Birds of the Shorelines of the Manning Estuary

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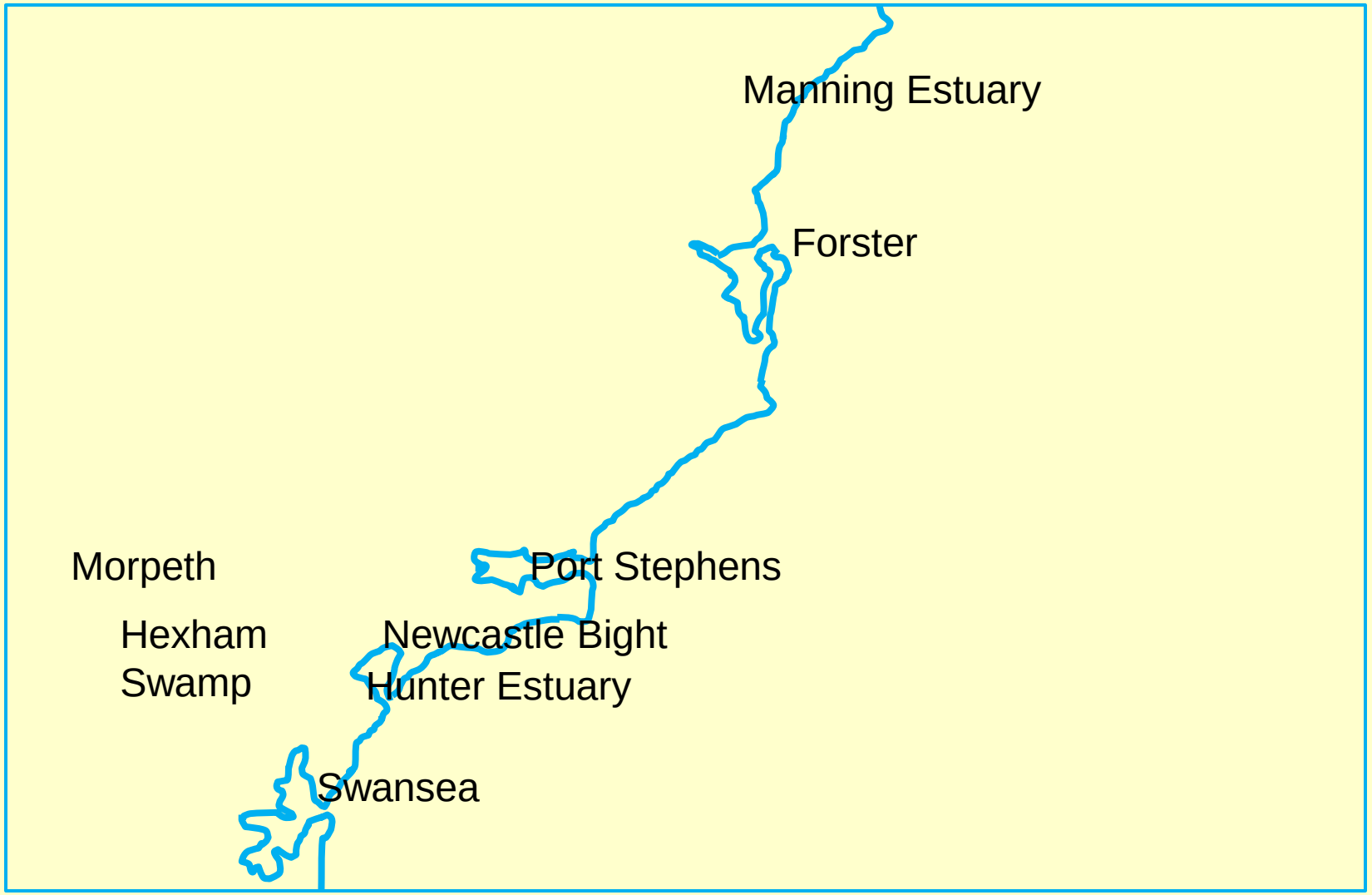
Photos: Jim Smart, Lorna Mee, Alwyn Simple, Jack Adams, Alan Stuart, Allen Friis

Topics for this evening

- The relative importance of the Manning Estuary
- How birds utilise the shorelines
- Migratory birds in the Manning Estuary
- NSW threatened species in the Manning Estuary
- Disturbance
- What you can do

Locations Monitored by HBOC Members



The Relative Importance of the Manning Estuary

- In NSW, the Hunter Estuary is the most significant location for shoreline birds
  - >50 species of migratory and Australian endemic species have been recorded
  - 5000-10000+ birds present in summer
- "Tier 2" sites with 1000-2000+ birds in summer
  - Port Stephens
  - Manning Estuary
  - Clarence Estuary
- For several species, the Manning Estuary is a NSW stronghold
  - e.g. Little Tern, Common Tern, Sanderling, Pacific Golden Plover, Bar-tailed Godwit, Red-necked Stint, Double-banded Plover
- The Manning Estuary is also important for some NSW threatened species
  - e.g. Australian Pied Oystercatcher, Beach Stone-Curlew, Sooty Oystercatcher, Black-necked Stork, others
- Monthly surveys since 2008, many prior *ad hoc* records

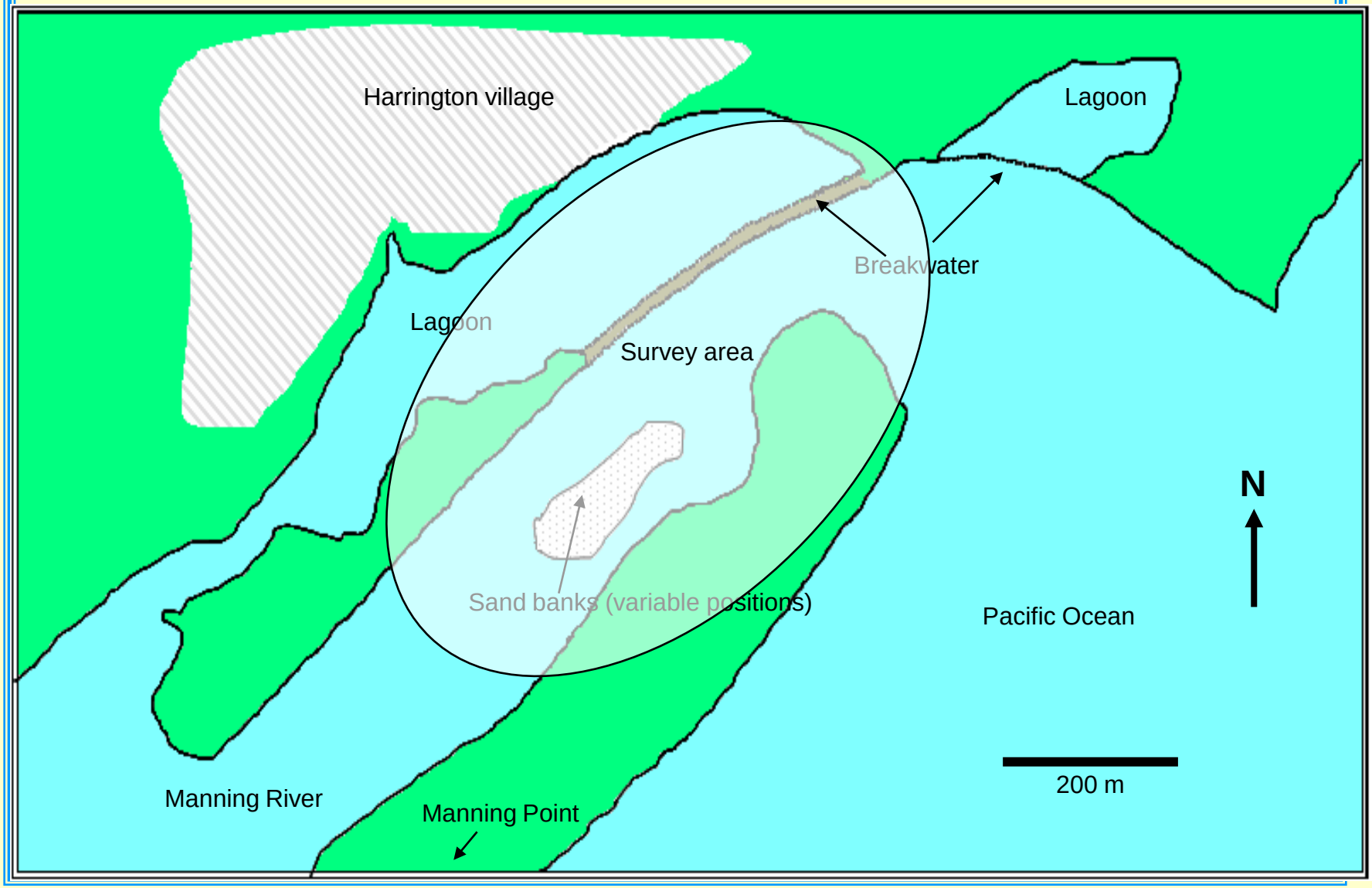
How birds utilise the shorelines

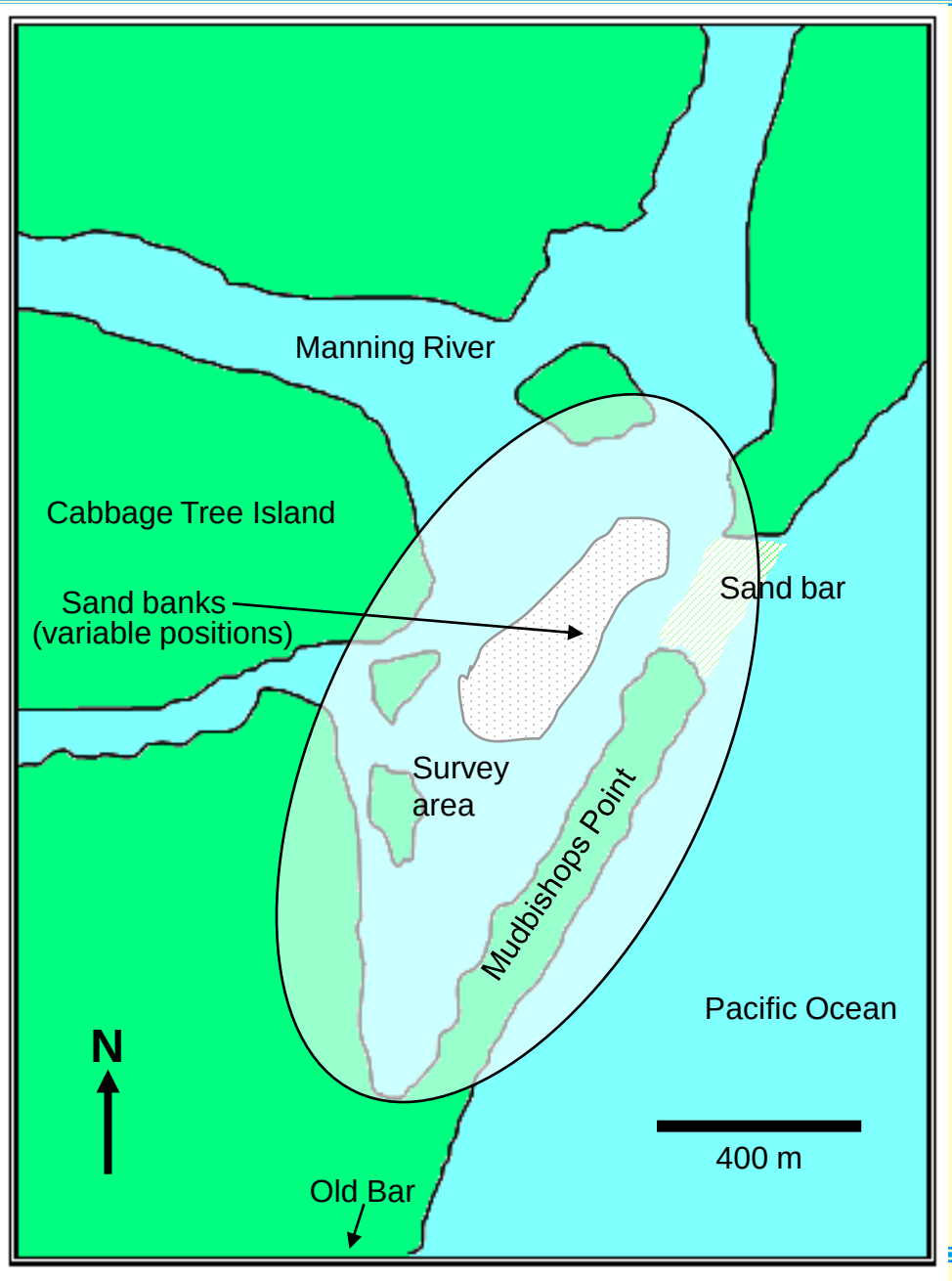
Feeding

- Birds forage individually (but often in loose flocks)
- Terns:
  - Fishing in estuary/lagoon (off-shore sometimes)
- Waders:
  - Collecting bivalves, worms etc in exposed/shallow mudflats and sand bars
  - Some species specialise in foraging at the coastal shoreline

Roosting

- Birds prefer to roost communally (safety in numbers)
  - At high tide (foraging areas under water) or when not hungry
- Roost site requirements:
  - Good views (to see predators)
  - Close to water
  - Close to foraging grounds
  - Minimal disturbance


Harrington village
Lagoon
Breakwater
Lagoon
Survey area
Sand banks (variable positions)
N
Pacific Ocean
200 m
Manning River
Manning Point


Manning River
Cabbage Tree Island
Sand banks
(variable positions)
Sand bar
Survey
area
Mudbishops Point
Pacific Ocean
N
400 m
Old Bar

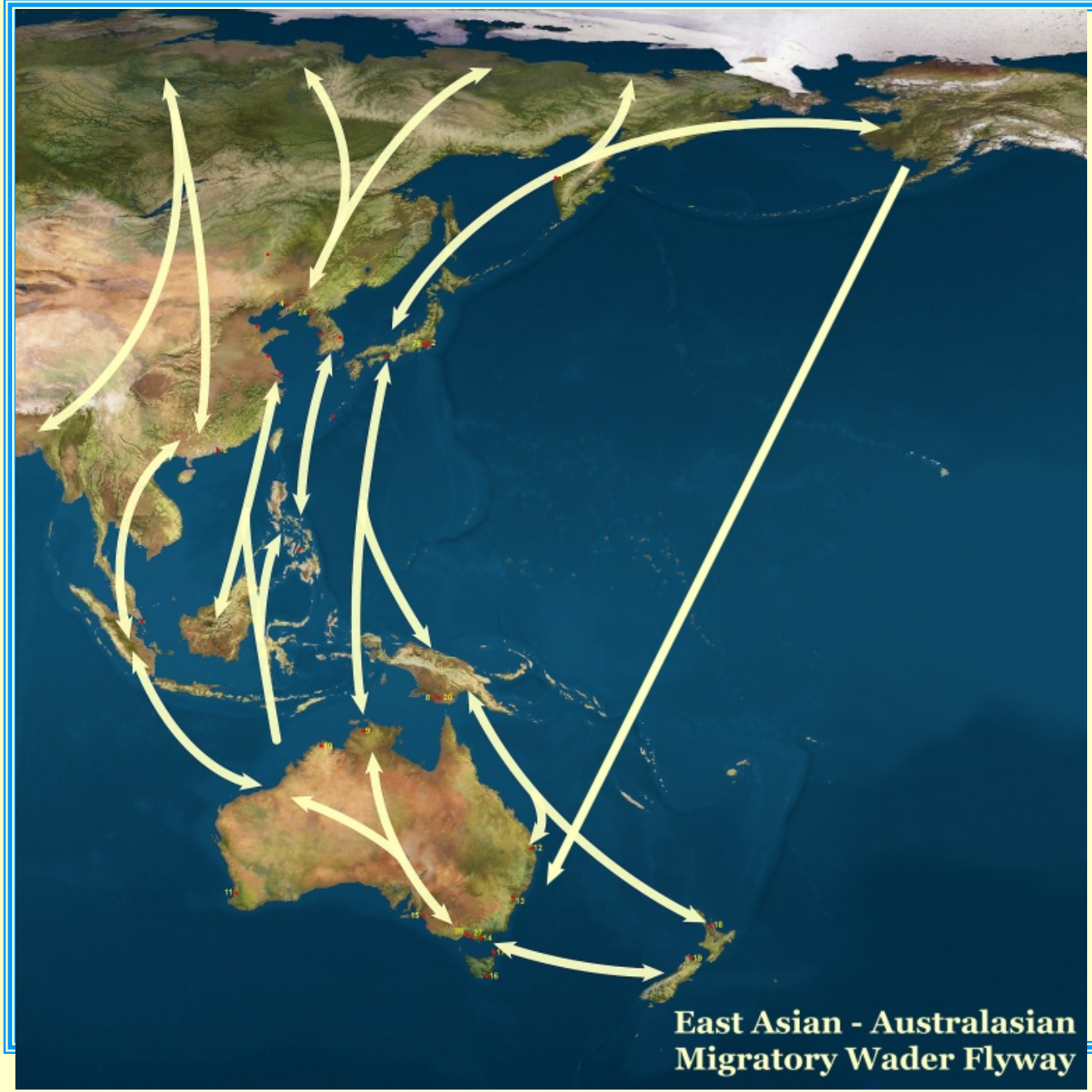
Tourists and Locals

Migratory Birds

- Generally they are site-faithful
- Arrival Sep-Oct (lots of surge over Aug-Nov)
- Departure Feb-April (increase body weight by ~50%)
- Young (pre-breeding) birds stay on (some do a partial migration)
- Long distance super heroes!
  - Some travel 1000's of km non stop
  - Red-necked Stint: 26-27g / 30,000km yearly migration

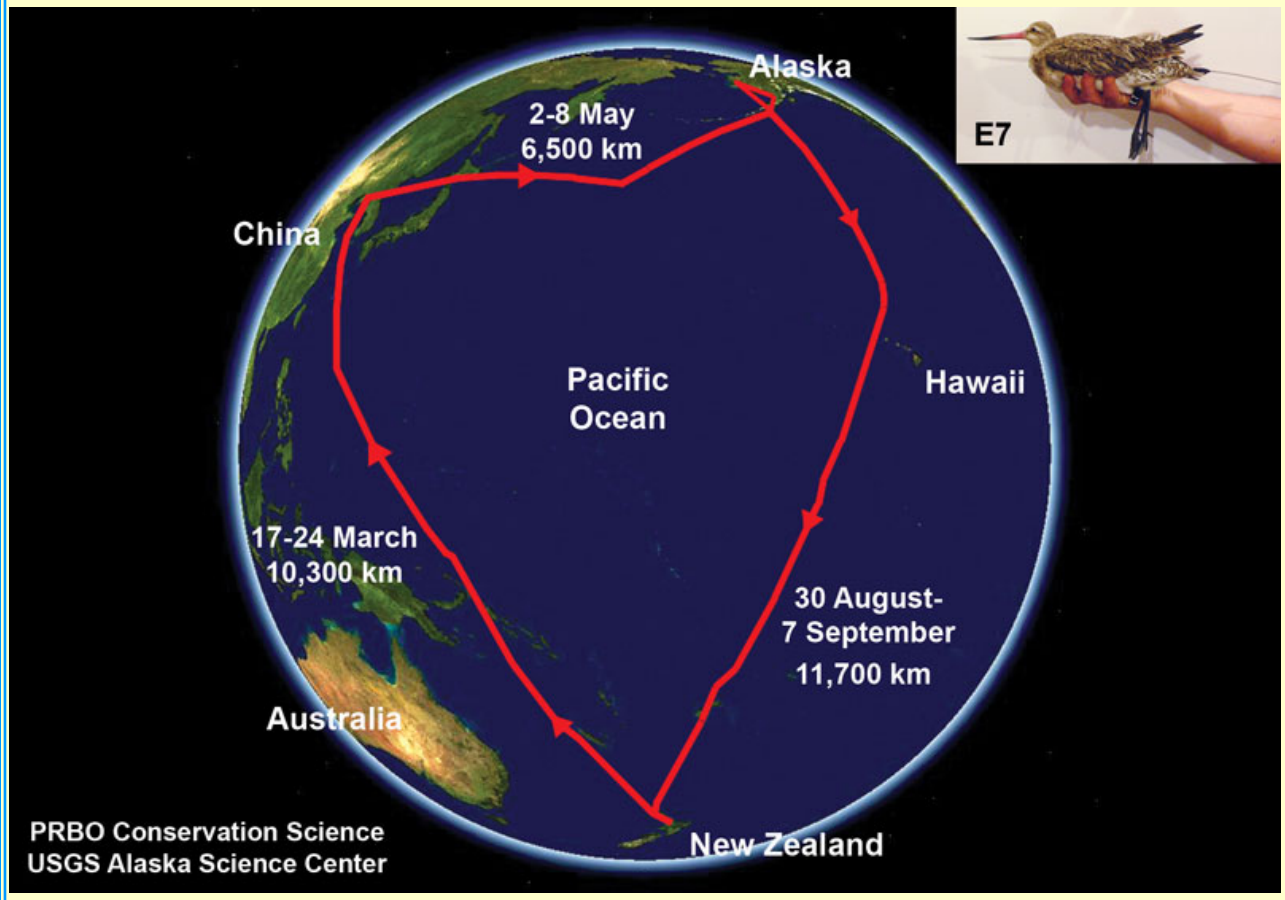
Australian Endemics

  - Some are highly nomadic and some are locally "resident"



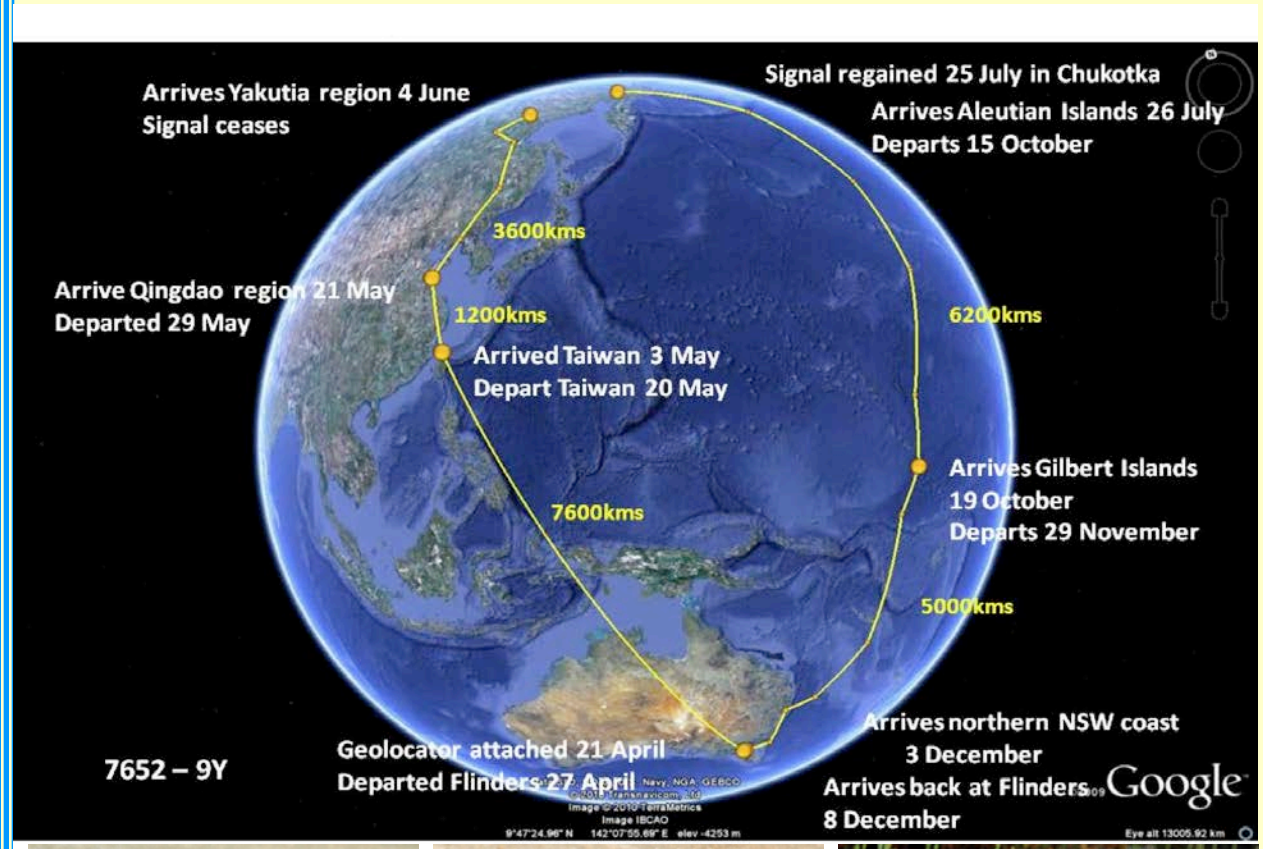
All except one species of Aust. migratory shore-bird breed in the high Arctic region of Siberia or Alaska, 12,000 – 15,000 km away

Bar-tailed Godwit satellite tracking



- In 2007 NZ scientists fitted 16 Bar-tailed Godwits with satellite transmitters
- Birds flew non-stop to Yellow Sea, then non-stop to Alaska
- One godwit E7 flew non-stop 11,600 km from Alaska to NZ in 9 days
- Total round-trip ~30,000km!

Ruddy Turnstone satellite tracking



- In 2009, satellite transmitters were fitted to some Ruddy Turnstones in southern Australia
- Birds flew non-stop to Taiwan, then on to their breeding grounds in 2 further stages
- Return via Gilbert Islands
- This bird weighs just 100-130g!

Manning Estuary: Stronghold Species

Little Tern

- Present ~Aug-May (Oct-Mar peak)
  - Migrates to northern Australia and PNG/SE Asia
- Peak counts of 400+ birds
- Two large breeding colonies in Manning Estuary
  - Supply 40-50% of new NSW fledged birds

Crested Terns & Little Terns

Common Tern

- Present Oct-May (Nov-Mar peak)
- Migrates to northern breeding grounds
- Peak counts of 400+ birds
- In winter, replaced by 20-30 White-fronted Terns (NZ migrant species)

Pacific Golden Plover

- Manning Estuary is now know to be an important site
  - Numbers sometimes higher than Hunter Estuary
  - But more variable (this might mean we don't yet know all the places to look for them)
- 250-350 birds present over Sept-April
  - 150-200 in Hunter Estuary
    - Recent peak count: 304 birds
  - 80-100 in Manning Estuary
    - Recent peak count: 181 birds
- Small numbers over-winter
  - Up to 5 birds in Port Stephens
  - 3-4 birds in Manning Estuary
  - No Hunter Estuary winter records in >30 years

Bar-tailed Godwit

- 2,000-2,500 birds regularly visit in summer:
  - 1,000-1,500 in Hunter Estuary
  - 600-800 in Port Stephens
  - 150-275 in Manning Estuary
- 500-700 birds regularly over-winter:
  - 200-300 in Hunter Estuary
  - 300-350 in Port Stephens
  - 30-90 in Manning Estuary

Sanderling

- 30-40 birds regularly in the Manning Estuary in summer
  - Some recent MVBW counts of 100+ birds
- Not recorded in Port Stephens or Hunter Estuary
  - Habitat not right ... this is a “surf” bird
- Only two records of single birds along Stockton Bight
  - Heavy 4WD beach
  - But, not regularly surveyed until recently
- Regular in southern and northern Australia but far less common in NSW
- Not recorded by McGill at Harrington in 1950’s

Red-necked Stint

- The 26g super-hero
- Records of 300+ birds in summer
- 50-100 birds now more typical
  - Siltation in Manning Entrance SP appeared to favour this species

Double-banded Plover

- Present Feb-Oct (Apr-Sep peak)
- Most birds migrate to Tasmania/southern Australia
- Records of 50-100+ birds in Manning Estuary
  - Peak: 121 birds – significant in regional context
  - Only a handful of records of 50+ birds from elsewhere

NSW Threatened Species in the Manning Estuary

Beach Stone-Curlew

- NSW *Critically Endangered* species
- Manning Estuary has the southernmost breeding pair in Australia. Arrived ~10 years ago.
- Breeds on Charlies Island. Poor breeding success until past 2 seasons
- Often roosting within the Little Tern colony at Old Bar
- Sometimes foraging around Harrington/Manning Point
- Two birds *(a pair?)* seen at Port Stephens several times recently

Australian Pied Oystercatcher

- NSW *Endangered* species
- Hunter Region has emerged as the NSW stronghold
- ~300 birds now present (NSW population 500 birds?)
- ~50% are in Port Stephens
- Frequent records of 15-25 birds in the Manning Estuary

- Up to 8 breeding pairs in the Manning Estuary with relatively good success rates
- Poor breeding success elsewhere within the Hunter Region
- Some evidence that young birds move into the Hunter Region from outside it

Sooty Oystercatcher

- NSW *Vulnerable* species
- 60+ birds in the overall Hunter Region
- 2-8 birds are frequently roosting at the Harrington sandbars
  - Occasional reports of greater numbers being present

- Not at all clear where these Manning Estuary birds come from, nor where they breed
  - Main foraging habitat for the species is rock platforms
  - Typical breeding habitat = off-shore islands

Black-necked Stork

- NSW *Endangered* species
- Not a shorebird:
  - Its preferred habitat is swamps, creeks, paddocks (freshwater habitats)
- A pair is resident at Harrington/Coopernook and enjoying breeding success
  - Only 2-3 pairs are known to occur further south

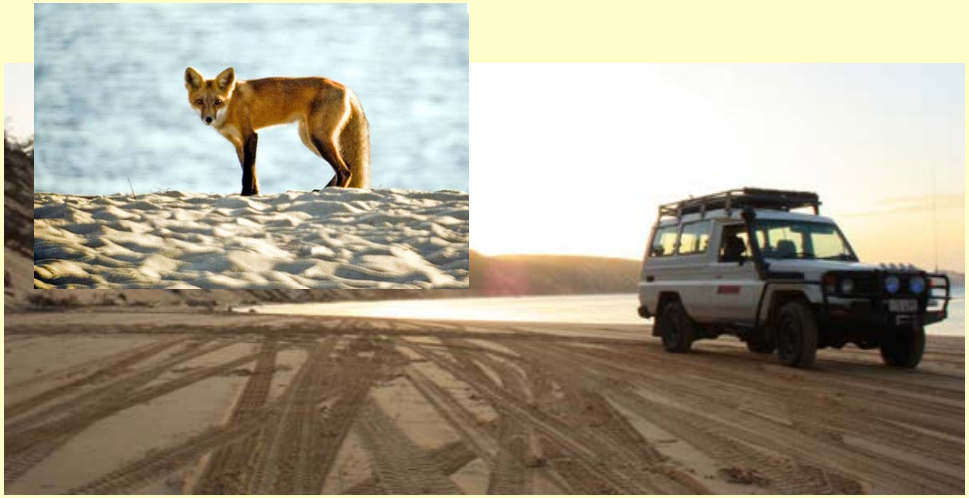
Bush Stone-Curlew

- NSW *Endangered* species
- Preferred habitat is woodlands, paddocks, ovals .....
- No records from Manning Valley for decades ....
- Except .... one bird was at Harrington (sports oval) for 2-3 weeks in March
- Are there more birds around??

Disturbance

Agents

- Human: people, 4WD's, boats, dogs, kiteboards
- Predators: cats, foxes, gulls & terns, ravens/crows
- Natural: storms, tide surges
- Climate change: new tidal prisms, mangrove incursions, losses of saltmarsh



Disturbance

Consequences

- Birds can’t breed successfully (eggs/chicks destroyed or abandoned)
- Birds can’t lead chicks to foraging areas at the shoreline
- Birds can’t access foraging areas (a problem particularly at arrival)
- Migratory birds burn energy which they needed for their long journeys

What you can do to help

- Learn where birds prefer to be and help protect those areas from disturbance
- Keep records, count numbers present, monitor the trends
- Join a local bird club
  - Manning Valley Bird Watchers
  - Hunter Bird Observers Club
- Join Birdlife Australia (newly merged national body: knowledge and advocacy)
- Submit data to BA/HBOC

Hunter Bird Observers Club

Manning Valley Birdwatchers