

00:00
monitoring other species such as
00:02
monarchs and milkweed and Robins and red
00:05
and sugar maples throughout the state
00:08
and all the counties in mean and also in
00:10
New Hampshire and we couldn't do the
00:13
program without you what we also
00:15
couldn't do the program without our
00:17
research partners and our outreach
00:18
partners and Susan's talk today is going
00:22
to share a bit more about the research
00:24
that they're doing at Maine on a bond on
00:26
loon biology and about the ways that
00:30
your observations of loons and the
00:33
timing of when you see chicks and nest
00:37
sitting on nests and so forth loon calls
00:40
and when they move into inland lakes and
00:43
season when you first see them there
00:45
those are all very helpful for her
00:47
research and she's just going to share a
00:48
bit more about that but we've been doing
00:50
as a speranza mentioned webinars with
00:54
other of our partnering scientists as
00:56
well we have one on rockweed and we'll

00:58
be talking with another researcher who's
01:02
working on forest ecosystems later in
01:06
august so with that I will turn it back
01:08
over to Esperanza and so Susan can get
01:12
started thank you all
01:13
thanks Beth I'm going to share
01:17
Susan's cream ale and so we're really
01:20
happy to have Susan gallo
01:23
biologist with Maine Audubon and close
01:25
partner with us with signs of the
01:27
seasons and I think you're going to find
01:30
and find this super interesting
01:32
presentation and if I can find you on
01:36
here or season here we go
01:41
you
01:43
you
01:50
all right I clicked I click the right
01:51
button hopefully it's going to come up
01:53
great thank you
01:55
it's good all right so you can see that
02:01
okay
02:01
I put myself on mute yes yes looks good
02:07
all right so it's all okay yeah I'll

02:09
start it's kind of a little it's a
02:11
little bit strange to be sitting in my
02:13
office looking at a computer instead of
02:16
computer screen instead of out on the
02:18
sea of faces but I'll do my best to sort
02:21
of keep on track and usually I take
02:28
questions as I talk and so that often
02:30
Spurs different conversations so I'll
02:33
try to just power through this
02:35
presentation and if you if if we end up
02:39
the me if we end up at the end of the
02:42
webinar and your questions don't get
02:44
answered you have a question that's hard
02:45
to type in or you can always reach me at
02:48
Maine Audubon it's s gallo at Maine
02:51
Audubon org and I'm happy to follow up
02:53
with anybody after this on the phone or
02:57
by email so reach out to me that way so
03:03
I'm just going to cover the slide the
03:05
slide show is one I do a lot for Lake
03:08
associations and groups like that it
03:10
usually takes about 45 minutes to get
03:13
through all the slides so I'm going to

03:15
try to move it along and leave a little
03:17
bit more time for questions and the
03:22
first half of the first half of the
03:25
slideshow talks about loon Natural
03:27
History and a wetlands are when they
03:30
come back what they do when they get to
03:32
Maine and then the last lap the up
03:35
second half is more threats concerns
03:38
issues what we what you know what we
03:44
need to be thinking about what we need
03:45
to be watching out for so jumping right
03:49
into loon Natural History um I can
03:57
advance my slide
03:59
hold on one second okay there we go
04:05
all right so I may not have on I work
04:10
for me in Audubon a Maine autobahns a
04:13
conservation organization that is
04:15
focused on wildlife and wildlife habitat
04:17
and the Maine Loon project has been here
04:20
since the late 70s early 80s when we
04:25
started gathering information about
04:27
loons based on concern from people that
04:31
loons weren't doing that well or that we

04:33
weren't seeing as many loons
04:35
as we had in years prior so this product
04:41
of all the mainland project evolved over
04:44
the years it's in our 30 we're in our
04:45
34th year in 90 2017 and we do a lot of
04:50
different as Beth mentioned we do a lot
04:52
of different projects related to
04:54
balloons but one of the nice things
04:56
about loons in Maine is that Lynde's are
04:59
birds that everybody almost everybody
05:01
has seen and almost everybody can
05:03
identify so they're these big amazing
05:06
charismatic birds they're about 46
05:09
inches from wingtip to wingtip in about
05:12
32 inches from the end of the bill to
05:14
their end of the tail so they're really
05:16
big birds they are also really unique in
05:21
that they're heavy they have their
05:23
diving birds like and just like penguins
05:25
they have solid bones so they can dive
05:27
this is a kind of a different view of a
05:30
loon than most people typically see and
05:34
I like to use it to point out a couple

05:36
of different things one is the size of
05:38
the feet at the back of the at the back
05:42
of the body they're not only are they
05:43
the feet themselves really quite large
05:45
but you can also see how they're located
05:48
their way in the back of the body and it
05:51
makes for a couple of their other
05:54
adaptations that they have are linked to
05:57
this location of their feet so when we
06:00
talk about nesting we'll come back to
06:01
this slide and the the skeleton another
06:06
thing is their wings they keep them in
06:07
like that they're these birds are diving
06:09
for fish swimming underwater they're
06:12
going to be their powered
06:13
their feet they're going to keep their
06:14
wings in tight like this when they swim
06:16
underwater and then the other
06:19
interesting thing about the skeleton is
06:21
the length of the neck which is you've
06:24
got a really long neck much longer than
06:26
people typically think based on how you
06:28
see them on the water and an interesting

06:31
thing about their vertebrae on their
06:33
neck is their vertebrae our shape so
06:36
that that neck can be really flexible
06:39
and you can see in that slide how much
06:41
space there is between each vertebrae
06:43
that neck is super flexible it can turn
06:46
it can go in all directions up and down
06:48
right and left so it's really good at
06:50
catching fish and then the sort of third
06:53
thing to look at is the bill the bill is
06:55
on at the end the bill is really heavy
06:58
it's super strong with between the
07:02
muscles on that neck and the width and
07:05
the width of that bill makes it a really
07:10
good weapon for defense hold on one sec
07:14
I'm just going to ask hey Donald hold on
07:17
one sec I'm gonna just close a few -
07:21
thank you all right sorry there was some
07:24
distracting noise here no I'm good
07:28
thanks
07:28
all right thanks for for letting me make
07:33
my office a little quieter so really
07:36
interesting skeleton really interesting

07:39
adaptations make this bird a really
07:41
formidable predator this is a great shot
07:47
underwater that just will just shows you
07:49
just real sizes how big those feet are
07:51
and where they are on there but on the
07:53
body they're way in the back so one of
07:57
the interesting things about loons is I
08:02
mentioned that they're heavy Birds a
08:05
full-grown male in Maine and prime
08:09
breeding conditional weigh about 15
08:11
pounds females are a little bit smaller
08:14
and it's one of the only ways there's
08:17
two ways to tell males and females apart
08:18
but one of them is by size so if you see
08:21
a pair together the bigger one will be
08:23
male will be the male and
08:25
and the other sort of dilemma about if
08:28
you're going to weigh this much as a
08:31
bird um you may be really good diver but
08:35
you're going to have some trouble I'm
08:37
not necessarily trouble flying but
08:39
trouble getting up into flight if
08:41
anybody has watch loons try to take off

08:44
you know that they take they have to run
08:47
along the water sometimes up to a
08:49
quarter mile to get enough speed up so
08:51
that they can take off and that is a
08:53
great shot because you can really see
08:55
how wide that wingspan is as they run
08:59
along the water so they they run it
09:03
takes about a quarter mile and then once
09:05
they get going on if anyone's seen them
09:08
take a hostage it takes them a while to
09:09
get up to the altitude they need to fly
09:11
but if anybody seen them fly overhead
09:14
one of the interesting things is that
09:16
loons are very fast fliers so if we were
09:20
in person I would ask everybody to chime
09:22
in and guess what how fast they fly but
09:26
since I can't do that I'll just tell you
09:28
that they've been clocked at going 90
09:29
miles an hour which is pretty amazing
09:32
for a bird that size so once I get going
09:37
they're very good fliers and partly
09:39
because they just have they're big they
09:41
have big big sternums big breast muscles

09:45
and they just have a lot of power and
09:47
that's light so it isn't to give you an
09:50
idea of where they are so the the blue
09:54
is where they're breeding in the
09:56
summertime and then the orange is where
09:58
their wintering and the next slide this
10:03
one just shows you the roots that
10:05
they're taking so kind of the split
10:08
right down the middle of the continent
10:09
in terms of who goes to the Atlantic and
10:12
who comes to the Pacific but one
10:14
interesting thing you can see is that
10:16
main birds have a really short commute
10:19
so migration for four main birds is
10:22
probably one of the shortest you know
10:25
mayor for birds and man also in the
10:28
Maritimes very short commute out to the
10:31
ocean in the winter and the short
10:33
commute back in the spring
10:37
oh there's a really interesting
10:38
phenomenon that coincides with loons
10:41
returning to Maine lakes debris and
10:45
again if you were in a live audience

10:47
that asked you what that day is and
10:49
hopefully you're all out there you know
10:52
what this day is is a loons come back
10:56
almost always on the day of ice out or
10:58
the day right after ice out or within a
11:01
couple of days and so people are always
11:03
curious how do they know how do they
11:06
know to show up and this is a phenomenon
11:07
that is true across the u.s. not just in
11:10
Maine across the u.s. and Canada
11:12
wherever loons are breeding they're
11:14
always showing up right when that ice
11:16
opens up and the reason is that they
11:19
want territories so it's the males that
11:22
come back first they're looking to
11:24
protect - to claim and then protect
11:28
their territory they typically go back
11:31
to the same territory that they have the
11:32
year before there's about an 80% chance
11:35
here for deer to year you're going to
11:37
get the same lone pair on a on an s2
11:41
site they're typically going to they're
11:45
typically going to defend about a

11:47
hundred acres of Lake for their
11:49
territory they can do it can be bigger
11:51
if the quality of the fish that they're
11:55
eating is lower or there's fewer fish
11:56
they might have a bigger territory and
11:59
if there's a lot of fish and good
12:01
quality fishing easy fishing they may
12:02
have small our territory I'll just go I
12:07
just realized
12:09
um a speranza I we should have checked
12:12
this I'm not sure we'll these calls come
12:15
over this I'm going to play a call but I
12:18
don't know if it'll come through so I
12:32
don't know if you guys heard that
12:34
esperanza maybe you can Susan M you and
12:37
tell me yeah no it's great it came
12:39
across just fine I just wanted to tell
12:41
the pigeon the people who just joined
12:43
please mute yourselves whether you're on
12:46
the phone silence your cell or if you're
12:49
on the computer please
12:51
click on the little green icon
12:53
microphone on your GoToMeeting control

12:56
panel as we are recording and so to
13:01
prevent any interference thank you okay
13:05
great so you heard that yodel
13:06
so I mentioned about size telling meals
13:09
and females apart by size the other way
13:10
you can tell them apart is by by the
13:13
yodel that's only the male that makes
13:16
the yodel and they're going to yodel a
13:18
lot when they first come back they're
13:20
going to be part of their advertisement
13:22
and their defense of their territories
13:24
so you hear a lot of yodeling when they
13:27
come back I put all the calls together
13:29
in the slideshow to make it easier just
13:32
so they're all grouped together
13:33
Tremeloes are another call you'll hear
13:36
often in the spring when they first come
13:38
back females typically come back a week
13:41
to ten days later than the males and
13:43
they also come back to the same
13:45
territory so males are coming back to
13:47
the same territory they had the females
13:49
are coming back to the same territory

13:50
they have they haven't spent the winter
13:52
together they don't really there is
13:55
there's no bond for life in loons it's
13:58
Tere Pyar bog use really lasts about
14:00
seven years and they're really bonded
14:04
over the territory where they're trying
14:07
to gnaw so here's a tremolo that's kind
14:13
of sure I'll play it one more time so
14:19
that's a call that you'll often hear
14:22
between males and females when they're
14:24
reestablishing their pair bond after
14:26
they've been separated all all winter
14:31
and here of the circle there's four
14:35
total calls on the third call is the
14:38
whale and this is not a stress though
14:41
that tremolo and the yodel are both kind
14:43
of stress related calls you hear them
14:46
when they're either somebody's coming
14:50
into their territory they're trying to
14:51
chase somebody off
14:58
[Music]
15:01
the whales are really just a contact
15:04
call that you hear between parents

15:06
between parents and their chicks and
15:07
between parents and their neighboring
15:09
loon so if I'm sure if any of you are on
15:14
lakes you'll know that you you know this
15:17
phenomena will you hear a loon
15:18
close by and then you hear a whale
15:20
answered by a away loon on another
15:23
Lake so it's just a contact call their
15:26
social birds in the wintertime and this
15:28
they aren't they're not really so social
15:30
in the summer they kind of keep to
15:32
themselves as family units but they do
15:35
socialize through these contacts then
15:38
the last call is a hoot which you're not
15:40
going to hear that often but it's a
15:42
communication between parents and chicks
15:54
so getting back to nesting with a pair
16:00
they mentioned they haven't been
16:02
together a winter they read they usually
16:05
bond and connect over an F site and so
16:08
they do a lot of ritualistic behaviors
16:10
they swim together they dip their bills
16:12
they make the tremolo back and forth and

16:15
that creates the bond that lets them
16:17
stay together all summer long so the
16:22
next thing to do after they were
16:23
established that bond they look for a
16:25
place to nest so all Luna's share one
16:30
characteristic they are always right
16:32
near the shoreline and if you recall
16:34
back to that skeleton that graph of the
16:38
skeleton that we had hold on one second
16:43
[Applause]
16:44
[Music]
16:46
the graph of the skeleton the the feed
16:53
being so far back on the body makes it
16:56
really awkward for these birds to walk
16:58
around so one of the need to be on the
17:00
shoreline so they can slip on to slip
17:03
onto and slip off of their nests without
17:04
being detected
17:07
I have a couple of different shots of
17:08
Lunas but like I said they're all
17:10
they're typically all very close to the
17:12
water they can be
17:14
pardon me they can be pretty soggy the

17:16
eggs can get wet and they'll be okay if
17:19
the water level starts to rise they
17:21
might be able to build this build their
17:23
nests up a little bit we do lose nests
17:26
every summer when there's torrential
17:28
rain and there big rainstorms and lake
17:31
levels rise they will they will they
17:33
will swamp nests and eggs will actually
17:36
flow right out of the nest they're eggs
17:42
you can see the eggs sort of in the
17:44
center of the screen here the eggs are
17:46
really well camouflaged they're
17:49
typically olive green they usually have
17:51
black spots they're pretty hard to see
17:54
this one also has a red color band on
17:57
its right leg there's probably at least
18:02
a hundred bird loons in Maine that has
18:04
been color banded so they the color
18:07
bands have been put on and in different
18:10
combinations on different flags and so
18:12
we can if when we recite birds like this
18:16
we can look back in the records and see
18:18
where where they were banded and I

18:20
actually just read this morning that
18:22
they there is a male loon in Minnesota
18:25
who is banded as a chick 30 years ago
18:29
and he's still on a nest me still still
18:32
a breeding male so we often think that
18:36
we think that loons live to be 25 to 30
18:39
years and so now we have a confirmation
18:41
of 30 years for sure and it's just a
18:44
matter of time if that if we if we get
18:47
if we find loons that are older than 30
18:49
years which seems likely given that this
18:51
male and Minnesota is still an active
18:54
reader but anyway so they must write on
18:58
these shorelines they have these really
18:59
can't well camouflaged eggs the male and
19:04
the female take turns incubating eggs so
19:07
they'll do is you know three or four
19:09
hours to the time they switch off
19:12
throughout the throughout incubation
19:14
incubation lasts about 28 days or 28 or
19:20
29 days
19:22
the eggs are laid a day apart so one
19:24
chicken one egg he is a little bit

19:27
bigger than the other and then they
19:28
they're going to hatch out on the same
19:30
day so they one chick is going to hatch
19:32
a little a bit ahead of the other one
19:35
they turn the eggs every time they sit
19:37
down when they sit down to incubate they
19:40
turn the eggs one of the things that
19:42
people are always surprised to learn is
19:44
that the eggs can get really cold like
19:46
you can if it's a rainy day and a luns
19:49
off of a nest the eggs get cold but
19:51
they'll be okay one of the big
19:55
challenges for lumens is on a hot day
19:57
you know like yesterday or any day where
20:00
it's sunny and warm those eggs being
20:03
exposed to the sunshine is going to be
20:04
one what will be what's going to be the
20:08
most damaging so the eggs don't last
20:11
that long and Lee's done so one of the
20:13
things that wounds do when they incubate
20:15
their eggs in the summer in Maine is
20:17
they're actually keeping them cooler
20:18
than the air temperature

20:22
they say keep this in the slideshow just
20:25
as a reminder there are some in sub
20:27
behaviors from for loons that are good
20:31
signs to people that you're too close so
20:33
this is they call this the hangover
20:35
position and when the heads over the
20:37
water like this it's a good sign that
20:39
this bird is is stressed it's ready to
20:42
jump off its nest and get in the water
20:45
and it's just a it's a good behavior
20:47
watch for hopefully you'll never see it
20:50
but if you do
20:51
chances are it's caused by you you're
20:53
too close in and to get away so with
20:59
good be until behavior good incubation
21:02
no issues with predators no issues with
21:04
disturbance and Sun baking any eggs loon
21:09
eggs hatch after like I said 28 or 29
21:11
days they generally hatch on the same
21:14
day so one chick is going to be slightly
21:16
bigger loon siblings are not
21:19
particularly friendly they do a lot of a
21:22
lot of fighting a lot of interacting

21:25
it's not necessarily friendly right from
21:28
the get-go when they have a chat when
21:30
they hatch out they
21:33
get right in the water they weigh about
21:35
1/4 pound so they're equivalent to like
21:37
a stick of a stick of butter they can't
21:40
really dive they're super buoyant they
21:43
don't have a lot of weight so they will
21:46
go after as soon as they have she'll go
21:48
after insect invertebrates that are on
21:51
top of the water but they won't be
21:53
successful catching fish at the very
21:56
beginning that parent behind this chick
21:59
has its head in the water so adult loons
22:03
are well all loons adult loons are
22:06
visual predators so they're looking
22:08
under the water to see the fish before
22:10
they catch capture them and that's what
22:13
this loon is doing it's looking around
22:14
under the water to find to find a fish
22:18
to catch um this is I have a quick video
22:26
we didn't check video but let's see if
22:29
it or it might just need a minute to

22:31
load I'll just let it play and then I'll
22:35
talk about it I did not have the music
22:37
though so that was a clip from
23:03
biodiversity Research Institute they
23:06
have translocated some loons chicks from
23:08
Maine down to Massachusetts and so that
23:11
was a film clip that they took they
23:14
raised the loons in the young loons in
23:16
these pens enclosures so if you saw the
23:20
fish we're coming down from we're
23:22
literally dropping from the sky that was
23:24
the researchers dropping the fish in to
23:27
feed the Loon and then that was a really
23:29
good example of just how and swim and
23:32
how they look for and chased after those
23:36
fish so this is a typical gizzard the
23:41
gizzard contents for a loon we are
23:44
involved in a research project with
23:46
Tufts
23:47
université that that school at Tufts
23:49
University and so we we in our
23:53
volunteers citizen science scientists
23:56
throughout Maine we've been collecting

23:58
loom at collecting limbs and carcasses
24:00
for the last 25 years
24:03
and when people find carcasses they you
24:06
know we try to get them in the freezer
24:07
we try to get them down to Tufts clinic
24:11
and that students will take a look and
24:14
see if they can determine the cause of
24:16
death so I'll talk a little bit more
24:18
about that later in the in the slideshow
24:20
but this is typical gizzard contents of
24:24
of an adult loon so you can see the this
24:28
the ruler is about is six inches so this
24:33
is pretty typical six to eight inch fish
24:35
is what a loon is going to eat in any
24:38
given on any given day belly larger fish
24:41
or smaller fifty depending on what's
24:43
available in the lake but this is pretty
24:46
typical stomach contents they lean
24:49
toward perch and bass more so than
24:53
trout's the bass are easier to catch the
24:57
trout or to fast can be too fast and
25:00
then it may have that speed trout get
25:03
away from predators by just speeding

25:05
straight away loons can still catch them
25:07
but it's even much easier to catch these
25:09
other fish that kind of zigzag as their
25:12
as their tactic to get away from
25:14
predators
25:16
loons do what a lot of other species of
25:20
wildlife do a loon parents will feed
25:22
chicks very small fish when they're
25:25
really small and as they grow bigger
25:28
they get bigger and bigger fish I'll go
25:33
through just quickly a quick aging this
25:36
is you know for anyone out there who's
25:38
doing the signs of the season phenology
25:40
and looking at loons
25:42
this is a this is just a we ask people
25:47
to identify three different stages of
25:49
loon chicks so I'll just go through
25:51
quickly these stages this is just a
25:54
quick summary of what they look like and
25:57
how you can try to age them a few see
25:59
loons out there on the water so
26:01
less than one week super super huge
26:05
round dark that dark down and they're

26:09
really spherical shape and so this is
26:14
just at one week and there they actually
26:17
have two coats down they they start out
26:20
with this darker down and then they they
26:22
molt so like lighter brown down but
26:25
they're still going to be all downing
26:27
the two or three weeks they're going to
26:29
start getting longer so you can see the
26:31
shape they're kind of a long gating like
26:34
the adults as they approach three weeks
26:37
four weeks they're going to start losing
26:39
some of their some of their down as you
26:42
can see on these two chicks just in the
26:43
breast there where those white feathers
26:45
are coming in six weeks you can see that
26:50
those contour feathers just kind of move
26:52
back along the back you can see the head
26:54
is still kind of downy woolly sort of
26:57
looking by seven weeks they're going to
27:01
be again a progression just continues
27:04
until nine or ten weeks they're going to
27:06
be pretty solid contour feathers all
27:08
over and all that down will be gone and

27:10
then this is the age where they start
27:13
start flying
27:17
so loon chicks get a lot of parental
27:20
care ideally they're going to get at
27:23
least Elise
27:25
in an ideal world they get three months
27:27
of parental care so their parents feed
27:29
them they you know they take care of
27:32
them they teach them how to fish for
27:36
three months now loon chicks can go can
27:40
make it on their own with less parental
27:43
care than that
27:44
typically in Maine the eggs are laid
27:46
between May 15th and June 15th and then
27:49
the eggs hatch between June 15th and
27:51
July 15th so you know it there's debate
27:56
about when is the best time to hatch but
27:58
lots of thinking is that the earlier you
28:01
hatch as a loon chick the better off you
28:03
are because by the time and the fourth
28:05
of July arrives in the crowds and lakes
28:08
get really crowded with voters you know
28:10
you've got a little size you've built up

28:13
a little size and
28:14
you can protect yourself a little better
28:16
from predators you can swim a little
28:19
stronger to stay with your parents if
28:21
boats are coming your way
28:23
but that said chicks who hatch later
28:27
than July 15 even into the beginning of
28:30
August we know have survived in Maine
28:31
their parents might have might abandon
28:34
them a little bit early in the fall
28:36
before they're ready but they can still
28:38
make it they can still learn everything
28:40
they need to learn with just four or
28:43
five weeks of parental care so in the
28:47
fall in Maine is when you start seeing
28:49
these big bigger a bigger rafts of loons
28:52
so adult loons due to the shortening
28:54
shorten days due to biological
28:58
physiological changes they start to molt
29:02
so they start to molt from their bill
29:04
back they are going to turn into kind of
29:07
this lot much more bland gray and white
29:10
plumage and that's how they're going to

29:12
they're going to spend the winter
29:13
looking like that they're going to fly
29:15
out to the ocean and typically Maine's
29:18
adult loons lead the state you know more
29:21
mostly kind of September early October
29:25
and then the juveniles will group up
29:29
together in large rafts as well and then
29:31
they'll make their way out to the ocean
29:33
later in the fall more like November
29:36
December so every year the ice comes in
29:38
and we definitely have loons that don't
29:40
leave in time those are typically going
29:44
to be juveniles that have just waited
29:46
too long because I mentioned loons doll
29:50
well maybe I didn't know I don't think I
29:52
did mention this loon so breed until
29:54
they're about seven years old so for
29:58
those first seven years luns luns
30:02
chicks you know they they hatch on a
30:05
lake in May and they fly out to the
30:07
ocean in November they could potentially
30:09
stay out in that ocean environment for
30:11
you know up to five or six or even seven

30:14
or eight or nine years they may come in
30:16
and check out the lakes but they're
30:21
always going to there they're not
30:23
typically going to breed for for quite a
30:26
long white a while
30:29
so these chicks will grow will fly out
30:32
from Maine in in a late fall and that
30:36
kind of ends the cycle of a year of a
30:40
life of a loon in Maine so I'll jump
30:45
over into the next part of the talk
30:47
which is talking about conservation
30:50
conservation threats and lunar
30:51
conservation issues that may not a
30:53
blonde is working on so I mentioned I'm
30:56
director the mainland project we started
30:59
in the early 80s and really formalized
31:01
as a project in 1984 with the beginning
31:05
of the Maine loon count
31:06
so the loon count is coming up this
31:08
Saturday it's always the third Saturday
31:11
in July
31:12
it's from 7:00 to 7:30 and it it
31:15
involves about 950 to a thousand people

31:19
like this who go out with binoculars
31:21
with kayaks canoes they stand on shore
31:25
everybody's assigned a section of a lake
31:27
a lake or a section of a lake and they
31:29
report back how many losses they see and
31:32
where they see them and what we've
31:35
learned from that over the last 34 years
31:37
is that our Loon population is doing
31:41
well we have the yellow line at the top
31:44
of the graph is the number of adults and
31:46
I should say it's an estimate of the
31:48
adults that we get from the actual count
31:50
numbers so it doesn't matter if there's
31:52
more counters or fewer counters the
31:54
estimate we get is reliable from year to
31:57
year it's an estimate for the southern
31:59
half of the state so if you draw a line
32:01
you literally cut me in half from the
32:05
45th parallel south this is the estimate
32:07
we do have loon counters in northern
32:10
Maine we typically don't have enough to
32:12
really have a robust estimate and the
32:14
lake in northern Maine are pretty

32:16
different from the rest of the state a
32:18
lot more granite a lot less wetland up
32:21
there so we don't want to extrapolate to
32:24
a whole state based on the density that
32:26
we find in on southern Maine but you can
32:29
see looking at the yellow line you know
32:32
adults are really we've almost doubled
32:34
our number of adults over the last 33
32:38
years
32:39
but then what's interesting is if you
32:41
look at the red line in terms of the
32:42
number of chicks that we estimate every
32:44
year chicks have never really changed
32:47
much we they go up a few they go out for
32:49
a couple years they go down for a couple
32:50
years but you know you can see in 2011
32:53
was our record number of over 500 chicks
32:56
that's the only time that's happened and
32:59
then typically it's between two and
33:00
three hundred chicks that we produce
33:02
every year in me so chick production is
33:06
pretty low compared to the number of
33:08
adults that we have we think a lot of

33:11
our adults are not breeding potentially
33:14
our breeding territories are full and a
33:17
lot of our extra burgers that we've
33:19
accumulated over the last thirty years
33:21
are potentially not breeders we're
33:25
working on a couple of different ways to
33:27
figure out when people count loons how
33:30
can I count them can they count can they
33:34
identify breeding pairs versus lone
33:37
individuals versus large giraffe of
33:39
loons on the water and that's some of
33:41
the things we're working on with our
33:42
current loon count protocol and how we
33:47
collect that data on loon count day some
33:52
of the threats at loons face on the
33:54
water this is just kind of a this is I
33:56
used to do the slides one by one and now
33:58
I just put them all in one part of the
34:01
message I want to convey to people what
34:02
I talk about threats to lose is that
34:05
it's a lot of little threats so you know
34:09
predators through me native predators
34:13
bald eagles will take both chicks and

34:16
adults predators like mink skunk
34:21
raccoons will take eggs Ravens and crows
34:24
will take eggs big fish will take chicks
34:28
for sure sappers take chicks but there's
34:33
also boating disturbance though canoes
34:35
and kayaks in particular but also
34:37
boating you know fishing boats bass
34:39
boats speedboats both a disturbance
34:43
factor for the for the non motorized
34:45
boats that are close to shore and then
34:49
you know the speedboat factor of just
34:51
literally running over
34:53
adults who pop up in the water or chicks
34:55
who pop up in the water and if any of
34:59
you have been on bass boats there
35:00
there's they're fast and you know hard
35:04
to predict if you're a loon hard to
35:07
predict where to come up and not if
35:09
there's a speeding boat in your in your
35:12
neighborhood so but all of those threats
35:15
oh and I put the power plants are in
35:18
here because just to remind me about
35:20
mercury mentioned mercury as a-- as a

35:22
threat that loons have faced every day
35:25
on n waters in maine maine lakes have
35:29
some of the highest levels of mercury
35:30
and mercury we know impacts loon
35:33
behavior it makes make some as parents
35:37
they're not as good parents they're not
35:38
as attentive to their chicks they don't
35:40
spend as much time feeding their chicks
35:42
and we know that you know attentiveness
35:44
and time with the chicks is one of the
35:46
most important predictors for
35:50
successfully raising chicks in maine
35:53
fireworks is another one big issue for
35:56
the 4th of July in terms of voter
35:58
traffic and the firework disturbance
36:00
themselves and definitely ongoing issues
36:03
now that we have year round fireworks
36:05
some many most towns in Maine allow
36:07
year-round fireworks so there's now in
36:10
addition to that sort of big pulse of
36:13
activity on the 4th of July there's the
36:14
regular weekend in a regular weekend or
36:19
even in some cases throughout the week

36:21
smaller consistent fireworks displays on
36:26
many of our Lakes
36:27
I put LED sinkers in there LED jigs in
36:31
there and I'll talk a little bit more
36:32
about lead poisoning at the end of the
36:34
slideshow and I also that will the
36:37
picture of the person holding a loon
36:39
that's that loon is tangled in fishing
36:44
line alright so some other stressors
36:55
that aren't necessarily stressors today
36:57
but I think it's important with loons to
37:00
be looking ahead because loons take you
37:04
know up to seven years before from when
37:06
they're
37:06
- when they breed and because they they
37:13
only lay two eggs and in terms of
37:16
productivity typical productivity for
37:18
loons is about half of its half a chick
37:21
per year so it's out of four eggs that
37:24
they lay every two years only one of
37:27
those four it
37:29
eggs is going to live and survive to
37:31
become an adult

37:32
so really low productivity really
37:34
long-lived Birds I think it's really
37:37
important to be watching out for a loon
37:40
watching out for loons because of that
37:45
delay what if we saw when by the time
37:49
some by the time we see a decline in the
37:52
loon population it will be too late
37:54
because the because of that delay and
37:57
the ability to sort of rebound from
37:59
something that happens I'm just
38:00
catastrophic occurrence or something
38:03
like climate change it's really
38:04
important to be watching that population
38:06
now and be thinking that the time line
38:09
of seven or eight or ten years ahead for
38:13
those chicks but looking ahead so some
38:17
of the things to think about
38:22
water quality and storm events all
38:25
things that are coming under the under
38:28
the sort of banner of climate change so
38:32
may National Audubon did a did a
38:36
modeling exercise where they took they
38:40
looked at climate factors and I did a

38:43
model you know it's not a hundred
38:46
percent and like all models it's based
38:48
on a lot of assumptions but I'll just
38:52
run through these maps that they made
38:54
really quickly this is the year 2000 so
38:57
this is kind of current current range of
39:00
loons and you can see the yellow is the
39:02
summer range and then the winter range
39:04
is the blue so it's a little bit bigger
39:07
a few more areas included based than
39:10
that earlier range map I showed this is
39:15
20/20 so projecting as climate as the
39:19
climate warms as temperature warms as
39:21
temperatures go up you can see Maine
39:24
getting a little less yellow and then
39:27
becoming a little more blue in 2050 and
39:30
then by 2880 you can see that you know
39:34
according to this model we would have no
39:36
loons left breathing in Maine by 2080
39:39
and again as related to the temperatures
39:42
these are cold
39:44
these are should say a heat intolerant
39:46
bird this is a cold weather bird and you

39:49
know just looking at its range you can
39:50
tell that by the range map so a warming
39:55
climate means a lot of different things
39:57
but reduced water quality is a big one
40:00
for looms if you need to see your fish
40:01
in order to catch them you're not going
40:04
to be successful in a lake like this so
40:06
the big algal blooms and other water
40:09
quality factors that come in with when
40:11
water warms up are going to be a problem
40:14
for looms intense rain events that you
40:19
know when you have more intense rain
40:20
events you have bigger flooding and
40:23
that's going to impact lakeside nests
40:26
that will not those eggs won't be able
40:28
to survive big fluctuations and water
40:30
levels there are some options for timid
40:35
eight that and so floating platforms are
40:37
something that's been used in a lot of
40:39
places they actually have been shown to
40:42
increase productivity so looms can be
40:44
really successful on these rafts that
40:47
said they also don't they don't always

40:49
get used so many many many rafts have
40:52
been floated in Maine and never been
40:55
used by a loon so we don't exactly know
40:58
what what makes them gravitate towards a
41:02
platform or not but definitely we have
41:07
some guidance guidance on that and it's
41:09
definitely related to how successful
41:11
they're if they're natural Neffs are
41:14
being flooded out consistently so
41:17
predators are the cause of an s failure
41:19
year after year Rask rest actually may
41:22
help the big place that where rafts
41:24
health is where those water level
41:26
fluctuations are dramatic so a lot of
41:29
the lakes in Maine that are dammed for
41:31
energy production
41:33
those have mandated loon platforms on
41:37
them to provide nesting to provide
41:41
nesting habitats on those lakes where
41:43
you know the water level is going to go
41:44
up Susan a couple other future stressors
41:50
that I just want to touch on briefly and
41:52
I think I'm actually doing pretty well

41:54

Susan I'm Susan yeah near me yes you

41:58

have a line we have nine minutes left

42:00

okay

42:02

so I'll just go through these really

42:04

quickly insect outbreaks and diseases

42:08

there was a really interesting

42:10

phenomenon in Wisconsin a couple of

42:12

summers ago there was a huge outbreak of

42:14

black flies related to the way the

42:17

weather pattern and the war lots of snow

42:20

and then a really super crazy 70 degree

42:23

day early early early spring made for a

42:26

huge black fly hatch and about 80% of

42:29

the loons in Wisconsin failed that year

42:32

um this is just a nice gross slide from

42:35

test to show not necessary I won't go

42:38

into any details about the diseases

42:40

other than to say that these emerging

42:44

diseases we're seeing are new there and

42:47

they're expanding so a lot of the

42:48

disease

42:49

you know malaria is the one and all this

42:51

shows is illustrated on the left

42:53
something that we saw a little bit of
42:55
once in a while you know and then two
42:58
summers ago we had a loon that actually
42:59
an adult loon that died from a malaria
43:02
infection so diseases are definitely
43:04
changing
43:05
I mentioned mercury mercury continues to
43:09
be - in fact main loons I mentioned a
43:14
fishing line is an issue I just want to
43:18
end the talk I've got two more things to
43:19
talk about one is really quickly touch
43:21
on loons and lead and then the other one
43:23
the last I want to just add with kind of
43:25
a what you can do a couple slides about
43:28
what you can do to help loon so just to
43:31
touch on lead poisoning loon adult
43:35
healthy loons died from lead it's the
43:38
leading cause of death about 30 percent
43:40
of loons that we've collected and sent
43:43
to Tufts so this is a vet student from
43:45
Tufts doing a necropsy on an adult about
43:48
30 percent die from the engine from
43:50
ingesting lead sinkers and lead headed

43:52
jigs so here's some x-rays showing the
43:55
the pieces of lead that are in the
43:58
gizzard lose just like other birds they
44:02
and the rocks they ingest rocks and the
44:05
rocks hitting our gizzards so the
44:07
gizzard that's the gizzard on the right
44:09
and the gizzard a big strong muscle it
44:12
just grinds up the food grinds up all
44:14
those fish because loons just like all
44:16
birds they don't have any teeth so they
44:19
ingest these rocks here this is from a
44:22
New York this is from the New York Dec
44:25
website but here's the kind of rocks and
44:27
gravel that Illume would come along and
44:28
scoop this up and but what you don't
44:31
really notice is there are eight pieces
44:34
of lead in there so there's no way for a
44:37
wound as he's gooping up these rocks
44:40
there's no way to discriminate though
44:42
gravel from the lead and we think that's
44:44
how a lot of web gets in loon lose with
44:47
lead poisoning or really the act really
44:50
strange they beach themselves they

44:52
approach people and you know you could
44:54
go and you talk for an hour on the lead
44:57
toxicosis and what a terrible thing it
44:58
is for lens or for anybody but it's a
45:01
really
45:02
really quick death but not Apple no no
45:05
not quick enough it's pretty unpleasant
45:09
I'll just skip there with a video of a
45:12
loon with lead poisoning but we don't we
45:14
don't need to see that because we're
45:15
running short on time so I'll just go
45:17
over briefly we have lead singer bands
45:20
in Maine so two and half inch long jigs
45:23
like the one in the top left picture you
45:27
can't use though you can't buy those in
45:29
Maine you can use them but you shouldn't
45:32
but the use will be banned in September
45:34
of this year and then the bottom picture
45:37
with the red lines or it is blood
45:38
sinkers an ounce or less those are
45:40
banned in Maine so unfortunately you
45:43
still can get let painted lead headed
45:46
jigs which is picture on the right paint

45:48
does not do anything to protect the Loon
45:50
from lead but those are still legal but
45:54
we have some really strong lead sinker
45:55
laws we have a little there's a lot of
45:58
great options out there there's a lot of
46:00
alternatives to lead tin tungsten steel
46:04
we have a great website fish sled free
46:07
org you can check it out we have good
46:09
partners listed there on the right and
46:11
fish lead free org is actually a right
46:15
now at the national website it started
46:18
by us in Maine but we have lots of
46:21
different state partners signed on and
46:22
using fish lead free org with the idea
46:25
that we want everybody to see this logo
46:27
thing fish lead free org so following on
46:32
that quickly some things you can do
46:34
obviously
46:36
restocking your tackle box with lead
46:38
free tackle is a great thing to do we
46:40
also have a lot of lead free tackle here
46:43
at Maine Audubon that we can send if
46:45
anybody wants to do a led tackle

46:47
exchange or you know you you can if you
46:49
have a community event you can show up
46:51
with a big bucket of lead free tackle
46:53
asks anglers to bring in their lead
46:56
tackle and exchange it for new
46:57
alternatives we have lots of outreach
47:00
materials around their sled free we have
47:02
stickers posters rack cards if there's
47:05
any place in your community unity you
47:07
think you can put these out we can
47:09
provide them i we've been you know most
47:13
of you are volunteers for this program
47:14
you know looking at loon phone all
47:16
ecology and signs of the through signs
47:18
of the seasons and using nature's
47:20
notebook to make some of these reports
47:23
about loon chicks in particular when
47:26
they hatch and the different stages they
47:28
go through is really helpful for
47:30
learning more about climate change
47:32
effects looms and of course with a loon
47:38
cow on this this Saturday we're always
47:41
looking for new people if you're

47:43
interested in that you can shoot me an
47:45
email we're still collecting dead limbs
47:47
if you come across a dead alone on your
47:50
Lake give me a call or email this dead
47:53
mate dead Lynn Maine email to get some
47:56
directions for what to do will collect
47:58
it will get it to test and will try to
47:59
tell you more about it we are also
48:02
involved with the lake smart program so
48:05
if anybody's familiar with that Lake
48:07
smart is an award through the main Lake
48:09
Society for people camps that are that
48:14
are protective of water quality we
48:16
worked with them last year to create
48:18
this loon smart program so after you get
48:21
your Lake smart award you can go one
48:23
step further and get a loon smart award
48:25
that is tied in to things that you do
48:29
with your boat things that you do with
48:30
your camp and sharing loon smart
48:33
information with your neighbors so you
48:35
can get a little smart award and with
48:38
that I will end and these are just all

48:40
these pictures amazing pictures you've
48:42
seen we're taking but taken by lots of
48:45
really fabulous amateur photographers so
48:49
thanks to all of them and thank you all
48:51
for listening and I'll hand it back to
48:53
Esperanza okay try to take question
48:55
great thanks Susan
48:57
that was great so I'm going to start
49:00
with Sharon Young's question did the two
49:02
loons
49:03
taken from Cumberland County and we're
49:05
relocated to Massachusetts survived and
49:07
did they respond to the Massachusetts
49:10
Lake this spring or did they return to
49:12
their native main lake and well there's
49:15
follow-up questions as well
49:18
okay so no they haven't returned yet we
49:23
don't expect to see them for at least
49:27
Bri is hopeful that they'll see some of
49:29
their Minnesota birds that are three
49:31
years old because they actually did some
49:34
translocation from northern to southern
49:35
Minnesota they're hoping to see some of

49:38
those birds this year after three years
49:40
but we probably won't know we don't
49:44
expect to see those birds I mean they
49:47
might show up well we're certainly well
49:50
they're certainly watching the natal
49:51
Lakes where those birds were taken and
49:53
they're watching the there they're doing
49:56
translocating birds again a summer so if
49:58
they show if they do show up we'll know
49:59
about them but okay as far as I know
50:01
nothing yet okay and by what authority
50:04
did they remove these birds and how can
50:07
this be prevented in the future well we
50:11
were a hundred percent supportive of the
50:14
program it's a very very limited effort
50:17
they only they were only taking ten
50:20
total they weren't going to exceed ten
50:23
chicks from Maine and they only took
50:27
them from two minutes from clutches
50:30
where there were two bird two chicks so
50:32
they could only take one they took one
50:33
and our feeling really was if you're
50:36
four in terms of loon conservation you

50:41
know that it was a good idea to try to
50:42
expand the range any time you can expand
50:44
an animals range is is really a good
50:47
thing in terms of long term survival so
50:50
we really thought it was a good project
50:53
so it went through all the channels that
50:55
anybody would have to go through to do
50:56
anything with wildlife so they have a
50:58
permit from Inland Fisheries and
51:00
Wildlife and you know there were lots
51:01
and you know I can assure you there were
51:04
a lot of meetings and a lot of reviews
51:06
of protocols and a lot of I feel like it
51:10
got a really good a really good review a
51:12
lot of you know what adaptive management
51:15
is if something went wrong or if
51:17
something if it didn't look like it was
51:19
going to be successful you know there
51:20
were alternatives in there too to
51:23
address those concerns so I personally
51:25
had we were behind it and we thought it
51:27
was a good thing it won't happen this is
51:29
the last year of that program so it was

51:31
a two-year
51:32
and so there won't be any more chicks
51:34
leaving Maine after this summer okay
51:38
and Giri O'Keefe has a question for you
51:41
why or how do fireworks harm them well
51:46
we know that they depending on the bird
51:49
and you know just like just like people
51:53
some some individual lives or more can
51:57
adapt to you know loud noises and people
52:00
and activity more than others but with
52:03
fireworks it's really it's the
52:04
disturbance it's the well it's two
52:06
things it's the boat traffic around the
52:09
the big fireworks they on the fourth of
52:11
July and then it's just it's just a lot
52:13
you know depending on how loud and how
52:15
frequent it is that we know that
52:17
someone's get off the nest if they hear
52:19
fireworks they'll panic and leave the
52:21
nest and so then if they go they're off
52:22
the nest or leaving it vulnerable to
52:24
predators and if they are if they do it
52:26
during the day you know yeah but you

52:29
have to deal with the weather so this I
52:32
think it's just one more source of
52:33
disturbance for loons especially when
52:36
they're nesting so can people still sign
52:38
up for the Loon count this Saturday they
52:42
can it would be a little tricky to get
52:45
they would need we could email
52:48
information and people would need to be
52:51
need a prisoner I don't think we can get
52:53
things in the mail in time yet we're
52:55
still on a mail system we do have a new
52:59
data portal that's going to be active
53:01
it's active now and it's being tested
53:04
out and in the future we'll be able to
53:05
just you know and point people to a
53:07
website and have their log on but
53:09
definitely get in touch with me so this
53:11
person can email you individually yep
53:16
okay so David Dave you can you can
53:19
contact Susan directly and I'll put the
53:23
email on the chat box so can you quickly
53:27
repeat the timing of molting and I
53:29
understand we're two minutes past so

53:30
people need to go that's fine but if you
53:34
want to answer this I think last
53:36
question Susan that would be good
53:39
a time I know melting like chicks or
53:43
assuming that means the chicks in the
53:45
summer time is that I uh
53:48
yeah so it's about so they're all down
53:52
and really know contour feathers until
53:54
four weeks of age and then from four to
53:58
ten weeks is when they when those
54:02
contour feathers start coming in and
54:03
they really go from the head all the way
54:05
down to the you know progress down the
54:08
body and then it's by nine or ten weeks
54:10
they're going to be solid they're going
54:12
to have solid contour feathers and
54:14
that's when they can start flying okay I
54:17
hope that if that doesn't answer the
54:19
question let me know might Sharon will
54:22
get in touch with you if that needs
54:24
further clarification adult molting
54:27
actually alright
54:28
Oh a dull multi it's kind of in it I

54:32
don't really know that much about adult
54:34
moral molting other than what I've seen
54:35
which is you know it starts with a
54:38
shortening day so typically September
54:40
sometimes August but typically the
54:43
beginning of September and it's just
54:45
gonna they're going to molt you know
54:48
molt into that gray and white plumage
54:49
throughout the month of September and
54:51
into October so by the time they fly out
54:53
to the coast they're going to be in
54:56
their winter plumage okay
54:59
Thank You Susan I think that's all of
55:02
the questions and I just would like to
55:04
thank Susan for a great presentation and
55:08
thank you all for participating I want
55:11
to also let you know about our third
55:13
webinar coming up on Friday August 4th
55:16
from 3 p.m. to 4 p.m.
55:18
it's dr. Caitlin McDonough research in
55:22
May she's been researching a flowering
55:25
and leaf out and flowering phenology and
55:28
Acadia and also through historical data

55:32
in Maine so I think it's going to be
55:34
fascinating she's been working here for
55:37
as I said several years and this is part
55:40
of her her doctorate program doctoral
55:43
program with Boston Universal so I
55:46
highly recommend that we'll be sending
55:48
out information and Susan what is your
55:51
email again
55:53
so it's s gal osg a ll of at Maine
55:59
Audubon one word ma ine AUD u bo n ok
56:06
great
56:06
thank you all for Brett or feeding and
56:09
and we hope to see you on the next
56:13
webinar all right thanks everybody
56:34
you
56:37
you