHAMBRE LAKE
URBAN LAKES FISHERIES STUDY 2014**

INTRODUCTION

Ucpu"Ejc o dtg"Ncmg"*68Å65ø38ö"P.": 3Å29ø6:ö" Y+"ku"c"3607"jc"ncmg"nqecvfgf" ykvj kp"vjg"Ekv{"qh"
I tgcvtg"Uwfdwt{"kp"Dqy gnm"vqy pu.jkr0""Kv"jcu"qpg" o ckp"dcukp"ykvj "c" oczk o wo "fgrvj "qh"3907" o "
*Hki wtg"3+0""C"eq o r ngvg"uw o o ct{ "qh"rj {ukecn"ej ctcevgtkuvkeu"ecp"dg"uggp"kp"Vcdng"30"
"

Ucpu"Ejc o dtg"Ncmg"ku"ceeguugf"d{"cp"wppc o gf."tgetgcvkqpcn/wug"tqcf"qhh"qh" Pgnuqp"Ncmg" Tf0"
Vjgtg"ctg"pq"tgukfgpvu"nkxkpi "ctqwpf"vjg"ncmg"cpf"kv"ku"uwttqwp

METHODS

Fisheries Community Assessment

Vjg"hkuj"eqo o wpkv{"qh"Ucpu"Ejc o dtg"Ncmg"y cu"uc o rngf"ceeqt fkp i"vq"vjg"Pqt fke"kpfgz"Pgvkpi"rtqvqeqn"*Crrgndgti."4222="Oqt icp"cpf"Upwekpu."4227+0""Vjku"pgvvpki"rtqegfwtg"y cu"fgxgnqrgf"kp"Uecp fkpckc"cpf"jcu"dgpp"wguf"gzvpgukxgn{"cetquu"pqtvjgcuvgtp"Qpvctkq"ukpeg"3; ; ;"*Ugnkpi gt"et al0."4228+"vq"cuuguu"vjg"tgncvkg"cdwpcfpeg"cpf"dkq o cuu"qh"hkuj"urgekgu"cpf"rtqxfkg"dkqni kecn" kphqt o cvkqp"qp"rqrwncvqp"uvcvwu"*Oqt icp"cpf"Upwekpu."4227+0"

C"vqcn"qh"38"o wnv/ o guj" i knpgvu"y gtg"ugv"kp"Ucpu"Ejc o dtg"Ncmg"htq o"Cwi wuv"48"/"4:."4236"" Pgvu"y gtg"ugv"htq"cr rtqzko cvgn{"34"jqwtu"cv"tcpfq on{"ugngev f"nqecvkqpu"qp"vjg"ncmg"cetquu" o wnvkrng"fgrvj"uvtvcv"*6"pgvu"kp">502"o="6"pgvu"kp"502"/"70; "o="6"pgvu"kp"802"ó"330; "o="6"pgvu"kp"3402" ó"3; 0; "o +0""Hki wtg"4"ujqyu"vjg"nqecvkqpu"qh"cnm" i knpgvu"ugv"kp"Ucpu"Ejc o dtg"Ncmg"fwtkpi"vjg" uwtxg{0"

Cnm"hkuj"ecrvwtg"y gtg"kgpvhkkgf"vq"urgekgu"cpf"vcnkgf"d{"pgv0""Dkqni kecn" kphqt o cvkqp"uwej"cu" hqtm"cpf"vqcn"ngpi vj"*o o+."y gki jv"*i+."ugz"cpf" o cvwtkv{"cpf"uvq o cej"eqpvpgvu"y gtg"tgeqtfgf"htq" cnm"nct ig/dqfkgf"urgekgu0""C igkpi"uvtwevwtgu"y gtg"eqmgev f"htq o"cnm"qh"vjgug"urgekgu."cpf"o" o wueng"vkuuwg"uc o rng"y cu"eqmgev f"htq o"wr"vq"42"kp f kxkfwenu"rgt"urgekgu"cetquu"cu"uk|g"tcpig"htq" eqpvc o kpcpv"cpf"uvcdng"kuqvqrg"cpn{"uku0""Cnm"qvjgt"hkuj"y gtg" o gcuwtgf"*vqcn"ngpi vj"qpn{+}cpf" dwnm"y gki jgf"htq"gej"pgv0""C" dwnm"uc o rng"qh"wr"vq"42"kp f kxkfwenu"rgt"urgekgu"y cu"eqmgev f"htq" eqpvc o kpcpv"cpf"uvcdng"kuqvqrg"cpn{"uku0"

Baseline Organisms

Cvvg o rvu"y gtg" o c f g"vq"eqmgev"uc o rngu"qh"enc o u"*n?32+."upcknu"*n?52+."etc{hkuj"*n?42+." Jgrvc igpkkf" o c{hkgu"*n?72+."cpf"cs wcvke"rncpvu"htq o"Ucpu"Ejc o dtg"Ncmg"htq"hqf"y gd"uwfkgu0""

Enc o u"cpf"upcknu"y gtg"vct igvgf"d{"xkuwcn{"uecppki"pgct/ujqtg"ctgcu"cpf"rkemkpi"vjg"qt icpku o u" d{"jcpf"qt"y kvj"c"fr"pgv0""Etc{hkuj"y gtg"vct igvgf"d{"ugvvpki"vjtg"vq"hxg"yktg"o guj" o kppqy" vteru"dckvgf"y kvj"ecppgf"ecv"hqf"qxgtpki jv"kp"nkvvqtcn"ctgcu0"" Jgrvc igpkkf" o c{hkgu"y gtg"vct igvgf" d{"vwtkpi"qxgt"tqemu"cpf"y qff{"fgdtku"cnqpi"vjg"ujqtg"qh"Ucpu"Ejc o dtg"Ncmg."cpf"rkemkpi"vjg" qt icpku o u"qh"vjg"uwthceg"d{"jcpf"qt"y kvj"c"rct"qh"v y gg|gtu0""C" dwnm"uc o rng"qh"wr"vq"hxg"rncpvu" qh"vjg"uc o g"urgekgu"y cu"vct igvgf"d{"xkuwcn{"uecppki"vjg"pgct/ujqtg"ctgcu"qh"Ucpu"Ejc o dtg" Ncmg"cpf"rkemf"d{"jcpf0""

Water Quality Assessment

C"fkunqngf"qz{ igp"*o i lN+"cpf"vgo rgtcvwtg"*AE+"rtqkng"y cu" o gcuwtgf"kp"vjg" o ckp"dcukp"qh"Ucpu" Ejc o dtg"Ncmg"qp"Cwi wuv"35."4236."wukpi"c" [UK"Oqfgn"74"fkunqngf"qz{ igp"ó"vgo rgtcvwtg" o gvgf0""Tgcfkpi u"y gtg"vcmgp"cv"3"o

Y cvgt"uc o rngu" y gtg"eqmngvfg"qp"Lwn{"39."4236"htq o "v j g"uwthceg"qh"Ucpu"E j c o dtg"Ncmg0"
Uc o rngu" y gtg"ugpv"vq"v j g"Okpkvvt{"qh"Gpxktqp o gpv"cpf"Enk o cvg"E j c p i g"*OQGEE+"e j g o kuvt{"ncd"
kp"Fqtugv."cpf"cpn{|gf"hqt"r J."eqpfwevxxkv{"vqvcn"kphngevkqp"rqkp"cnmckpkv{"fkuuqnxgf"qti cpke"
ectdqp."cpf"o gvcnu"cpf"o clqt"kp"0"

V j g"uc o rnkpi "nqecvkqp"hqt" y cvgt"swcnkv{"ecp"dg"uggp"kp"Hk i wtg"40"

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RESULTS AND DISCUSSION"

Fisheries Community Assessment

Kp"4236"vqvcn"qh"v j tgg"urgekgu" y gtg"ecrvwtgf<"dtqyp"dwnnjgcf"*

v j g"vqvcn"ecvej0""Dtqqm"vtqww"j cxg"pqv"dggp"qdugt xgf"kp"v j g"ncmg"ukpeg"4229"cpf" y j kvg"uwemgt"j cxg"pqv"dggp"qdugt xgf"ukpeg"4223"*Eqqrgtcvkxg"Htguj y cvgt"Geqni { "Wpkv."4236+0""Urgekgtke j pguu"cpf"rtqrqtvkqp"qh"vqvcn"ecvej"ecp"dg"uggp"kp"Vcdng"50"

Table 3"Urgekgtke j pguu"cpf"rtqrqtvkqp"qh"vqvcn"ecvej" hqt"Ucpu"Ejco dtg"Ncmg"*Eqqrgtcvkxg"Htguj y cvgt"Geqni { "Wpkv."4236+0"

Survey Type	Nordic		Nordic		Nordic		Nordic		Nordic	
	2001 ^a		2004 ^a		2007 ^a		2009 ^a		2014	
Year	n	%	n	%	n	%	n	%	n	%
Species	n	%	n	%	n	%	n	%	n	%

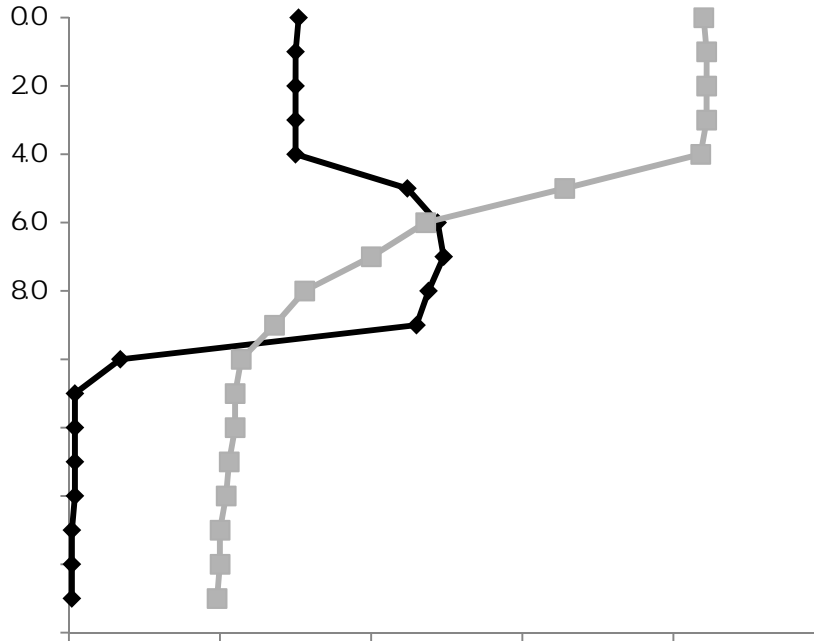


Figure 7 "Vg o rgtcvwtg" *ÅE+ "cpf" fluuqnxgf "qz{ i gp" * o i lN+ "rtqhkng" hqt" Ucpu" Ejc o dtg" Ncmg. " ogcuwtgf" Cwi wuv" 35. "42360"

" "

Vjg" y cvgt" swcnkv{ "qh" Ucpu" Ejc o dtg" Ncmg" jcu" o c fg" c" eqpukfgtcdng" tgeqxgt{ "ukpeg" 3 ; : 3" *Vcdng" 6+0"
 Fwtkpi" vjku" vk o g. "vjg" r J" jcu" kpetgcugf" htq o "705 : "vq" 807. "cnqpi" y kvj" cp" kpetgcug" kp" VKC" cnmckpkv{ "
 htq o "/2038" o i lN" EcEQ5" vq" 4046" o i lN" EcEQ50" "Eqpegpvtcvkqpu" qh" o gvcnu" uwe j" cu" Pkemgn" *Pk+."
 Eqrrgt" *Ew+. "Ktqp" *Hg+ "cpf" Cnw o kpw o " *Cn+ " jcxg" fgenkpgf" qxgt" vjg" rcuv" vj tgg" fgecfgu0" "Vjku"
 k o rtqxo gpv" kp" y cvgt" swcnkv{ "cr rgctu" vq" dg" vjg" tguwnv" qh" tg fwevkqpu" kp" g o kuukqpu" htq o "u o gnygtu" kp"
 Uwfdwt{ " *Mgnngt" et al. "4229+0"

"

Cu" qh" Lwn{ "39. "4236. "Ucpu" Ejc o dtg" Ncmg" jcf" c" ektew o pgwvtcn" r J" tgc fki" qh" 807" cpf" c" VKC"
 cnmckpkv{ "qh" 4046" o i lN" EcEQ50" " Ogvcn" eqpegpvtcvkqpu" jcxg" cnuq" k o rtqxo gf0" "Eqpegpvtcvkqpu" qh"
 Pkemgn" *6" Û i lN+. "Eqrrgt" *3" Û i lN+. "Ktqp" *62" Û i lN+ "cpf" Cnw o kpw o " *39" Û i lN+ "tg o ckp" dgnqy" vjgug"
 etkvgtkc0"

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Table 4 Ycvt"ejgokvt{"htqo"Ucpu"Ejcodtg"Ncmg"*30"Qpwtkq"Okpkvt{"qh"Gpxktqogp"cpf"Gpgti{."3; ;6="40"
Mgnngt'et al

Species	Fish #	Fork Length (mm)	Total Length (mm)	Weight (g)	Sex 1-Male 2-Female 9-Unknown	Maturity 1-Immature 2-Mature 9-Unknown	Ageing Structure	Tissue
							0-None 2-Scales 4-Pectoral Ray 7-Dorsal Spine A-Otolith B-Operculum D-Cleithrum	0-None 1-Flesh 8-Stomach 9-Gonads A-Whole Fish X-Genetic
Uocnn o q w j "Dcuu"	82"	489"	4 : :	45204"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	83"	543"	562"	63503"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	;6"	462"	477"	3870;"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	;7"	492"	4:4"	46709"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	;8"	45: "	473"	3890;"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	;9"	543"	563"	65;0: "	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	;: "	4:7"	527"	535"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	; ; "	48: "	4:8"	48209"	3"	4"	C"	2"
Uocnn o q w j "Dcuu"	322"	42: "	442"	33:04"	3"	3"	C"	2"
Uocnn o q w j "Dcuu"	323"	4: : "	52: "	4;906"	3"	4"	C"	2"
Uocnn o q w j "Dcuu"	324"	477"	494"	42;0;"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	325"	388"	398"	7906"	4"	3"	C"	2"
Uocnn o q w j "Dcuu"	326"	482"	496"	42306"	; "	; "	C"	2"
Uocnn o q w j "Dcuu"	327"	45: "	472"	3: ;07"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	328"	4;2"	533"	54404"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	329"	465"	47; "	42807"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	32: "	3;7"	42: "	;208"	4"	3"	C"	2"
Uocnn o q w j "Dcuu"	32; "	3;9"	42; "	;: "	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	332"	392"	3:2"	8707"	3"	3"	C"	2"
Uocnn o q w j "Dcuu"	333"	3;6"	426"	; ;04"	4"	3"	C"	2"
Uocnn o q w j "Dcuu"	334"	472"	487"	42205"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	335"	3;2"	423"	;203"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	336"	3:9"	3;9"	:80;"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	337"	424"	437"	32608"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	338"	479"	495"	43407"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	339"	486"	4:4"	45;03"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	33: "	526"	545"	576"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	343"	486"	4:2"	45403"	3"	4"	C"	2"
Uocnn o q w j "Dcuu"	344"	428"	43; "	33;07"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	345"	3;9"	432"	32404"	3"	4"	C"	2"
Uocnn o q w j "Dcuu"	346"	464"	477"	38904"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	347"	474"	48; "	43208"	4"	4"	C"	2"
Uocnn o q w j "Dcuu"	348"	4;2"	52; "	54807"	3"	4"	C"	2"
Uocnn o q w j "Dcuu"	349"	537"	556"	6270: "	3"	4"	C"	2"
Uocnn o q w j "Dcuu"	34: "	44; "	465"	3840: "	4"	3"	C"	2"
Uocnn o q w j "Dcuu"	34; "	4:6"	523"	49;07"	3"	4"	C"	2"