

INCIDENTAL SHOREBIRD NEST MONITORING

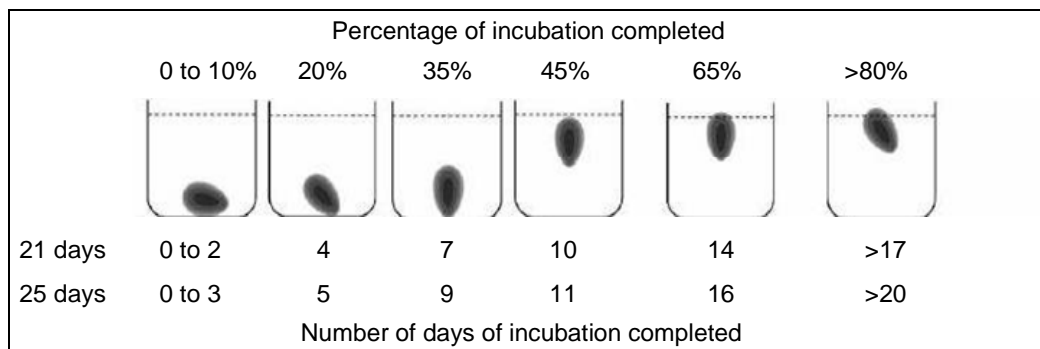
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PURPOSE

This shorebird monitoring ‘cheat sheet’ is provided for teams that do not have the time to conduct comprehensive shorebird monitoring. Nests found incidentally can provide valuable information on **timing of breeding** and **nest success** with very little effort.

PROCEDURE: TIMING OF BREEDING

- Estimate incubation stage using flotation chart
- Place 2 eggs in lukewarm water-filled transparent plastic container (cold water will work)
- Match the positioning of the egg with one of the images on the chart and note the percentage incubation completed (located above the image). Record angle to nearest 5%.
- DO NOT FLOAT eggs with pips or cracks.
- Multiply the percentage of incubation completed with the incubation duration for your species (WOLVES PROTOCOLS ANNEX 1). Use an incubation duration of 21 days for sandpipers and 25 days for plovers in the absence of species specific information.



PROCEDURE: NEST SUCCESS

- Estimate hatch date based on estimate of incubation stage above
- Note GPS coordinates for nest
- Mark nest at 5 and 7 metres (in a straight line) with a popsicle stick or natural marker (rock or feather). A diagram of the nest and area may help with relocation of nest.
- Record the bearing from the marker to the nest (or always keep it the same ie. North)
- Revisit the nest 4 days before the estimated hatch date (and again at hatch if possible)
- Record signs of hatch such as:
 - 1) Chicks in the nest
 - 2) Eggs that are starred (*) and about to hatch
 - 3) The presence of tiny shell fragments (<3mm) in the nest material. These are hard to detect, so nest contents may be stored in a Ziploc and sent to UQAR for analysis.

MATERIAL

- GPS
- stick or natural marker (feather or rocks)
- thermos for lukewarm water
- transparent plastic container to float eggs
- Ziplocs to transport nest contents

REFERENCE: Liebezeit, J.R. et al. 2007. Assessing the development of shorebird eggs using the flotation method: species-specific and generalized regression models. *Condor* 109:32-47.