

Loon Nesting Behavior - Great Pond - 2024

17 October 2024

REPORT for: Ms. Muriel Ingalls, President, Kingston Lake Association (KLA)

FROM: Jim MacDougall, Member KLA

Summary:

- By mid-April it was clear a territorial pair of loons had formed on Great Pond (Kingston Lake). On 13 May a major territorial battle was fought and by 16 May the pair was scouting the lake for potential nesting sites and engaging in territorial interactions with visiting loons, though none of those seen escalated to a fight. The pair focused on the southwest point of Clark Island throughout this period. On 5 June a nest was spotted on shore in this area. The pair tended the nest with diligence until it was abandoned on 18/19 June. During the nesting period one observer reported seeing at least one egg in the nest. It appeared the loon pair might make a second nesting attempt but did not.

Observations:

- Ice on the lake was variable all winter. What ice was in was out by 29 February.
- Up to six bufflehead ducks and four swans were on the lake in the first half of March.
- On 1 April a loon was on the lake. On April 3 two loons were on the lake, seen by two different observers.
- By mid-April it seemed clear a territorial pair had formed. They interacted closely, swam, fished and preened together.
- The nesting raft and warning buoy were towed on 2 May to a point on the east side of Clark Island (Map 1, B). The loon pair was south of Clark Island coasting along the shore.
- On 3 May two loons engaged in a territorial interaction. One loon wing-rowed across 150 or so yards to another. They did a slow, deliberate circle dance until a third loon appeared. The three did a more energetic circle dance followed by several long dives. After about 15 minutes the three dove at length and only two reappeared in sight.
- The loon pair was seen together the first two weeks of May, often scouting the shoreline around Clark Island, and also south of the Kelly Brook outlet and on

the northwest side of Spofford's Point. They showed no particular interest in the nesting raft when they were in that general area.

- On 13 May two loons were engaged in a frenzied battle. They were jousting with their bills, occasionally seizing each other by the neck and pummeling each other with both wings. Spray from the water around them rose several feet in the air. The fight seemed to alternate from above to below the water. Intermittently the combatants became disengaged, one dove and then the other. Usually they resurfaced either already fighting or commencing immediately thereafter. On those occasions when they resurfaced some distance from each other, one, with four or five strokes, wing-rowed at the other to resume the clash. All the while, a third loon was about 30 yards from the fray, but remained unengaged except for diving casually when the struggle moved underwater. After about 20 minutes, the two duelling loons dove, the third dove a bit later and only two resurfaced in sight. The pair bathed animatedly, particularly the prevailing loon, thrashing and flailing. At one point this loon rolled over sideways and remained upside-down for a few seconds; its feet up and out of the water. It is not clear if the intruder or defender proved successful.
- By 16 May the reconstituted loon pair began to focus their attention particularly on the southwest point of Clark Island. Specifically on the southern side of the point not far from the dock on the south of Clark Island.
- On 20 May the pair mated on the west side of the point at the spot of their second nest in 2023 (Map 2, D), after which they cut through the reed bed at the point and surveyed the area on the south side of the point.
- On 27 May south of the Kelly Brook outlet in a reed bed, the pair spent considerable time pulling up vegetation and arranging it on a tussock where they mated. They then stayed in the area in deeper water floating about 20 yards apart for some time before moving into the lake.
- Three loons were together near Grass Island on 5 June. There didn't seem to be the tension of a territorial interaction. They swam together and peered into the water. After 10 minutes one dove then the other two dove in unison. Only two resurfaced in view. They immediately swam to the spot west of the south dock on Clark Island (Map 1, A). One went ashore and sat on a nest. The second posted up about 40 yards away in deeper water. Later that day, a loon was on the nest. We ferried the warning buoy from the area of the nesting raft to this nesting area. It seemed to be well-positioned to alert boaters to the nesting activity.
- On 8 June a Loon Preservation Committee (LPC) biologist visited and led a pontoon boat tour. One loon was on the nest and one was seen preening, feeding and sleeping.

- From 8-17 June the pair settled into a nesting routine. They regularly changed places on the nest and sat diligently.
- On 18 June two loons were just past Grape Island in the lake. They swam north along the eastern shore and wailed a few times. From Grass Island it was clear that no loon was on the nest.
- On the morning of 19 June two loons were near the southeast point of Clark Island. Later from Grass Island they were seen in the area of the nest. One was lying prostrate in the water similar to a defensive posture. The other was slowly coasting. They eventually moved around the southwest point and swam towards the Narrows. An examination of the nest showed no loon, no eggs and no eggshells. On shore there were no signs of predator activity.
- One observer reported seeing at least one egg in the nest during the nesting period.
- Through the remainder of June it appeared as if the pair may attempt another nest. They spent time mid-lake then periodically went to Clark's Island and scouted various spots. They seemed to focus on the area west of the camp on Clark Island, near the spot (Map 2, F) where the nesting raft was placed in 2023.
- On 1 July three loons were on the lake, circle dancing. On 3 July two loons were in the immediate area just south of the nesting raft (Map 1, B). They spent 10 minutes surveying the shoreline in this area but did not approach the raft. They dove twice to the middle of the lake where a third was. They circle danced a bit then went on long dives, well over a minute at a time. On one dive of this length the three loons resurfaced within a foot of each other. After 6-8 dives one loon came up about 20 yards from the other two then dove in their direction. The other two dove. This happened once again and when the loons resurfaced they seemed to have taken on a totally different, relaxed composure. They swam casually in a row and then side by side. At one point two appeared to be sleeping while the third coasted next to them.
- By mid-July the loon pair seemed to have shifted their interest away from the island. Their general behavior lacked any immediacy. On a few occasions three loons were seen on the lake in loose social activity.
- On 20 July the LPC conducted its annual New Hampshire Loon Census. Interested residents state-wide are asked to survey a lake for one hour between 8 and 9 am and report the results. The aggregated results give LPC an idea of how the loon population is faring across the state. (Great Pond/Kingston Lake survey at Tab B).

- On 2 August four loons were on lake. They did some peering and circle dancing but there were no signs of aggression. One eventually dove off, then a second. The pair coasted off together.
- Often in the mid-July to mid-August period no loon or only one loon was seen on the lake. It would seem the loon pair traveled, individually or together, to other nearby lakes to socialize.
- Eagles and Osprey were more visible over the lake throughout August. On 24 August an osprey dove at a loon that was preparing to eat a fish. The loon dropped the fish, moved off slowly and yodeled about 10 times. The osprey circled back and ate the fish.
- September and early October on the lake saw typically placid loon behavior. Shiny white dots on the water on a sunny day signaled the beginning of the fall moult - another season drawing to a close.
- We towed the raft in on 29 September.
- In mid-October the loons were still seen on the lake. Our first frost was 17 October.

Discussion - 2024 Nesting Season:

- The early part of the mating and nesting season unfolded nearly according to the book including the heated contest over the territory.
- The pair was focused early on the spot where they nested (Map 1, A), visiting it repeatedly and mating there at least once. They also showed an interest in an area below the Kelly Brook outlet. This year they showed little to no interest in Grape Island or Grass Island.
- After the nest failure the pair were several times in the general area of the nesting raft but showed more interest in specific sites further down the shore to the south.
- As ever, the nest failure came as a surprise and a disappointment. The cause of this year's nest failure is uncertain.
- After the pair abandoned the nest, an examination of the nest and surrounding area on-shore was not revealing.
- The weather around the nest failure was harsh. On 18 June the temperature went into the low-nineties with full sun and oppressive humidity. This continued even higher through 19 into 20 June.

- The nest was built well above water level. Water level fluctuations don't seem to have been a factor.
- Placing the warning buoy soon after identifying the nest seemed to help. There were many interested people who observed the nest and from a respectful distance
- It appeared for about two weeks that the loon pair was planning for another attempt. Their focus was the shoreline below and west of the camp on Clark Island not far from where they nested in 2021 (Map 2, B).
- By early July their focus seemed to have turned from mating and nesting behavior to social behavior.
- In the broader perspective, we have had five loon nests in the last five years on Great Pond. None so far has produced a chick. The last four nests were on Clark Island (Map 2, Map 3). This seems likely to be their future focus.
- The new lake association sign at the boat ramp was helpful in disseminating useful information about the loons.

Recommendations:

- Expand efforts towards public awareness particularly during nesting season including posting cautionary signs at the state boat ramp and having information brochures available. (I believe the brochures are on hand.)
- Encourage other interested residents to keep notes of their observations of loon behavior and contribute to a broader base of observers and more observations, including during the annual loon census.
- Elicit support towing the nesting raft and warning buoy out in the spring and back in the fall.

Attachments:

Tab 1: 3 x Maps

- Map 1 - Loon nesting activity 2024
- Map 2 - Loon nesting activity 2019-2024
- Map 3 - Loon nesting activity 2019-2024 (Clark Island)

Tab 2: 2024 New Hampshire Loon Census (Great Pond/Kingston Lake) with Map

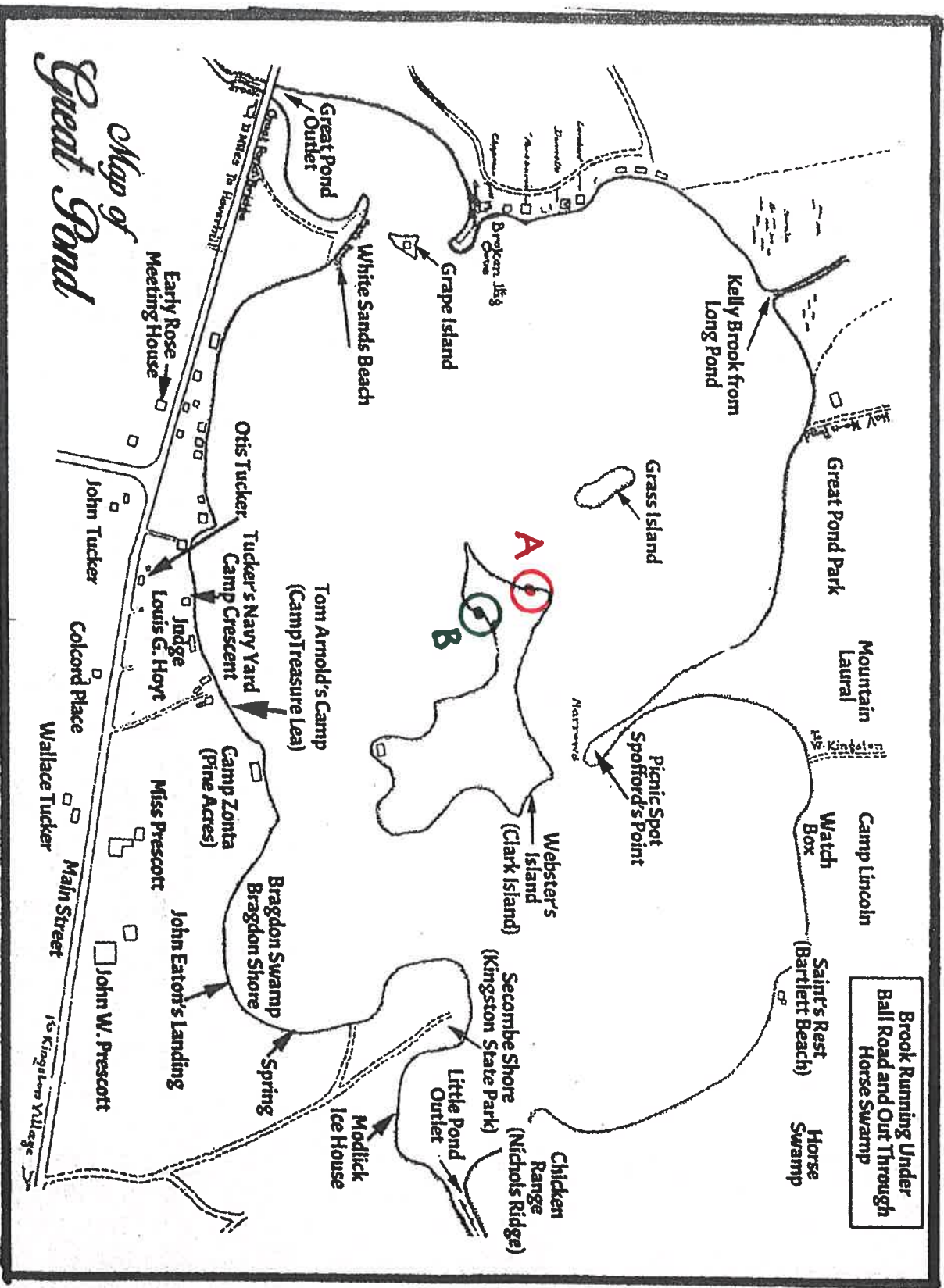
Tab 3: Table – Loon nesting dates 2021-2024

TAB 1

LOON NESTING ACTIVITY 2024

KEY

- A) NEST
JUNE 5-19
- B) NESTING
RAFT



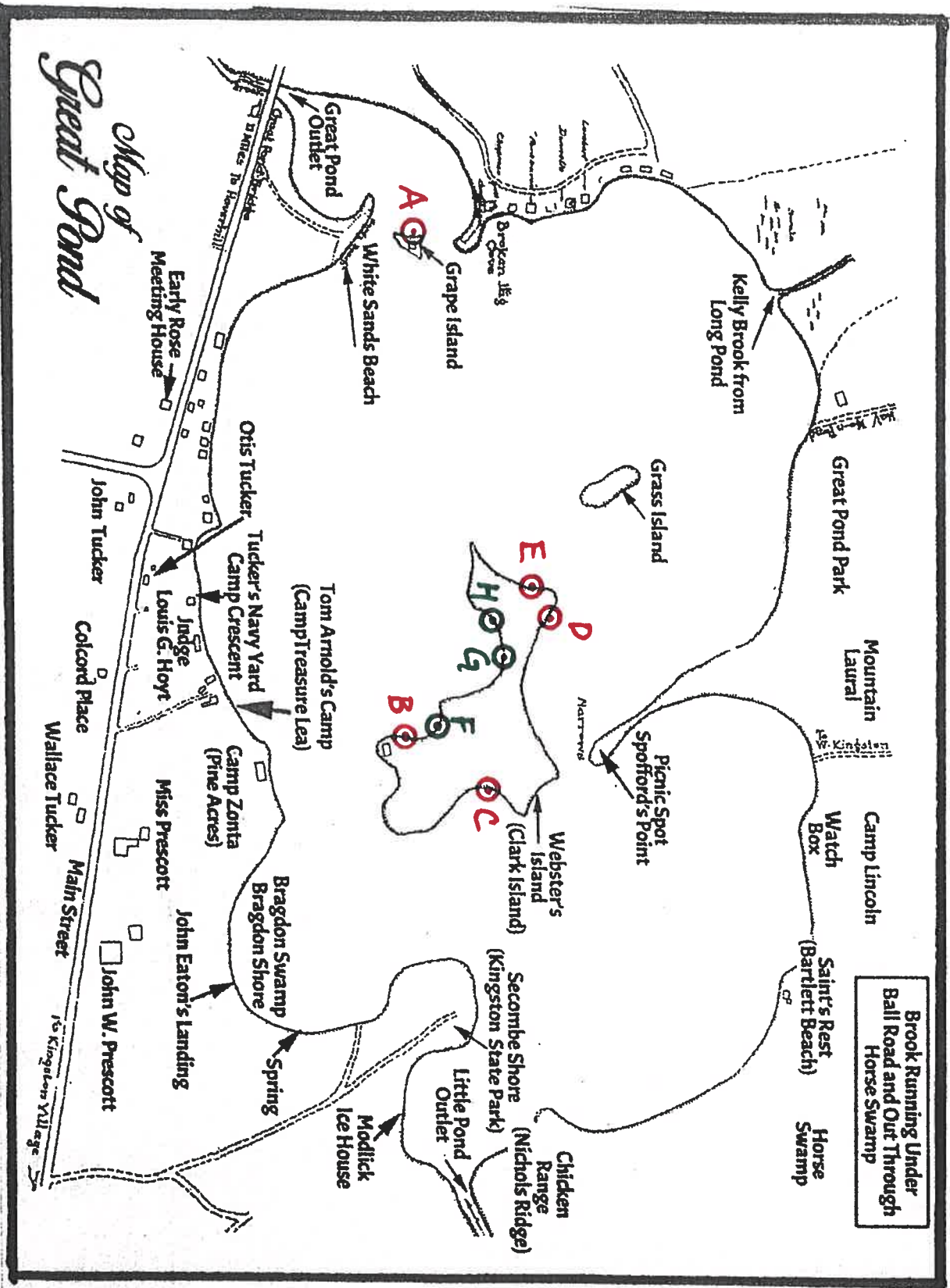
Map of Great Pond

MAP 1

LOON NESTING ACTIVITY 2019-2024

KEY

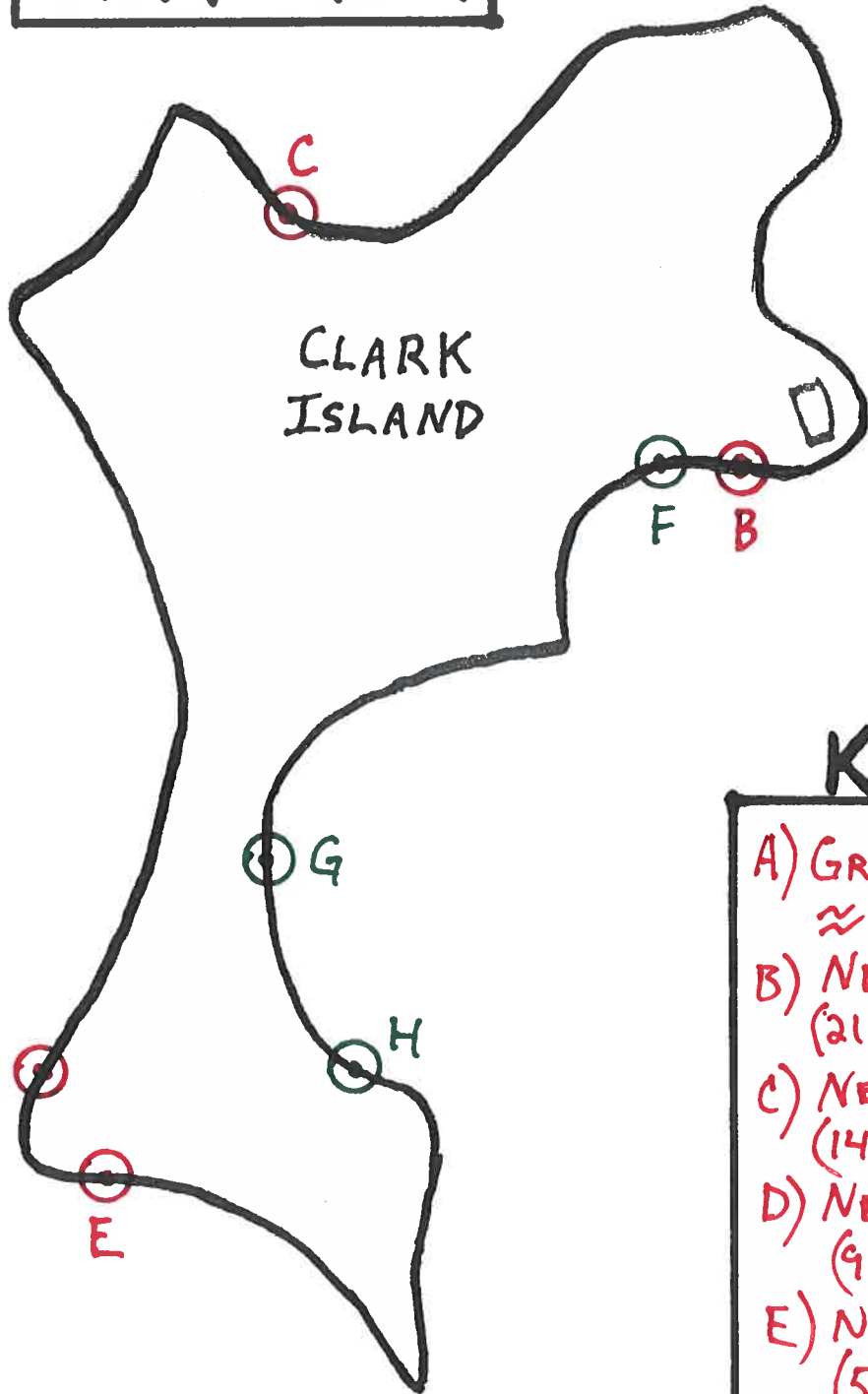
- A) NEST 2019
- B) NEST 2021
- C) NEST 2023
- D) NEST 2023
- E) NEST 2024
- F) NESTING RAFT 2022
- G) RAFT 2023
- H) RAFT 2024



Map of Great Pond

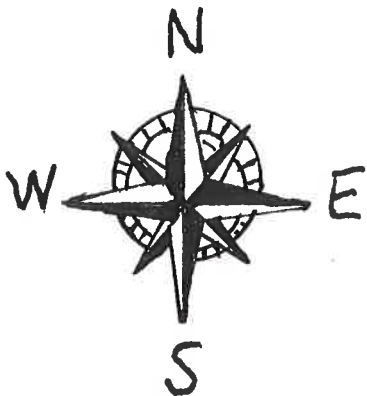
MAP 2

LOON NESTING ACTIVITY 2019-2024



KEY

- A) GRAPE Island
≈ 2019 *
- B) NEST 2021
(21 JUN - 11 JUL)
- C) NEST 2023
(14 JUN - 16 JUN)
- D) NEST 2023
(9 JUL - mid-July)
- E) NEST 2024
(5 JUN - 19 JUN)
- F.) NESTING RAFT
2022
- G.) Raft 2023
- H) RAFT 2024



GREAT POND
(KINGSTON LAKE)

MAP 3

* See MAP 2

TAB 2



New Hampshire Loon Census

Saturday, 20 July 2024

8:00 AM - 9:00 AM

Lake: GREAT POND (KINGSTON Lake) Town: KINGSTON

Observer(s): JIM MACDOUGALL

Telephone: (603) 583-0835 E-mail: macd3939@aol.com

Address: KINGSTON, NH

Total number of people in party: 1

Observations:

	Time	# Adults	# Chicks	# Immatures	*Location/Direction
Example	8:17	1 AD			Flew in from east
1	8:00-9:00	1AD	0	0	Tracked one loon
2					from E side of
3		* See attached comments			Clark Island to
4		and map			Saint's REST.
TOTALS	1				

Please note any bald eagle sightings during this hour & the loons' response (i.e. vocalizations):

No eagles were seen.

- (1) Record only the FIRST sighting of each loon or group, then be sure to total the number of loons observed on the appropriate line. Note the direction in which the loons move or fly.
- (2) If possible, please attach a sketch/map of census area and the location of any loons you observe.
- (3) It is CRITICAL that observations continue for the ENTIRE HOUR.
- (4) Remember, a report of zero is just as biologically important as a report of 10 loons.
- (3) Your sightings from throughout the summer are also valuable. Please comment on loon activity observed at other times on the reverse of this page.

CENSUS FORMS MUST BE RECEIVED BY JULY 27 TO BE INCLUDED IN THE FINAL TALLY.

Please return this form to the LPC: PO Box 604, Moultonborough, NH 03254,
or you can fax it 603-476-5497 or email it to volunteers@loon.org.

If you were part of a coordinated census effort on a larger lake, please send this form to your coordinator so they can send the forms in all together.

Loon Census 2024 – Great Pond (Kingston Lake)

Observations:

On Saturday, 20 July from 8:00 – 9:00 a.m. I tracked one adult loon from the eastside of Clark Island to Saint's Rest. (The attached map shows the general course of the loon during this time.) As a rule I observed the loon from points offering the widest vantage of the lake. I neither saw nor heard from other loons during the census. The weather was sunny with a light westerly wind.

At 8:00 an adult loon was just off the shore east of Clark Island below the camp. (Map, #1) It coasted slowly to #2 where it lingered over deep water until 8:15. It then coasted to #3 by 8:20, lingered again over deep water and coasted at 8:30 to #4, lingering again over deep water until 8:45. Between 8:00 and 8:40 the loon was on the surface of the water, never once peering or diving. At 8:40 (#4) the loon peered twice then made a short dive. At 8:45 the loon moved slowly to #5 just off Saint's Rest where it made a few short dives, preened briefly and by 9:00 was asleep.

In the course of the hour the loon made no vocalizations, nor did I hear any from elsewhere on the lake. It was my impression that the loon was inviting social contact between 8:00 - 8:45. As it moved from point to point, and at those points where it lingered, its neck was extended, head held high, seeming to scan the lake. When no contact was forthcoming, it drifted off to rest.

Background:

On May 2 we floated a nesting raft to a point (A) off Clark Island. A mated pair of loons has been on the lake since at least May 16. They nested on the SW of Clark Island (B) from June 5-18 then abandoned the nest for reasons unknown. It is worth noting that this was in the middle of a three-day heat wave (June 17-19) with temperatures hovering in the high 90s and humidity oppressive. After a week they showed signs of making another nesting attempt but the frequent presence of a third loon complicated their efforts. In the last few weeks interactions between three loons seem to begin with low-level territorial behavior (circle swimming, peering, diving) and end in more social behavior. At the end of one such interaction (July 3), two loons were sleeping while the third swam alongside both of them.

A final note: As I took my kayak out after the census about 9:30, I saw two loons together just off the boat ramp (Map, Great Pond Outlet).

SM
7/22

LOON CENSUS 2024

GREAT POND (KINGSTON LAKE)

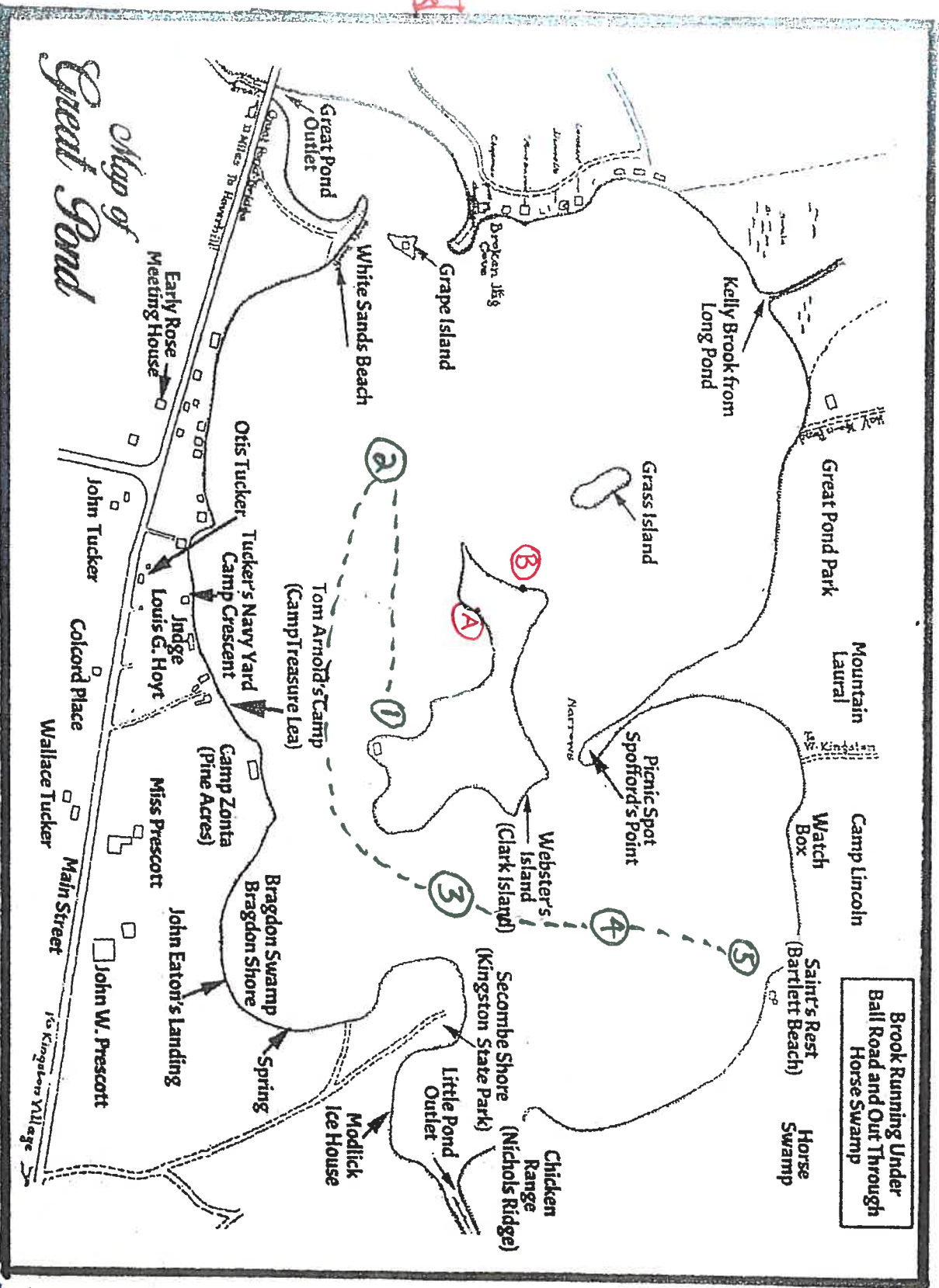
KEY

Surveyed
Course of
Adult Loon

- 1. 8:00 a.m.
- 2. 8:00 a.m.
- 3. 8:30 a.m.
- 4. 8:50 a.m.

VESTING BEHAVIOR

- (A) NEST RAFF - MAY 21
- (B) NEST - JUN 5-18



TM
2/27

TAB 3

**Great Pond (Kingston Lake)
Loon nesting dates 2021-2024**

2021	21 June	11 July
2023	14 June	16 June
2023	9 July	mid-July
2024	5 June	19 June