Regional Bird Monitoring Program
2013 Training Session

RAPP
Research on Avian Protection Project

Dr. Colleen Cassady St Clair,
Sarina Loots, Cindy McCallum, Neil Foley

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Schedule Overview (Cindy & S)

Schedule:

10:30-11:00: Introduction by Colleen

11:00-11:15: Introductions of Sarina & Cindy & all the operators

11:15-12:00 **A.** Introduction to the protocol (Sarina)

12:00-12:15 **B.** Protocol practice (case studies) (Sarina)

12:15-1:15 **C.** Introduction to bird identification (Sarina & Neil)

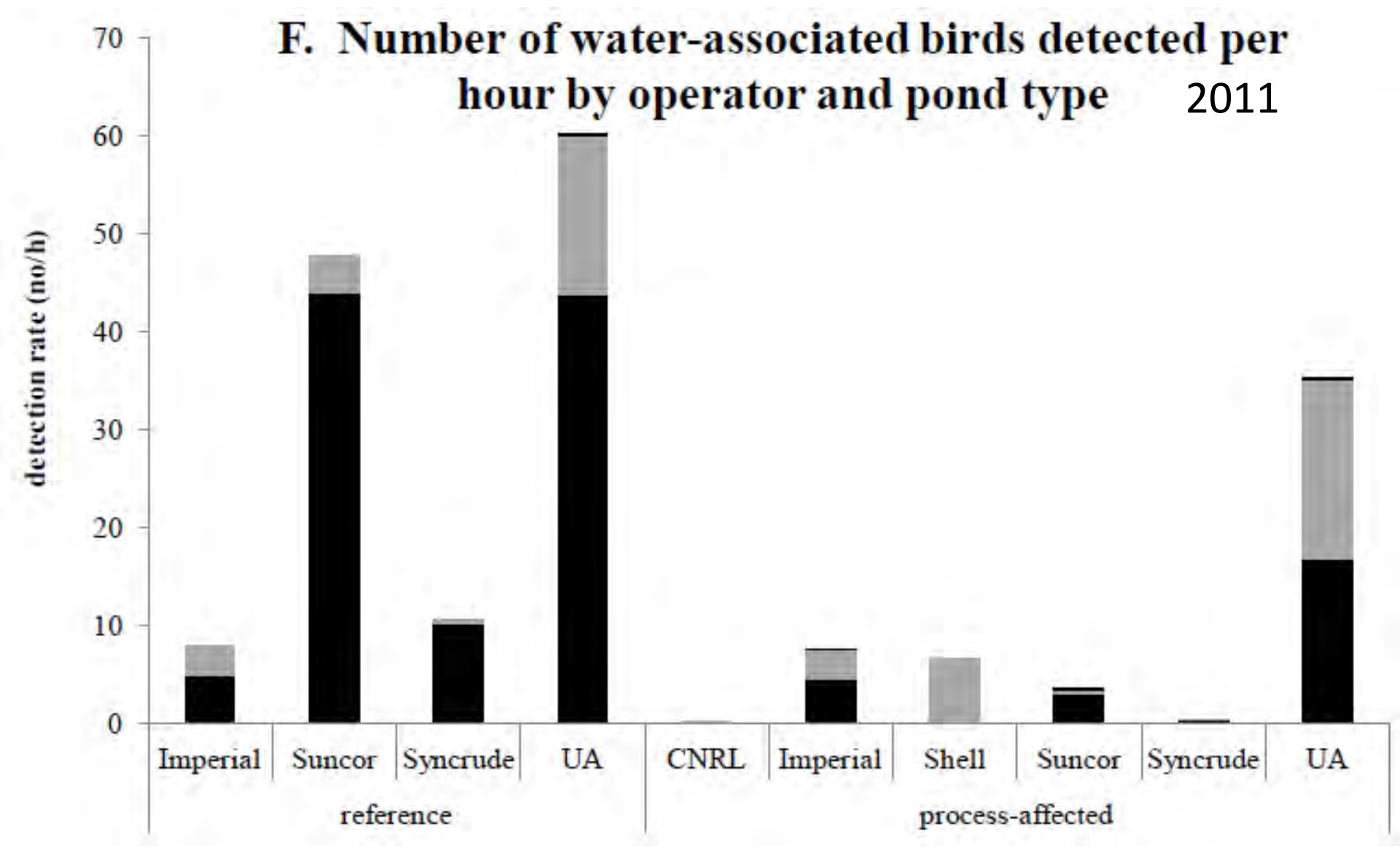
A. Introduction to the protocol

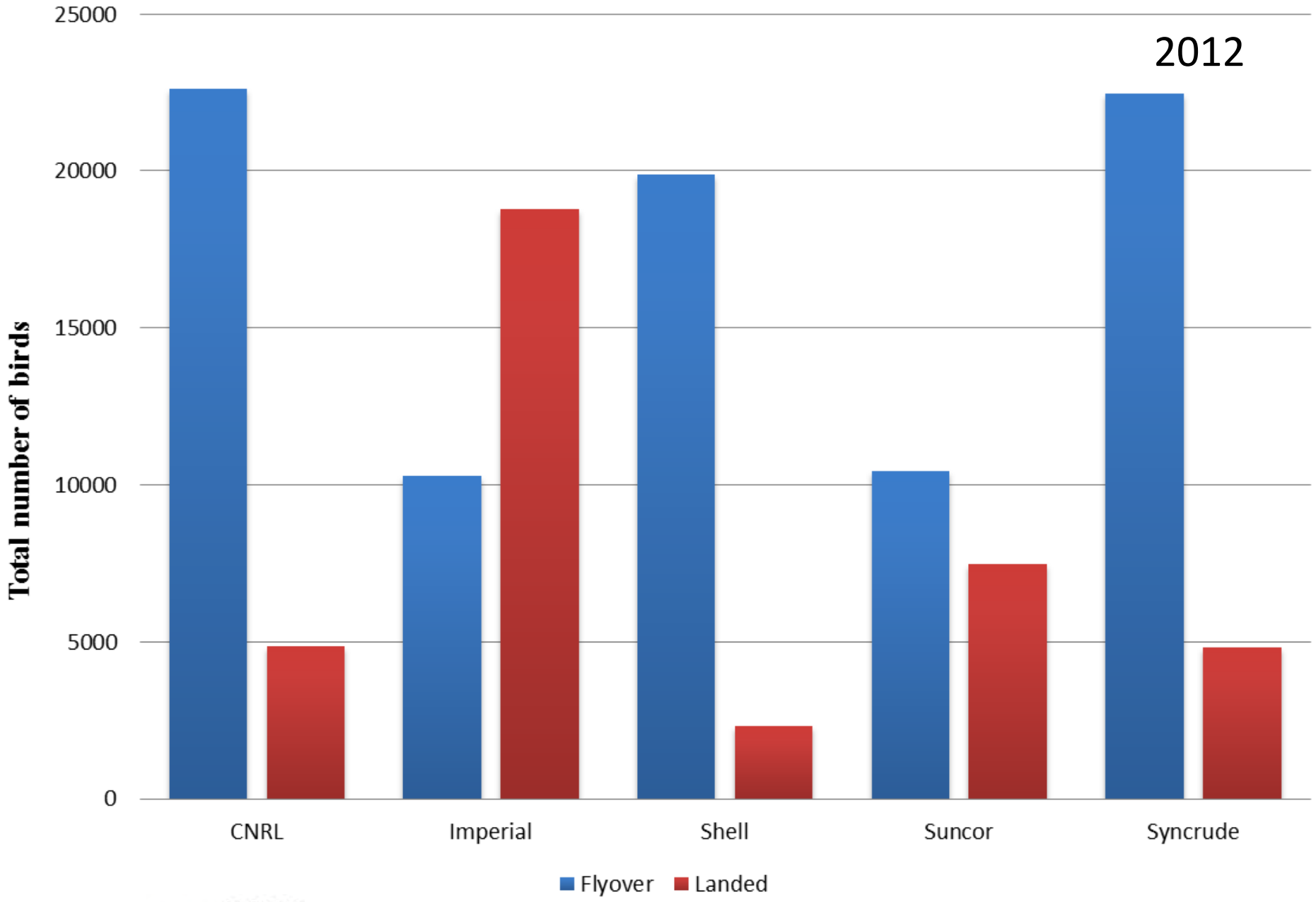
1. Important preface points
2. Changes since 2012
3. 2013 Protocol

B. Practice

A.1. Preface

- The purpose of this training is to be a shared experience to familiarize everyone with the protocol, and increase standardization between and among operators.
- Participation
  - When you have questions, introduce yourself and what operator site you work on.


F. Number of water-associated birds detected per hour by operator and pond type
2011
detection rate (no/h)
70
60
50
40
30
20
10
0
Imperial
Suncor
Syncrude
UA
CNRL
Imperial
Shell
Suncor
Syncrude
UA
reference
process-affected



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A.2. Changes from 2012 to 2013

1. Barcodes
2. New Forms
3. New species lists: by FORAGING GUILD
4. Identify to as much FORAGING detail as possible
5. Modified monitoring area

Barcodes

- One at each station
- Must scan in form
  - very simple
- Demo to follow

Crane Lake - 1

New forms

- One form per observation session

(no site characteristics + bird observation forms)

- Everyone is on forms
- NB: If there is a mistake, something unclear, or a species left out, LET US KNOW:
- Sarina: loots@ualberta.ca; 780-218-4038

  OR Cindy: cindy.mccallum@ualberta.ca

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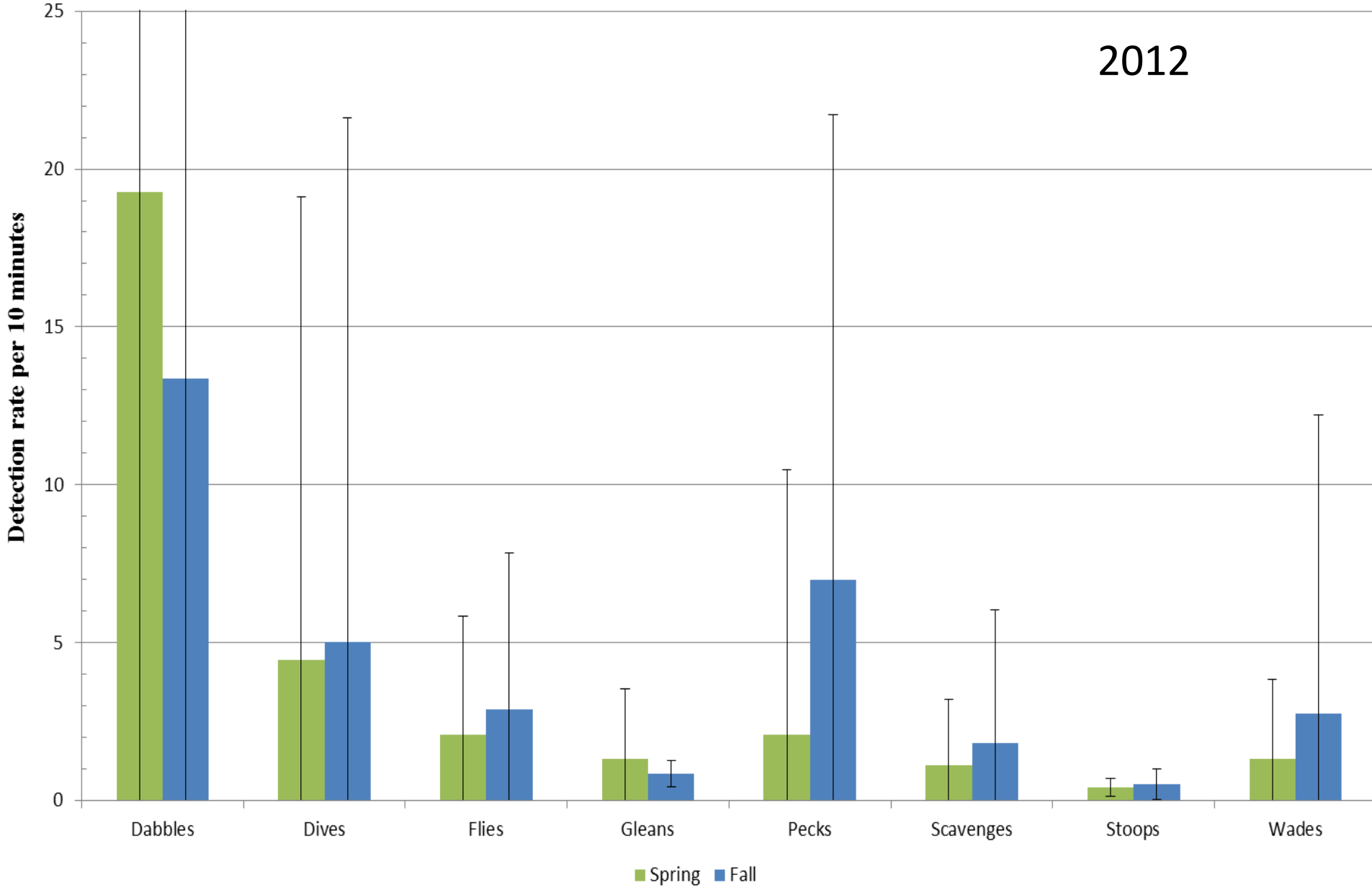
New Species Menus: Foraging Guild

- Risk of tailings ponds (contact with bitumen) depends on how the bird forages
- Dabblers, Divers, and Waders have greatest chance to come in contact with bitumen
- Non-target species is everything else:
  - Flies (to forage; swallows)
  - Gleans (picks insects out of bark; woodpeckers)
  - Pecks (on the ground; sparrows, blackbirds; buntings)
  - Scavenges (gulls, corvids)
  - Stoops (birds of prey)

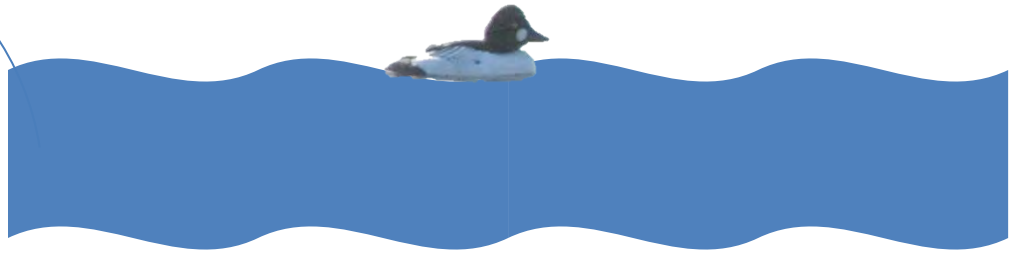

2012
Detection rate per 10 minutes
25
20
15
10
5
0
Dabbles
Dives
Flies
Gleans
Pecks
Scavenges
Stoops
Wades
Spring
Fall

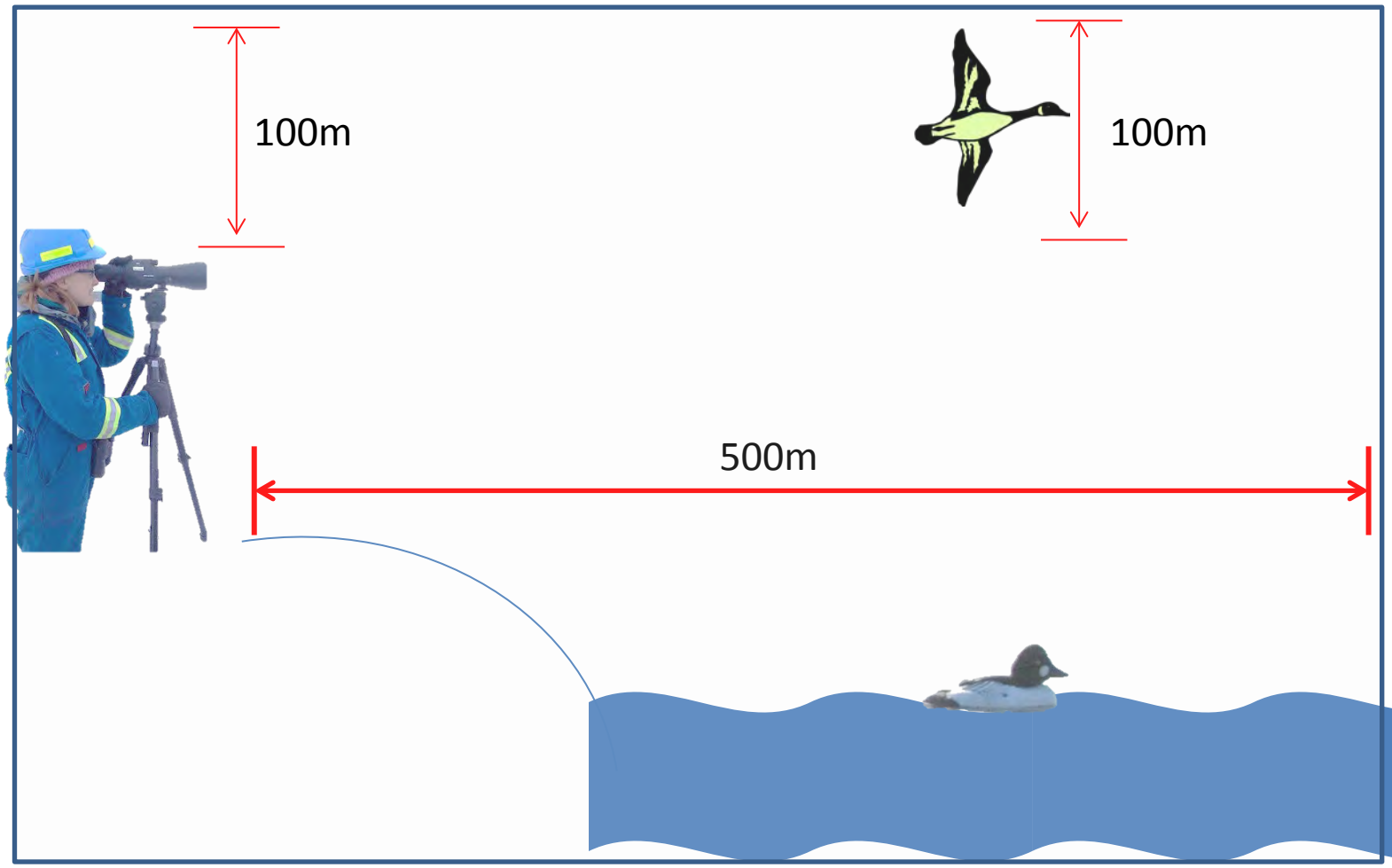
New Species Menus: Foraging Guild

- Identifying to as much FORAGING detail as possible
- Use your experience and judgement, use your field guides and your peers to make the best possible species ID (to the most detailed tier possible). Do not guess at a specific species if you are not sure.

Modified Monitoring Area

- 500m out from observation station; 100m up
- Any birds seen outside can be entered into incidental form.




100m
100m
500m

A.3 2013 Protocol

From the “2013 Oil Sands Bird Monitoring Plan” (draft April 4, 2013; P7)

Responsibilities

Observers

- Adhering to protocols
- Entering data precisely and with suitable quality for analysis

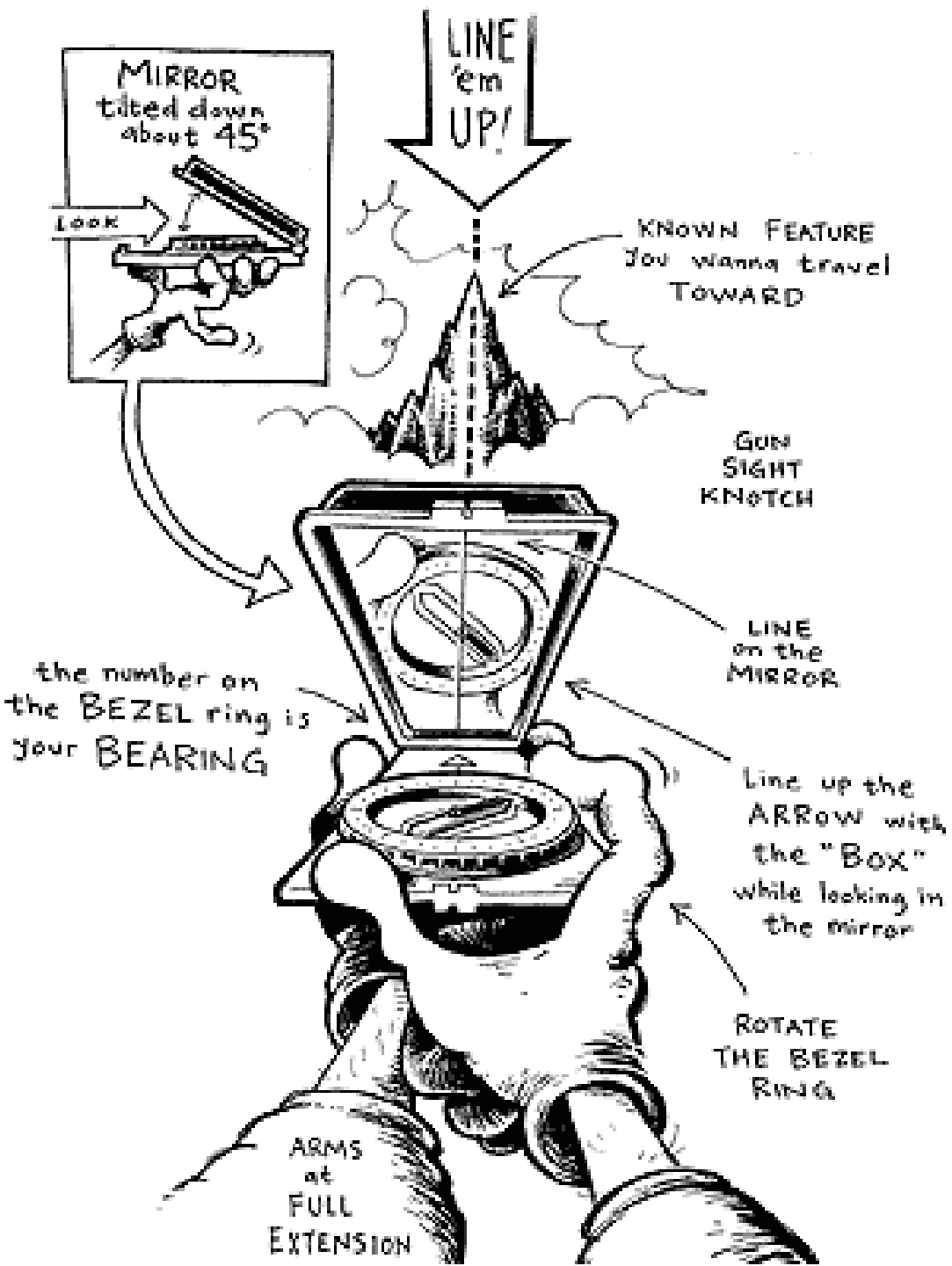
A.3 The 2013 Protocol
Good field work

1. Quality equipment
   - Operators are investing in equipment upgrades this year
2. Efficient equipment use
3. Thorough data entry

Field Equipment

1. Tablet (ensure it's charged daily!)
2. Field guides
3. Binoculars (10X magnification)
4. Spotting scope (60X or greater magnification)
5. Full tripod for spotting scope (with panning head)
6. Compass
7. Range Finder
8. GPS
9. Field notebook & pencil

Good Compass Position



How to take a compass reading

1. Hold your compass at arm's length
2. Open the mirror to ~45 degree angle
3. Point the compass with your arms outstretched to the bird
4. Turn the dial so that the magnetic needle lines up with the arrow in the middle of the dial
5. Now look by the hinge, where of the mirror and the compass meet: what number is the dial there? (see photo on next slide)

Read bearing
here

The Declination

- Set depending on where in the world you are
- Fort McMurray and OS area is **14° EAST (+)**
- Use the little tool on the end of the compass cord: turn the base of the dial with the tool until it is offset by 14 degrees past north (towards east).
- Check your compasses before heading out on your first trip
- Check them periodically throughout out the season

Standardized Monitoring Program in a nutshell

1. Monitor each station daily, up to 4 stations for large ponds
2. Count all birds observed within 500m radius in 30 minutes
3. Separate landings and flyovers

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A.3. Protocol: A brief overview of your day:

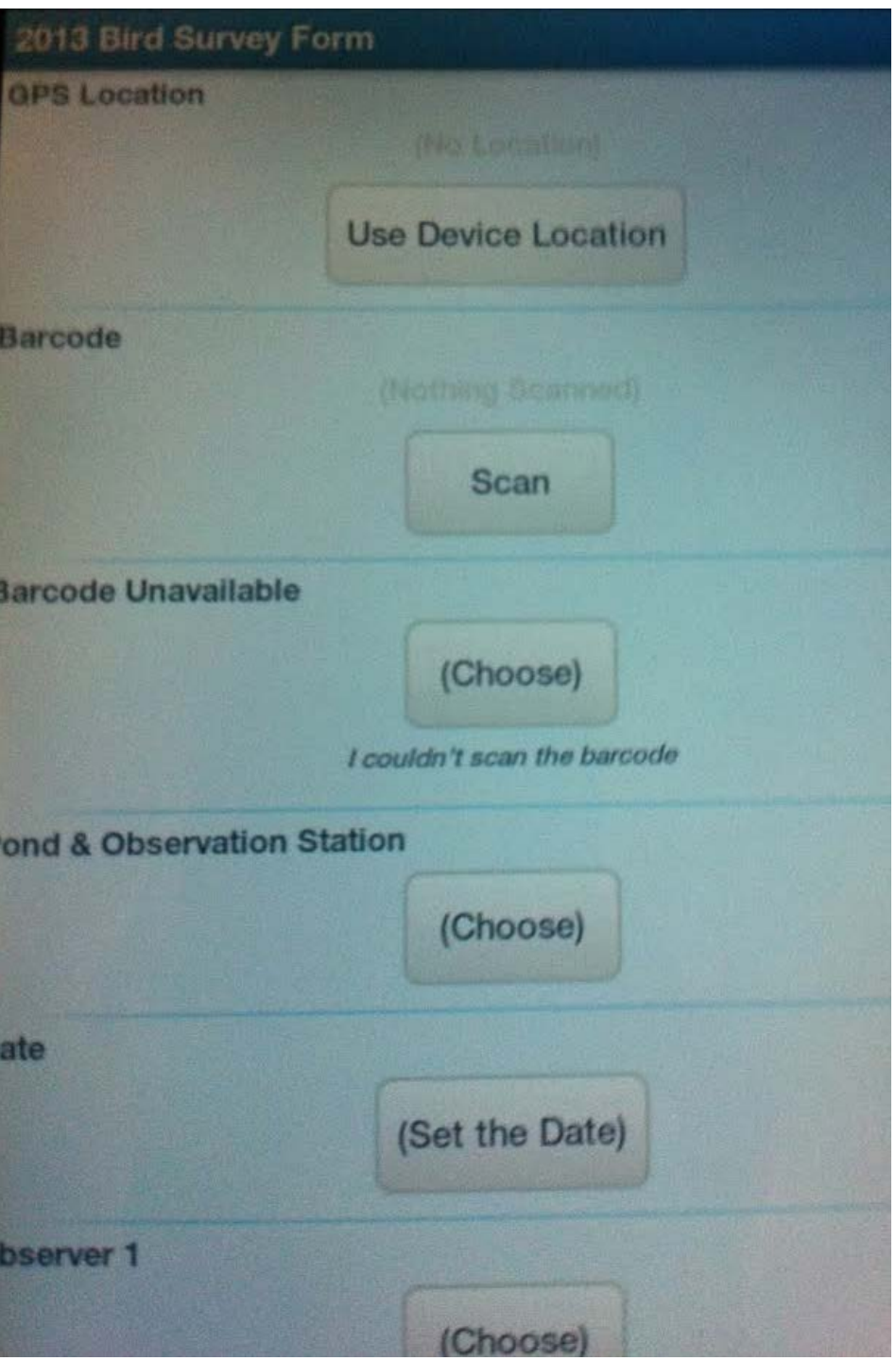
1. Check in at your office station and collect permits required; meet site safety requirements
2. Collect your equipment (see equipment list)
3. Head out to your assigned observation stations

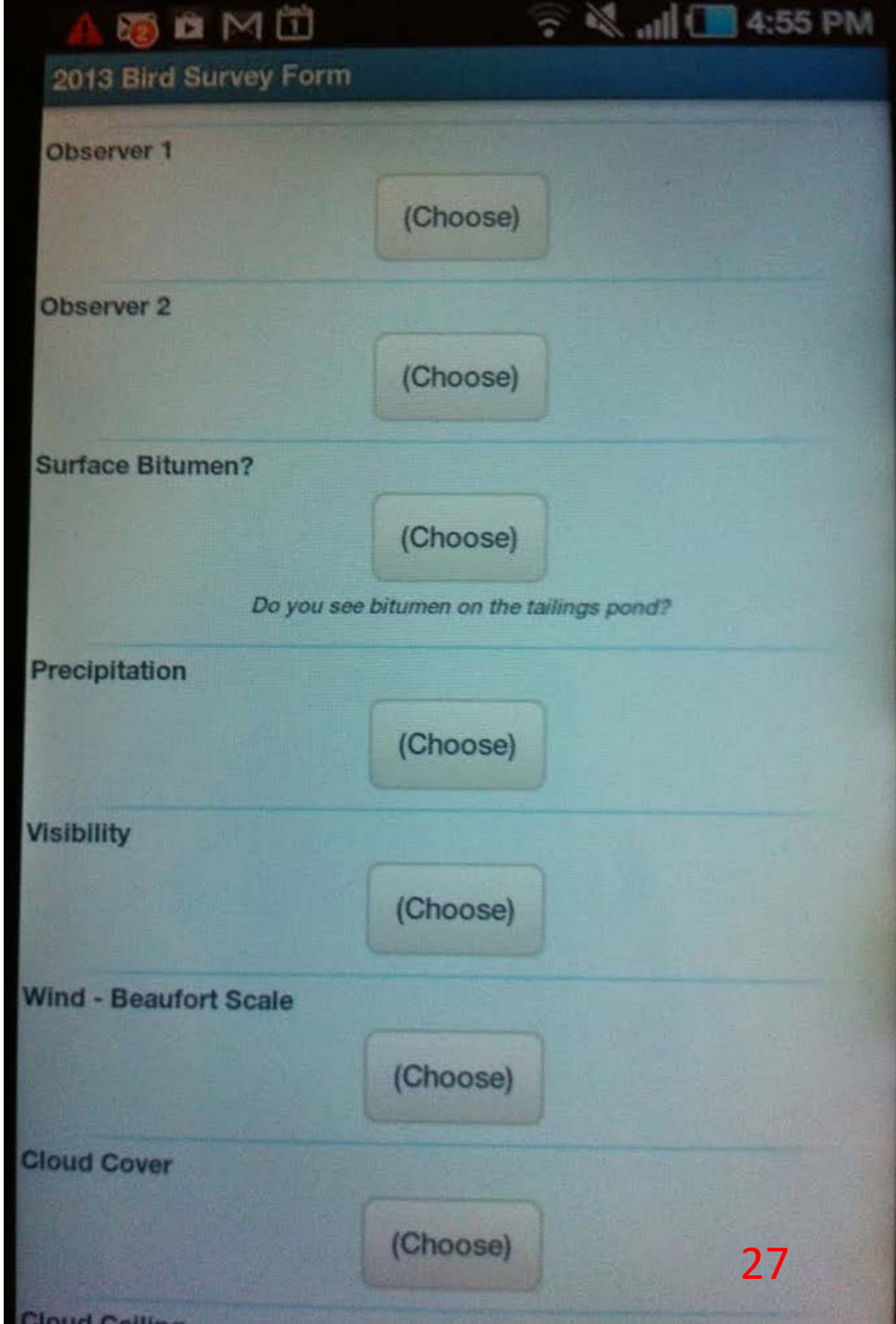
A.3. Protocol. An observation:

4. Arrive at a station
5. Get out of your truck, set up your tripod, assemble all the equipment you need for your observation around you
6. Start your observation officially…

A.3. Protocol. An observation:

- Let's open the "2013 Bird Survey Form" together…


2013 Bird Survey Form
GPS Location
(No Location)
Use Device Location
Barcode
(Nothing Scanned)
Scan
Barcode Unavailable
(Choose)
I couldn't scan the barcode
ond & Observation Station
(Choose)
ate
(Set the Date)
bserver 1
(Choose)


4:55 PM
2013 Bird Survey Form
Observer 1
(Choose)
Observer 2
(Choose)
Surface Bitumen?
(Choose)
Do you see bitumen on the tailings pond?
Precipitation
(Choose)
Visibility
(Choose)
Wind - Beaufort Scale
(Choose)
Cloud Cover
(Choose)

A.3. Protocol. An observation:

- Fill in the first portion of the form, the site characteristics

(Barcode, site name, weather, start time, observer, etc)

Example dataset

Site characteristics portion

Date	Start time	End time	Pond	Observer	#land	Bird
10 April	6:20	6:50	JPComp	Sarina	2	MALL
10 April	6:20	6:50	JPComp	Sarina	1	AMCR
11 April	6:45	7:15	JPTT	Allison	2	LEYE
11 April	6:45	7:15	JPTT	Allison	1	NHA
11 April	7:55	8:25	JPComp	Sarina	2	COGO
12 April	6:15	6:45	JPComp	Sarina	5	SUSC

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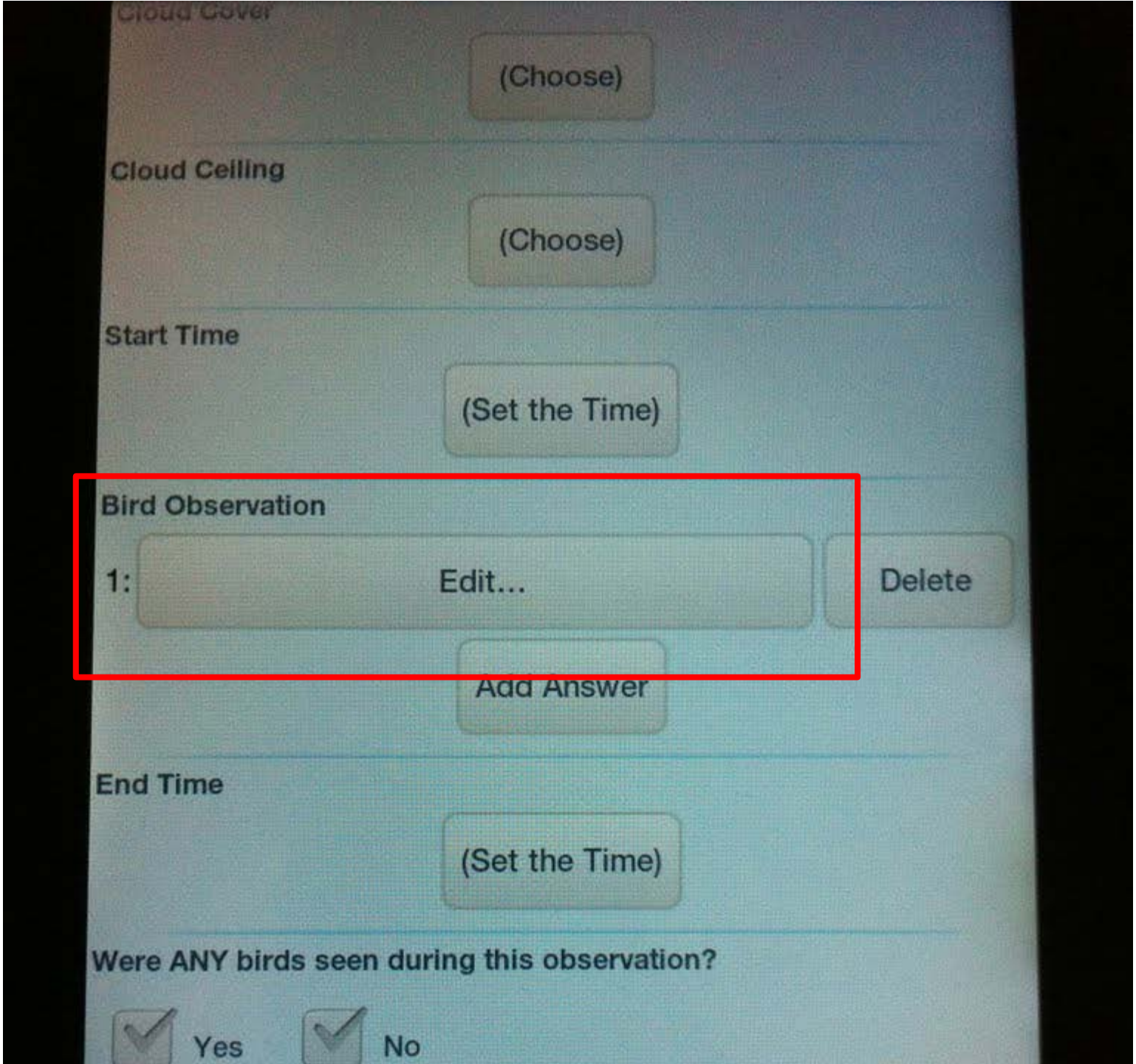
A.3. Protocol. An observation:

- Begin your observation by scanning the surface of the pond, and looking for any objects that may be birds floating on the pond surface
- At the same time, scan for any birds that fly around the pond, both in your spotting scope, and in your peripheral vision.

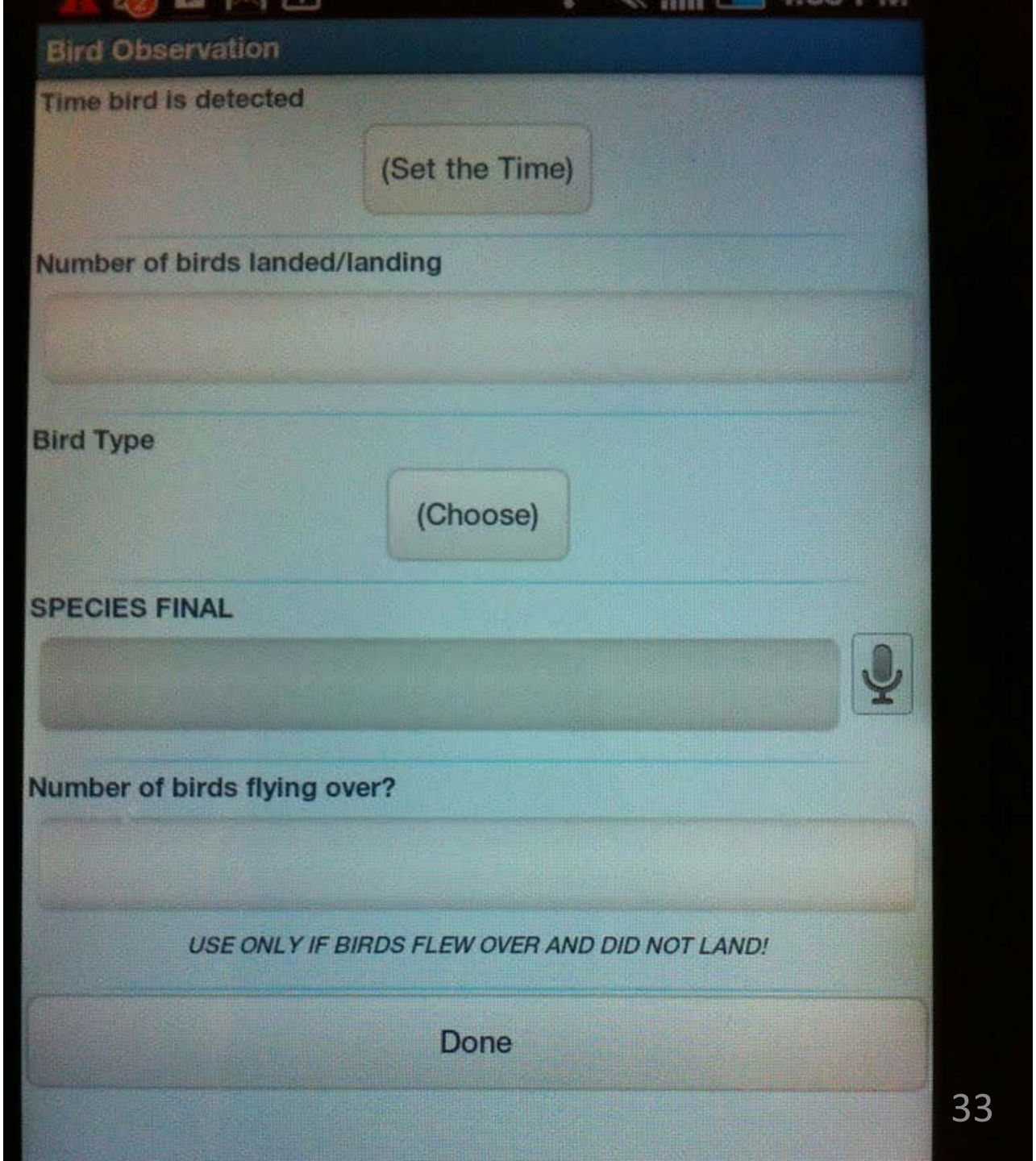
A.3. Protocol. An observation:

When you detect a bird, create a new “sub-form”, the “Bird observation” portion of the form.

- This portion of the form documents the details of that particular bird


(Choose)
Cloud Ceiling
(Choose)
Start Time
(Set the Time)
Bird Observation
1:
Edit...
Delete
Add Answer
End Time
(Set the Time)
Were ANY birds seen during this observation?
Yes
No

- Bird group Observation, Sub-form



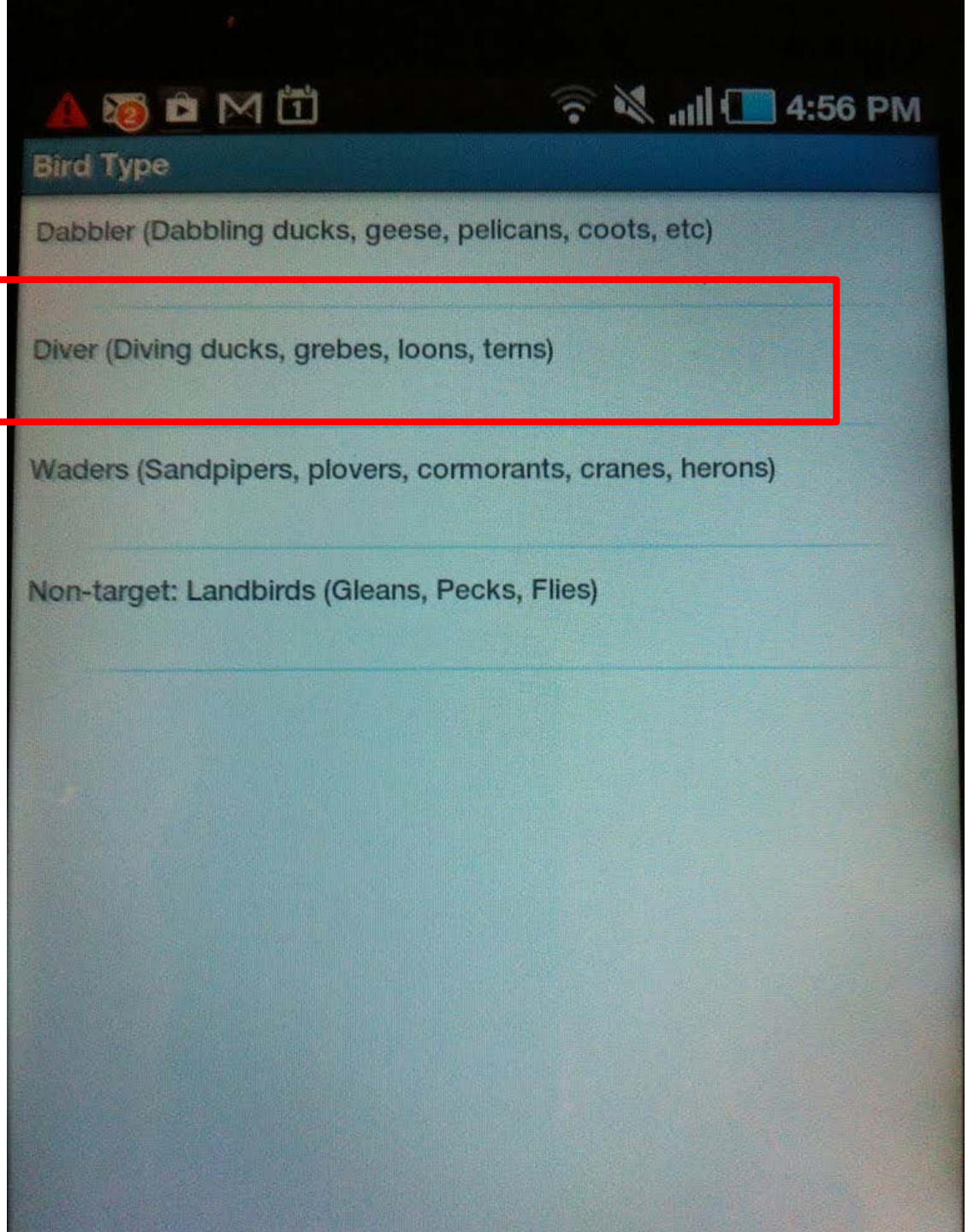
Bird Type (Foraging Guilds)

Diver leads to

A. Diving Duck

OR

B. Other Diver



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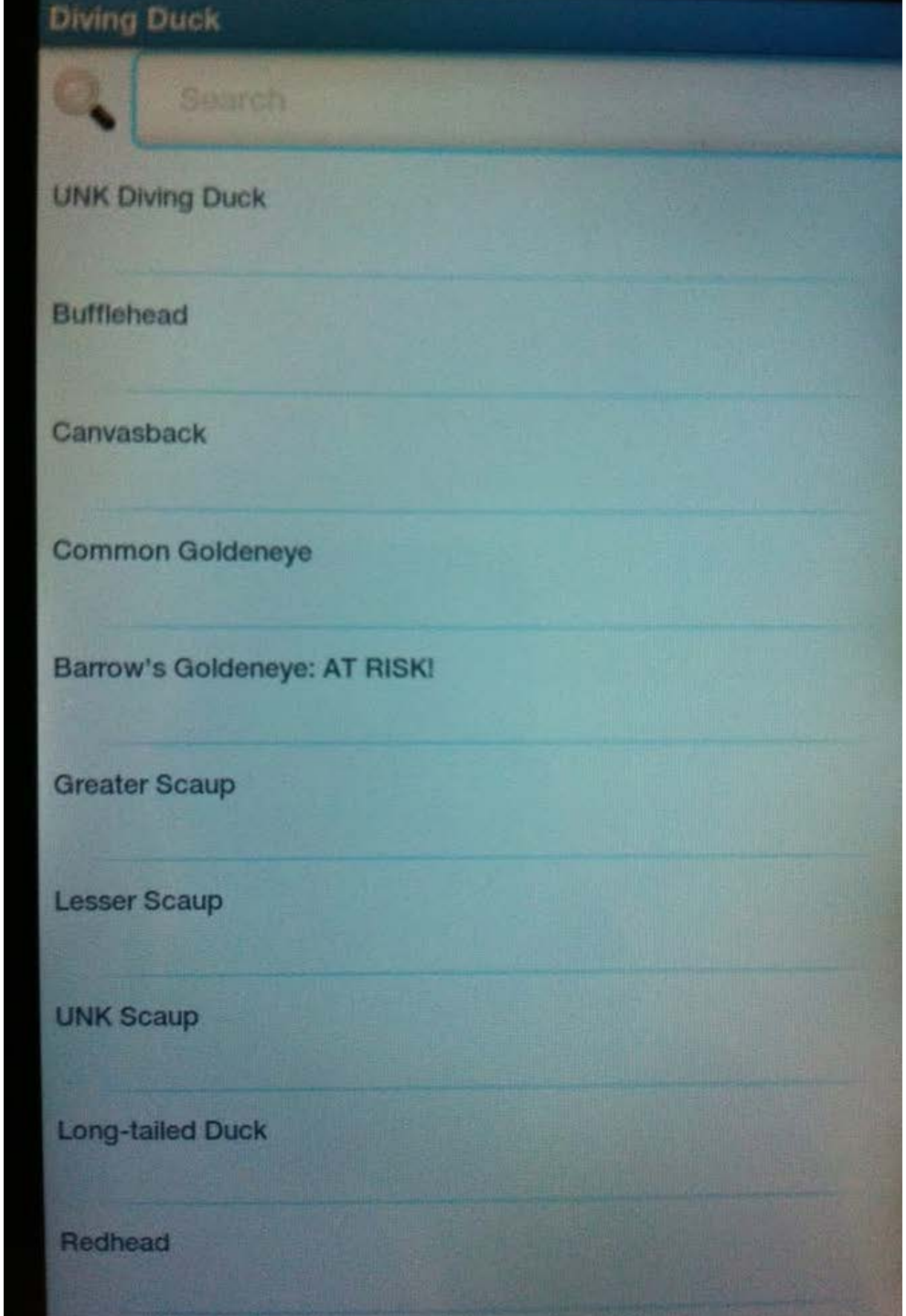
Diving Duck Selection list

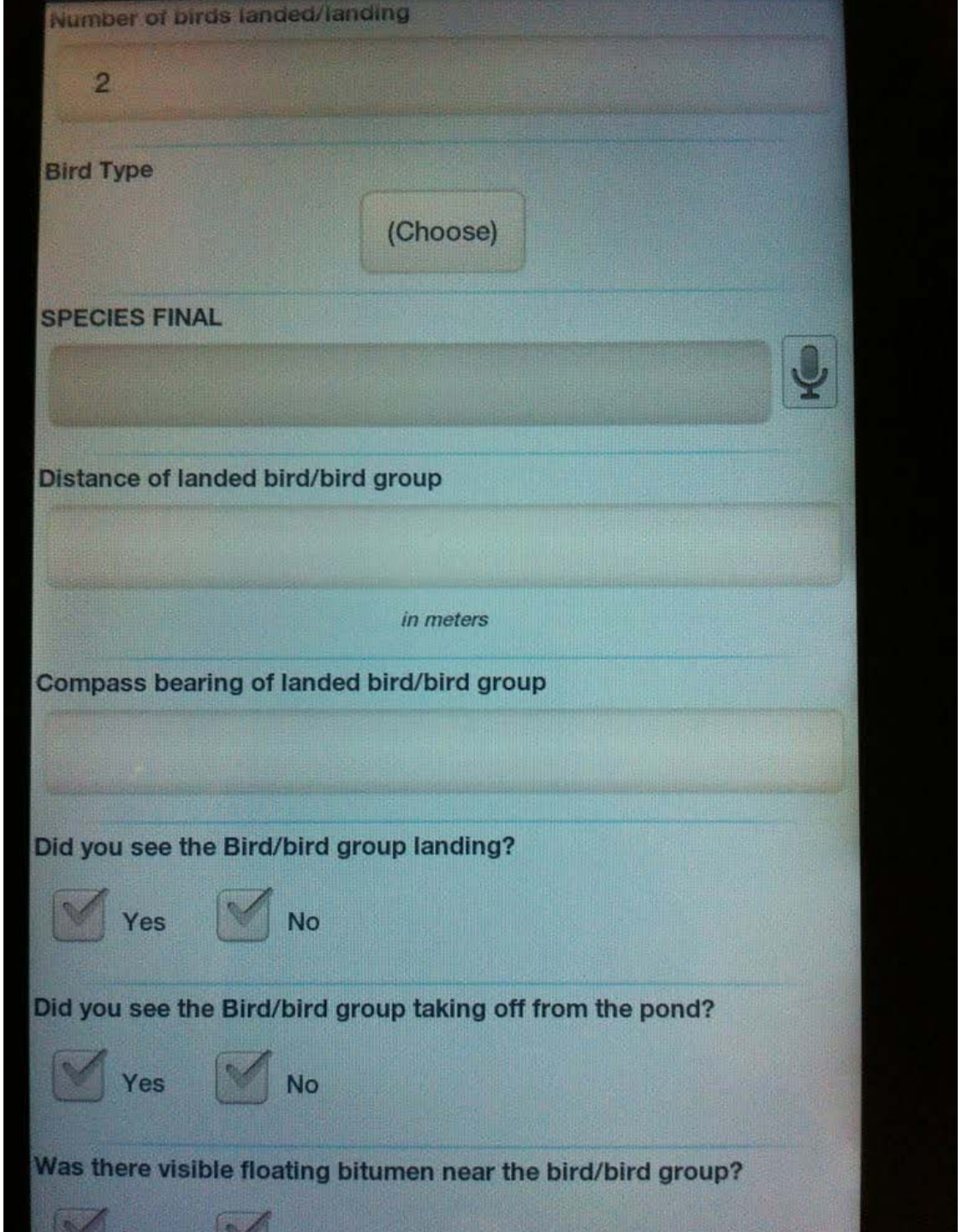


A.3. Protocol. An observation: Landed birds

Your #1 priority while doing your monitoring is to document birds landed on the pond surface.

- If a bird is seen landed, document it before any flying birds.
- If a bird flies in and lands, record it as landed.
- If a bird is landed and flies off, record it as landed.

Landed birds (Number of birds landed is >0)



A.3. Protocol. An observation: Flying birds

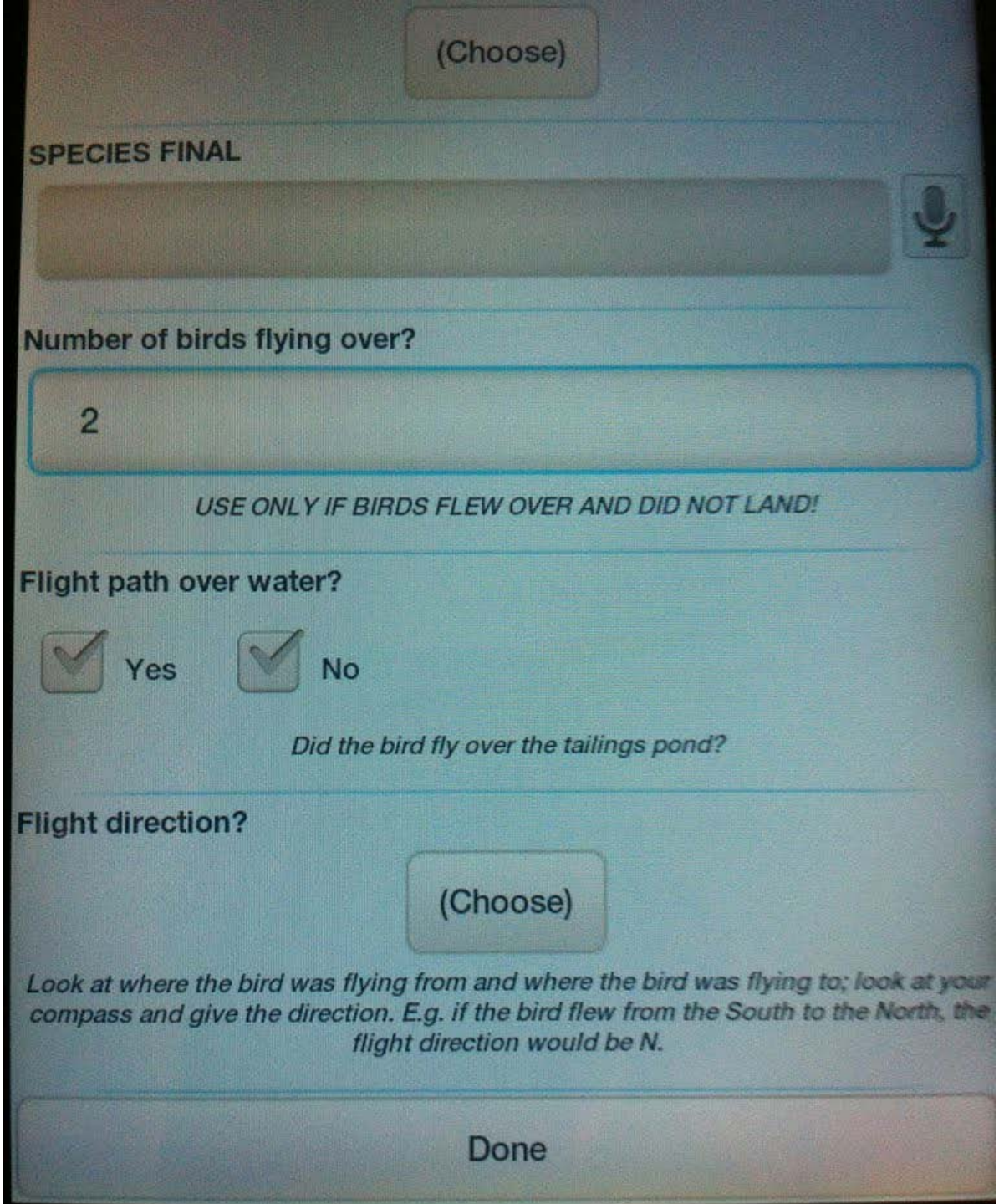
ONLY record a bird as flying if it was NOT seen landing on the pond.

NEW this year: No arrival or departure azimuth

Instead… Take a look at your compass before you begin your observation.

- Which way is north? S? W? E?
- When a bird flies over, and does not land, note the direction it is flying to.

Flying Birds



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Example dataset

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11 April	7:55	8:25	JPComp	Sarina	2	COGO
12 April	6:15	6:45	JPComp	Sarina	5	SUSC

1 bird group

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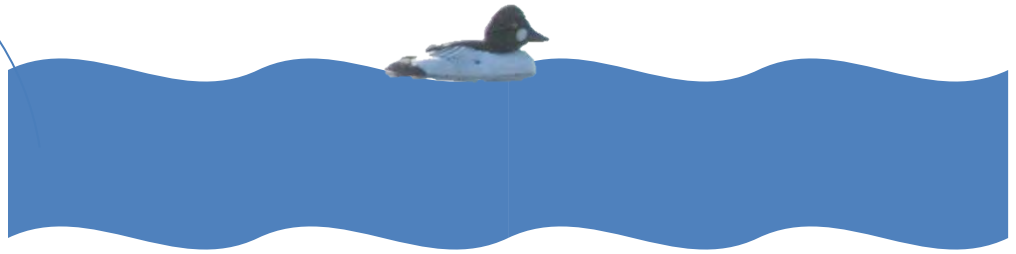
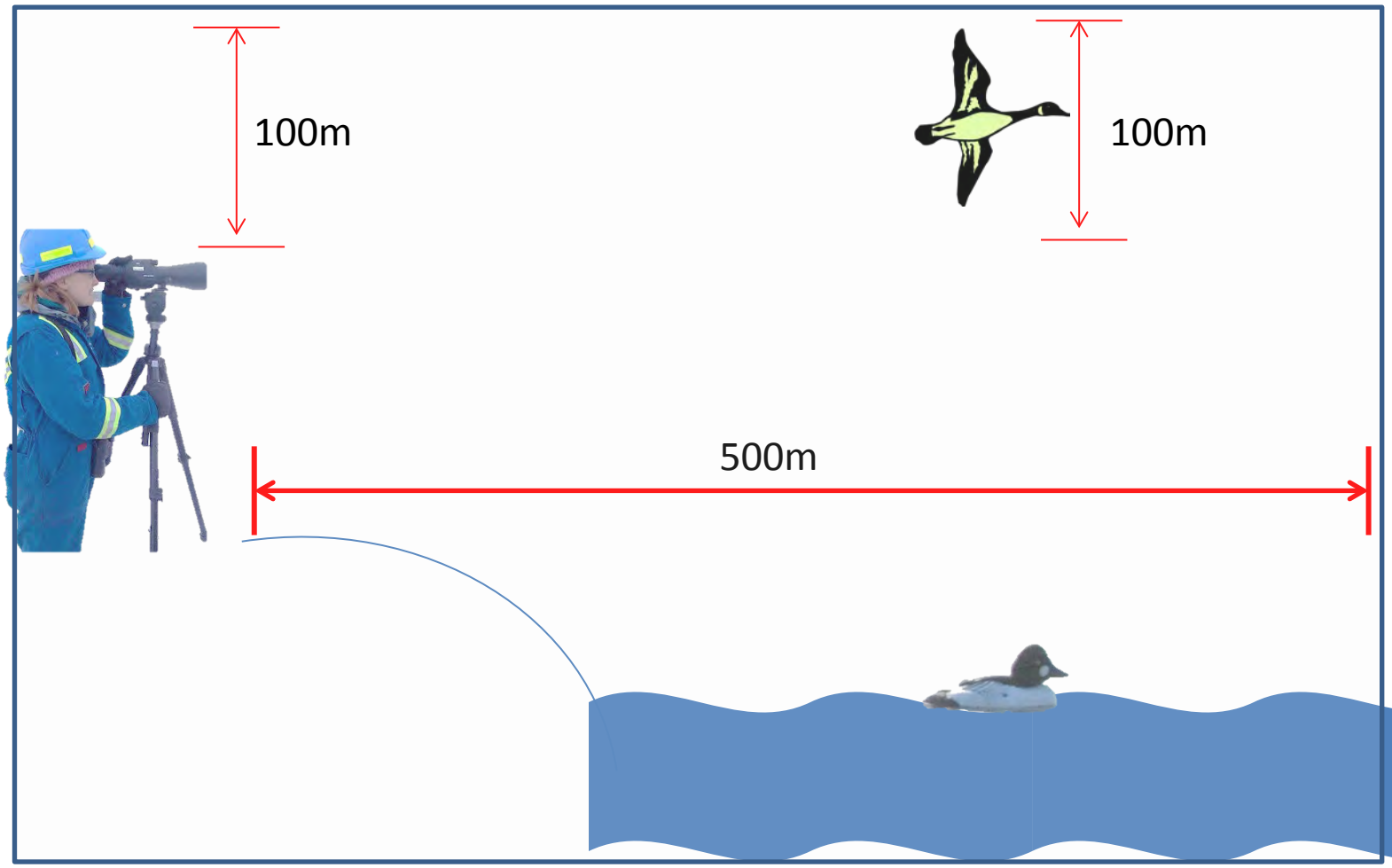
A.3. Protocol. Incidental Birds

Birds are not included in “Bird Survey Form”…

1. further than 500m away
2. flying (and didn’t land) higher than 100m away
3. flushed when you arrive at the station
4. NOT over the pond or on the pond shoreline (shoreline = 200m from the water’s edge)
5. “behind” your observation station
6. Before/after your observation




100m
100m
500m

A.3. Protocol. SAR Form

- To come next week (April 15-19)
- Extra form if you see 1 of 3 species
  - Whooping Crane
  - Trumpeter Swan
  - Peregrine Falcon

A.3. Protocol Quiz

How would you record:

1. Five American Wigeon fly over while you are doing your observation, and only 2 land on the pond.
2. Two Northern Shovelers fly over, loop around, then land.
3. One Mallard female dabbling on the pond with 8 chicks behind her.
4. A Yellow Warbler sitting on a tree branch in the forest behind you.

A.3. Protocol Quiz

5. Why do we get out of our trucks to do an observation?
6. What if you see a bird that is not on the species list?
7. What if you make a mistake on the form and you've already submitted it?
8. When should you "submit" your data?

B. Protocol Practice (Case Studies with tablets)

This section is aimed to introduce you to

- forced/required fields
- selection menus
- species foraging guild lists
- inter-observer variation through review of our collective submissions.

B. Observation #1 (47-50)

- Crane Lake
- No clouds, good visibility, no wind
- 7pm start time
- Scan the barcode…

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Crane Lake - 1

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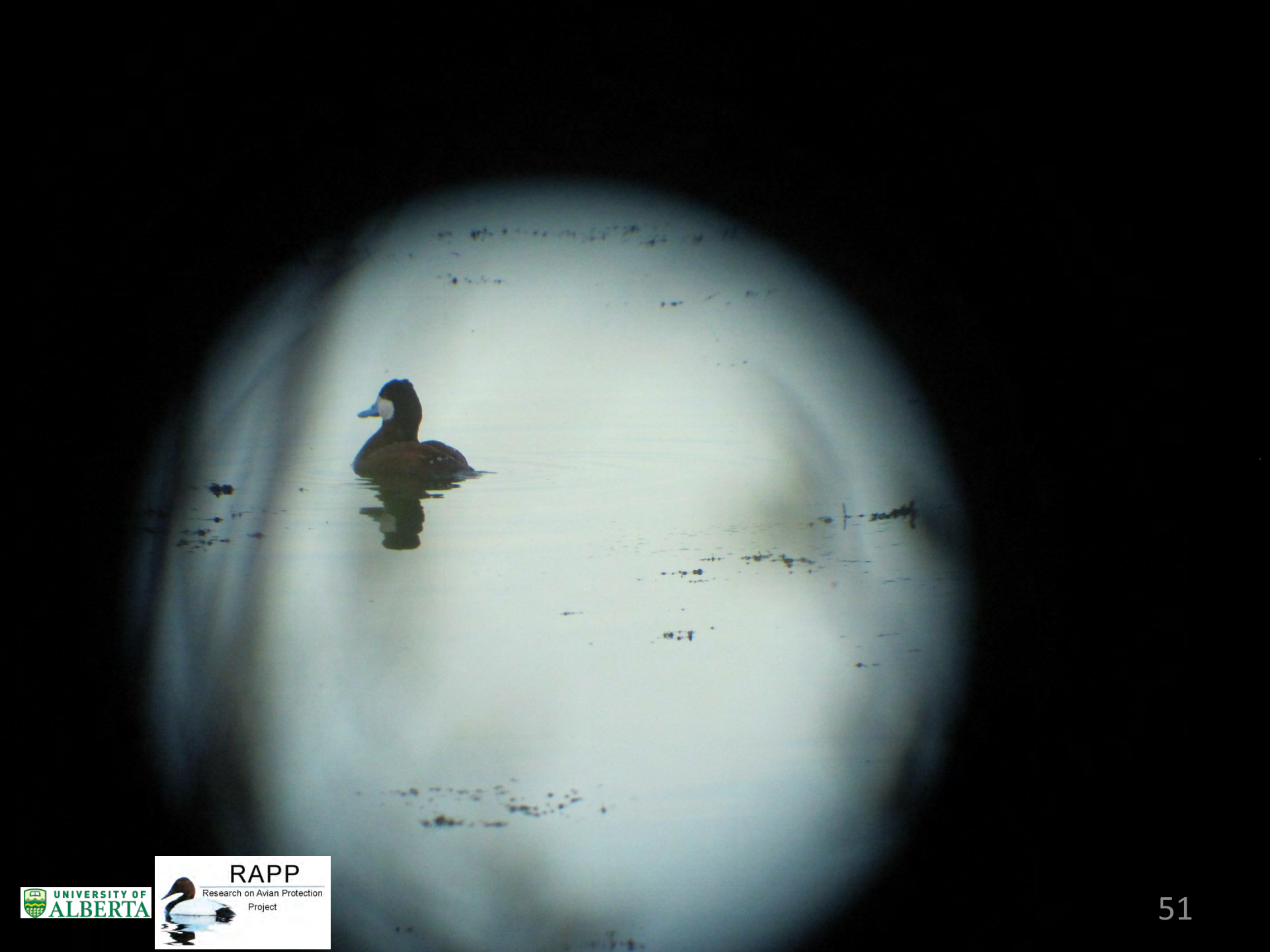

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B. Observation #2: (51-56)

- Shell Jackpine TT Pond
- Extremely cloudy
- foggy conditions
- 8am start time

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Shell_JackpineMine_JP_TT_1

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256m

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B. Observation #3 (57-59)

- Mildred Lake Reservoir
- 1pm start time
- Clear, cloud-less conditions
- You feel the wind on your skin
- Scan the barcode…

Syncrude_MildredLake_MLR

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Syncrude_MildredLake_MLR

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Observation #4 (60-61)

- Kearl Compensation Lake
- Extremely cloudy day
- Wind is moving dust around
- 6am start time
- Scan the barcode…

Imperial_Kearl_Comp_1

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Imperial_Kearl_Comp_1

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Observation #5 (62-65)

- Jackpine MFT Pond
- Clear day
- some wind that moves the leaves on trees
- Scan Barcode…

Shell_JackpineMine_JP_MFT_1

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Shell_JackpineMine_JP_MFT_1

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20m
BUSHNELL
YARDAGE PRO
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Protocol Examples RESULTS

- Take a quick break while we grab the results of the data we've just entered (we will email you)
- We'll look at the results together.

Introduction to Bird Identification

- 3 target foraging guilds and their main players
- Very brief intro to SAR & non-targets
- Bird ID quiz questions interspersed

Q: What is the easiest bird for you to identify & why?

SAR Caveat

- As per the monitoring plan, monitors must know the Species At Risk birds
- We cover the ones that fall in the 3 target foraging modes and the extra “highest risk category” species (in non-target foraging guilds)