

## **The AWSG Satellite Tracking Projects**

### **Background**

The Australasian Wader Studies Group (AWSG) has been using satellite transmitters for tracking the migration of shorebirds visiting North West Australia since November 2013 when five 5g satellite transmitters were deployed on Little Curlew in Roebuck Bay, Broome. In February 2017 satellite trackers were placed on Whimbrel and in February 2019 on Oriental Plover.

**The PTT were programmed to send signals for 10 hours then to be silent for the next 48 hours.**

**Whimbrel:** It was decided to extend the satellite transmitter program to Whimbrel in 2017, with five 5g units being deployed at both 80 Mile Beach (one bird) and at Broome (four birds). This was carried out during the NWA 2017 Expedition, in February 2017. One of these transmitters on the bird from 80 Mile Beach is still functioning.

### **Oriental Plover:**

The AWSG deployed, 5 satellite transmitters on Oriental Pratincoles (2g PTT units) in February 2019.

It is exciting to track birds with satellite transmitters because up-to-date location data is received as the bird flies or rests after migration. This occurs either in real time or at a maximum of two days behind the recorded event.

### **Acknowledgements**

The generous donation by Dr Doris Graham is acknowledged which allowed the purchase of the satellite transmitters for Whimbrel.

The role of Dr Clive Minton in obtaining funding and driving the satellite tracking project over many years is also acknowledged.

AWSG acknowledges the Yawuru People via the offices of Nyamba Buru Yawuru Limited for permission to catch birds on the shores of Roebuck Bay, traditional lands of the Yawuru people. AWSG acknowledges the Karajarri and Nyangumarta people for permission to catch birds to be marked for this project on the shores of 80 Mile Beach, traditional lands of the Karajarri and Nyangumarta people.

**“AWSG Satellite Tracking Project Updates 2020”** cover movements of the following shorebirds:

- Three Oriental Pratincoles (SHE, SEC and SEP) tracked from Eighty Mile Beach since February 2019; and
- one Whimbrel (LA) tracked from Eighty Mile Beach since February 2017.

No new satellite transmitter was deployed by AWSG at North-west Australia in 2020.

Photo 1: Five Oriental Pratincoles were tracked with 2g transmitters in February 2019, three are still transmitting to date. (Photo credit: Tom Clarke)

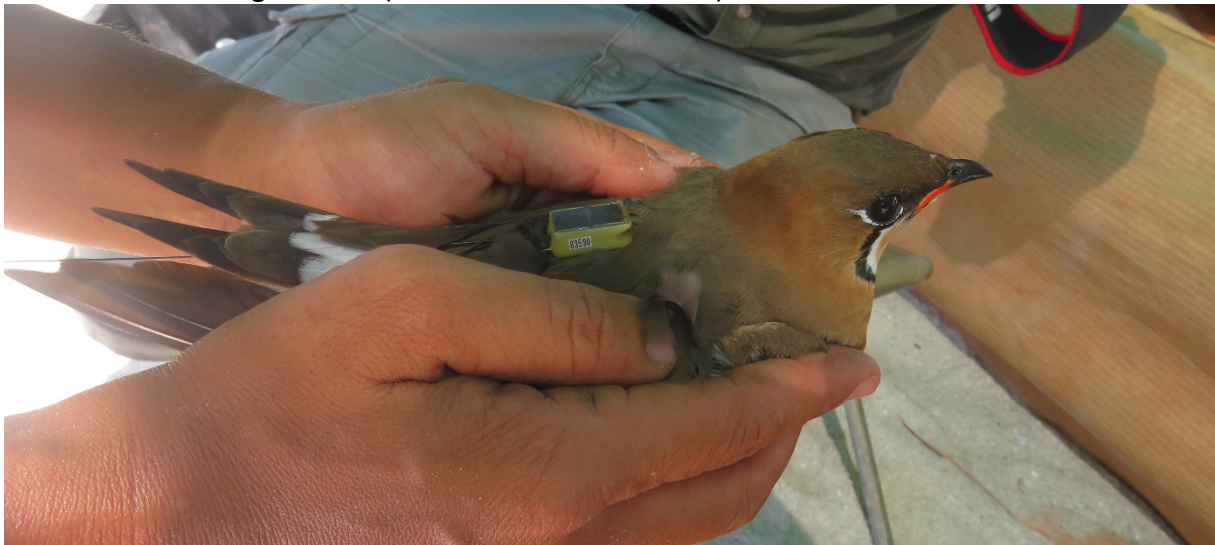


Photo 2: Whimbrel LA, now in its 5th-year of life, is getting ready for its 3rd northward migration in April (Photo credit: Prue Wright)



***Oriental Pratincole 2019 - And they're off.... AGAIN (by Grace Maglio)***

I start this report with an apology to all who have been following this amazing project; it has been too long between reports. I am fully responsible for the delay and I will ensure updates are issued fortnightly once again.

This project continues to produce fantastic results. We still have three birds with functioning Platform Transmitter Terminals (PTTs), SHE and SEC are currently on location on their 2019 breeding sites, and from the data it seems they have returned to the exact location. Despite continued infrequent transmissions, we have enough information to confidently locate SEP in Sumatra at the time of this report.

Also, when looking at Australian movements since the commencement of this project, the birds seem to use very similar areas for both years only expanding around 200 km either side of their 2019 range (Figure 2).

Fig 1: Tracks of Oriental Pratincoles SHE, SEC and SEP February 2019 to March 2020

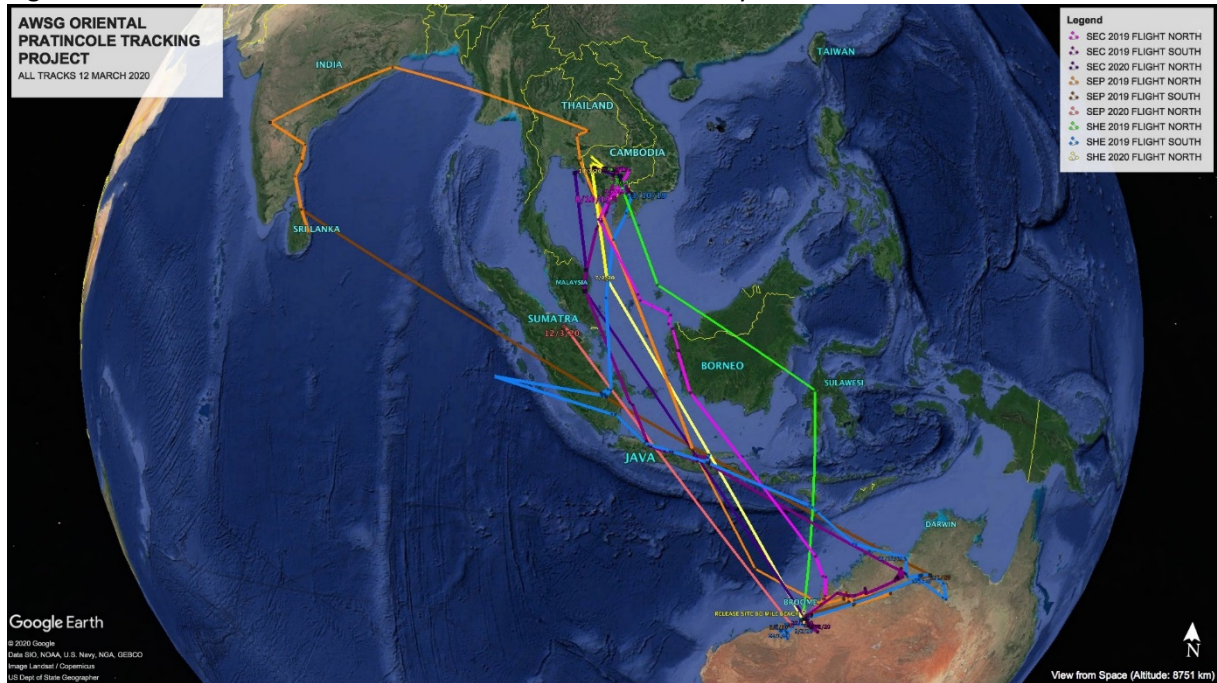
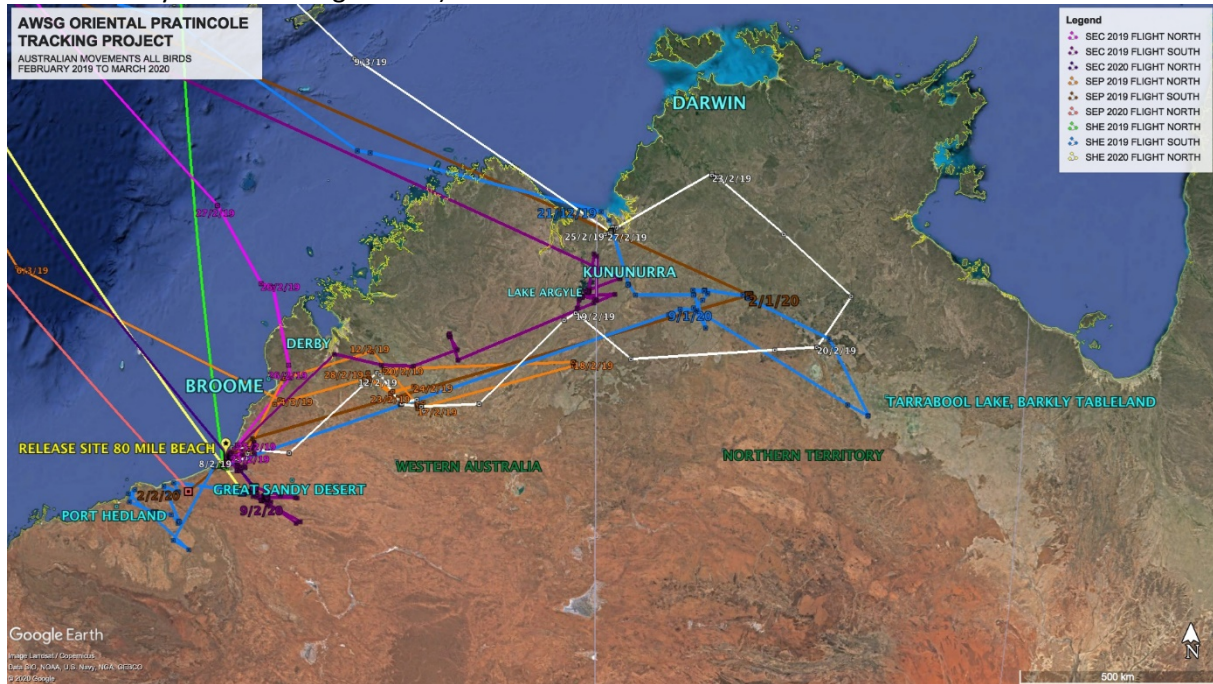




Fig 2: Australian tracks of all Oriental Pratincoles February 2019 to March 2020.

\*\*Note white tracks recording SUN's movements in February 2019 not listed on the legend, (PTT failure shortly after reaching Taiwan).



### SHE (PTT 83595) – The first to leave the Australian shore once again!

In February 2019 SHE left Australia around the 16th February, 8 days after being fitted with a PTT, ten days before any of the other birds in this project. This year SHE took flight over Eighty Mile Beach, 15 km south of the initial release site, towards Java around the 4th February.

The tracks leading to this year's northward flight are as follows –

Return to Australia on the 21st December 2019 via the Legune Coastal Floodplain, 103km north of Kununurra. From around the 23rd of December to the 9th January 2020, SHE remained in the Northern Territory, reaching as far as the northern fringes of the Barkly Tableland. SHE then headed southwest toward Eighty Mile Beach and from the 16th to the 31st January was located approximately 1600 km further south around the area near Marble Bar and Port Hedland before heading back towards Anna Plains station and leaving Australia around the 4th February.

The next accurate location data on the 7th February positioned SHE over the South China Sea 130 km east of the Malaysian coast, by the 13th February SHE was once again in Cambodia 130 km west of the 2019 Tonle Sap Lake breeding site. On the 15th February data showed SHE at the actual 2019 breeding site until around the 23rd February with a short flight 160km north west to the nearby province of Banteay Meanchey returning to its Tonle Sap breeding site on the 26th February. SHE remains at this site at the time of this report and is currently 4000 km from the 2019 release site.

Fig 3: SHE - all tracks since being fitted with a PTT, February 2019. One complete migration and northward flight for 2020 depicted by the yellow line.

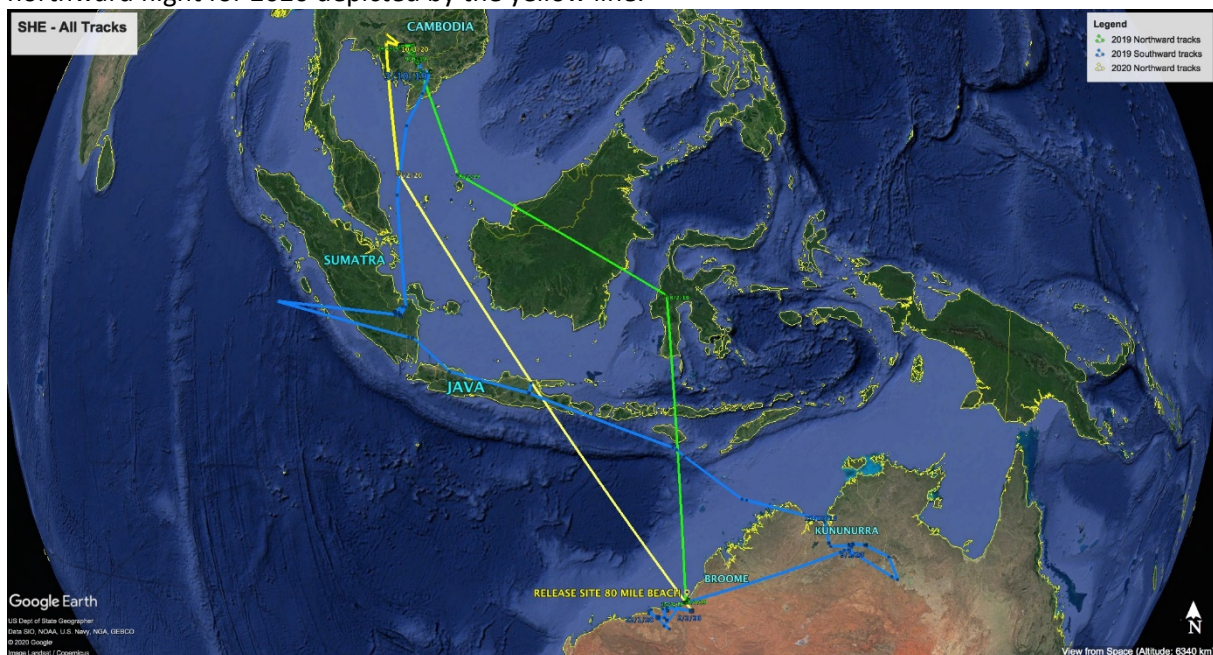




Fig 4: SHE 21/12/19 – Australian movements, leaving for the 2020 northern flight from (almost) the same location (yellow track).

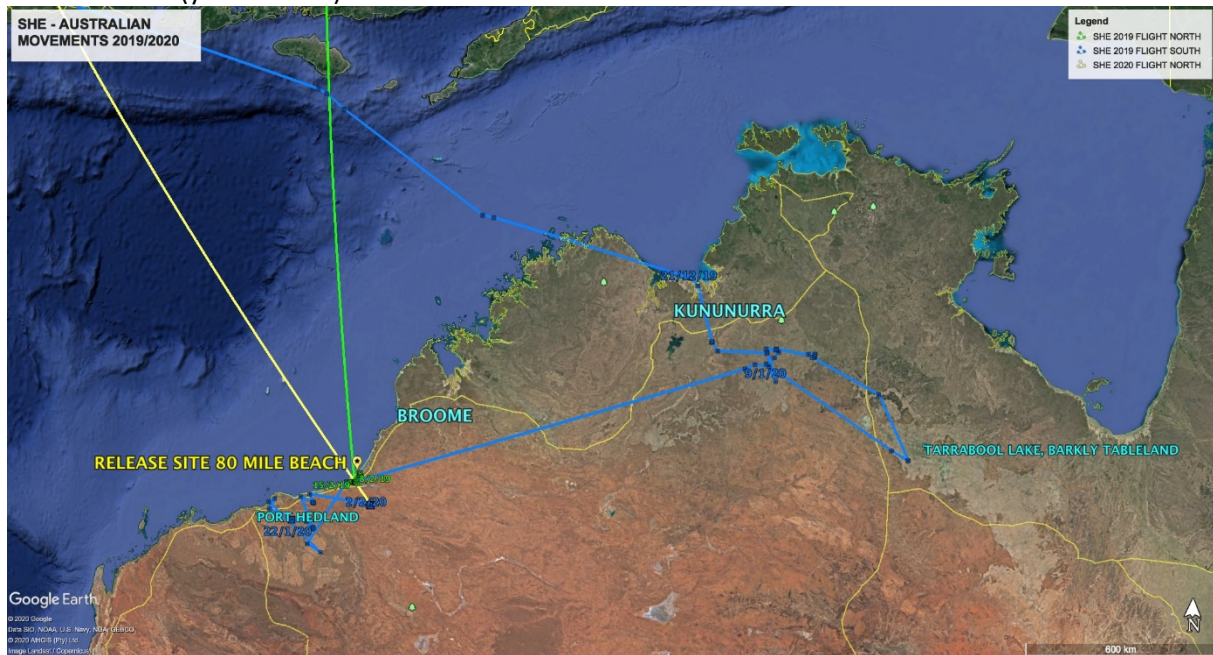
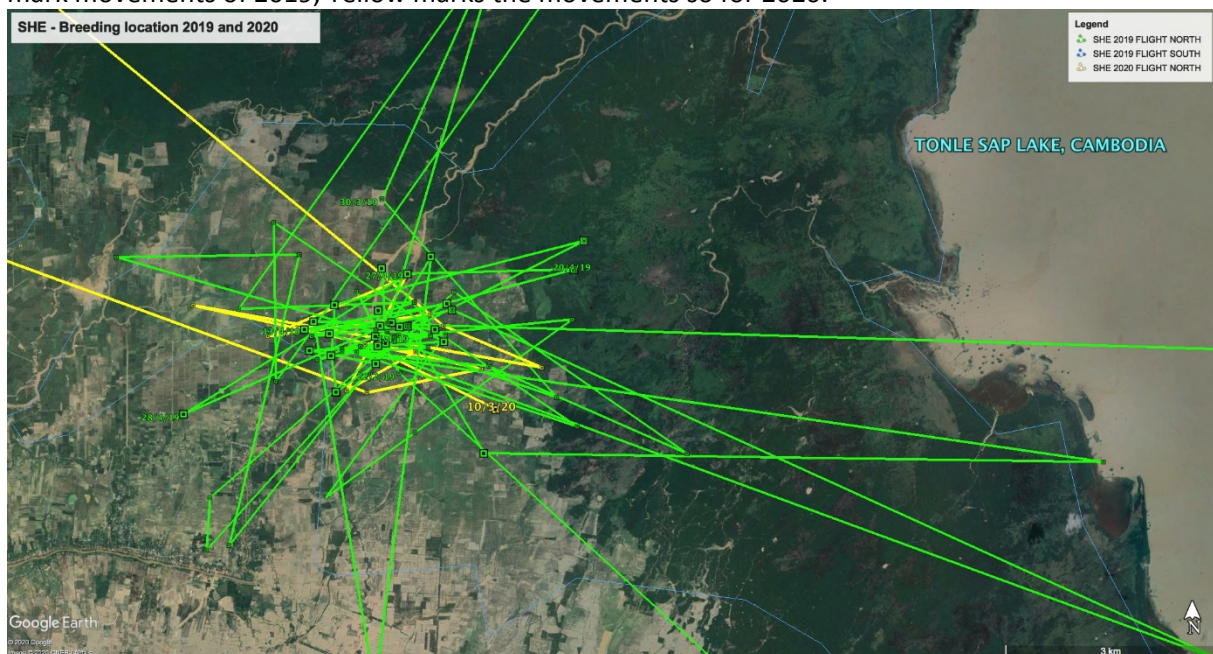


Fig 5: SHE – Creature of habit?? Likely to attempt breeding in the same location as 2019. Green tracks mark movements of 2019, Yellow marks the movements so far for 2020.



### SEC (PTT 83596) – Back in the Prey Veng Province

After arriving back in Australia on the 9th December, SEC remained mainly around the banks of Lake Argyle approximately 80 km south of Kununurra until the 7th January. The next five days or so was spent in the region between Mt House and Mornington Stations, situated between Lake Argyle and Derby before heading south with data positioning SEC on Anna Plains Station from around the 14th January, around 15 km from the 2019 release site. SEC remained within the Anna Plains and Mandora Marsh and then further south towards the Great Sandy Desert before embarking on its next flight north around the 18th February, flying almost directly over the release site and towards Java.

The next accurate reading on the 27th February finds SEC 7 km east of the tin mining town of Sungai Lembing in the Kuantan District in Malaysia. Further flights north and SEC reaches its 2019 breeding site in the Prey Veng Province, Cambodia 35 km east of Phnom Penh, around the 8th March remaining in this area at the time of this report and is 3870 km from the 2019 release site.

Fig 6: SEC - all tracks since being fitted with a PTT, February 2019. One complete migration and northward flight for 2020 represented by the dark purple line.

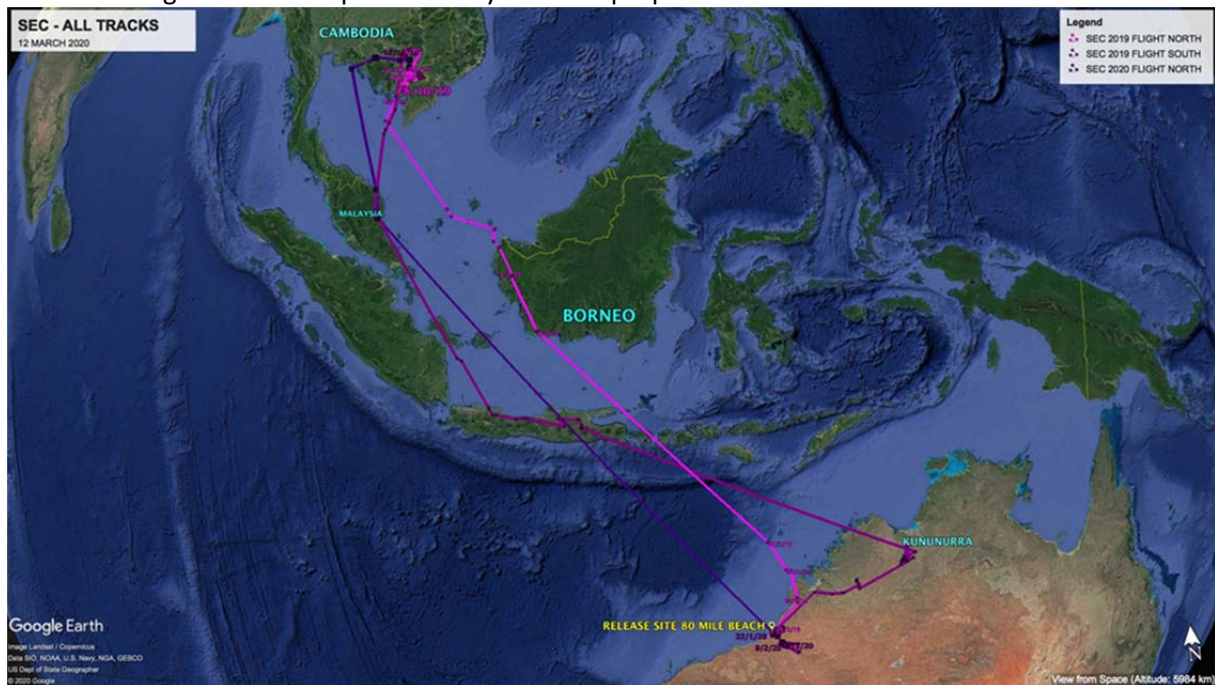
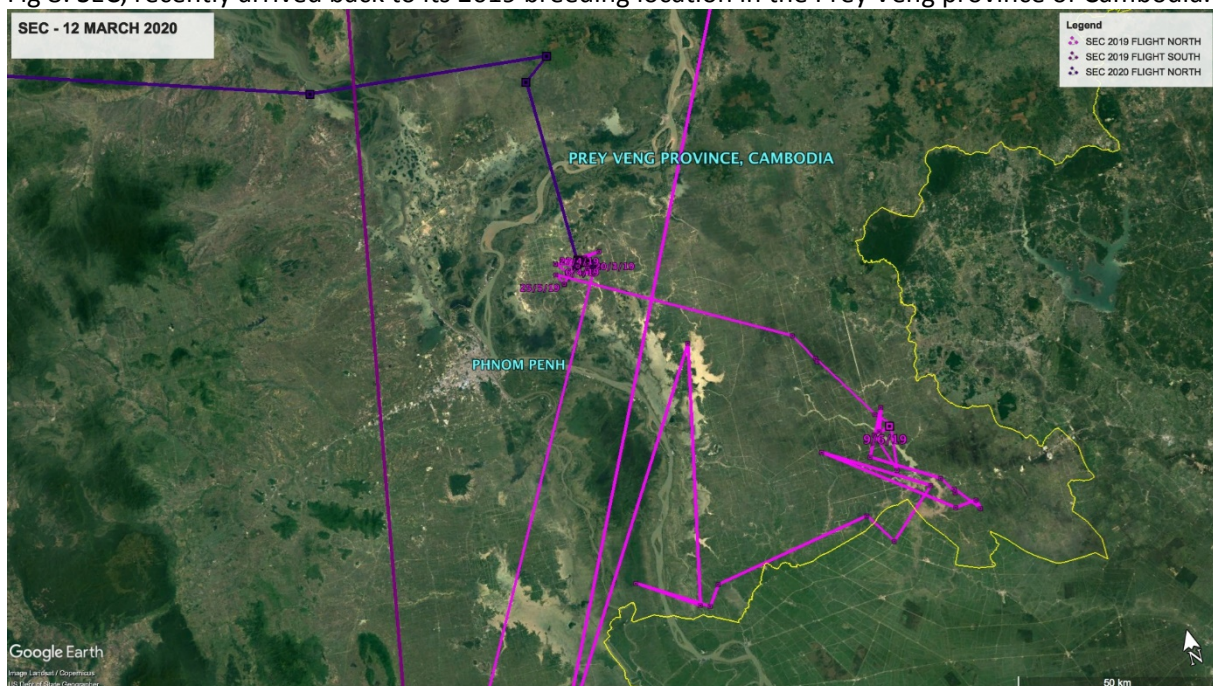




Fig 7: SEC, Australian movements... recovering from its long flight on the banks of Lake Argyle and then south towards Anna Plains Station.



Fig 8: SEC, recently arrived back to its 2019 breeding location in the Prey Veng province of Cambodia.





### SEP (PTT 83593) – Never Say Die - AGAIN

With hopes of a return to India, limited data continues to taunt the team and have us wondering how much longer before the PTT stops transmitting signals altogether. The first accurate reading received in Australia after the 2019 breeding season was received on the 2<sup>nd</sup> January 2020. On the 24<sup>th</sup> January SEP was situated 75 km north east of the Eighty Mile Beach release site then 121 km south west of this on the 2<sup>nd</sup> February. Inaccurate readings suggest that SEP may have ventured as far south as Warroora Station 15 km southwest of Coral Bay in Western Australia around the 9<sup>th</sup> February, further analysis is needed to determine how accurate these signals were. However what can be confirmed is that on the 12<sup>th</sup> March SEP was located 3130 km from the Eighty Mile Beach release site in Sumatra, 33 km west of Bengkalis in the Bengkalis Regency.

Fig. 9: SEP - all tracks since being fitted with a PTT, February 2019. Limited data overall but one complete migration and northward flight for 2020 represented by the salmon coloured line. Last known location, Sumatra.

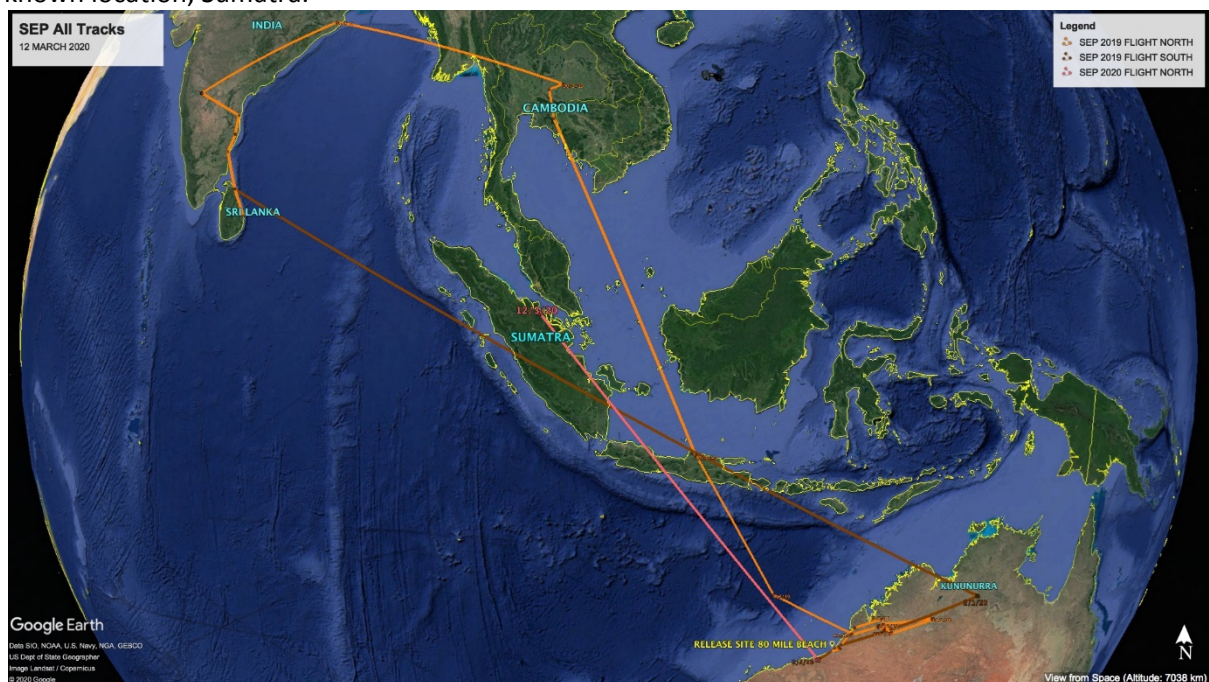


Fig. 10: SEP – Australian movements for 2019 and 2020 tracks derived from accurate readings.

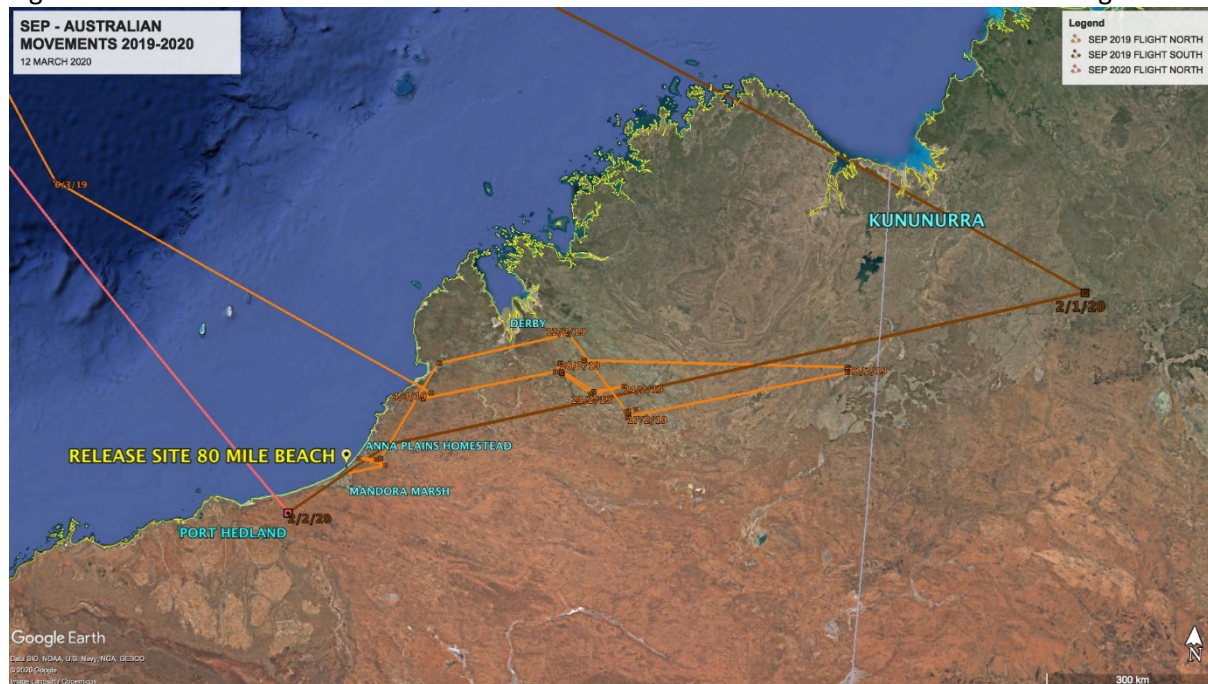


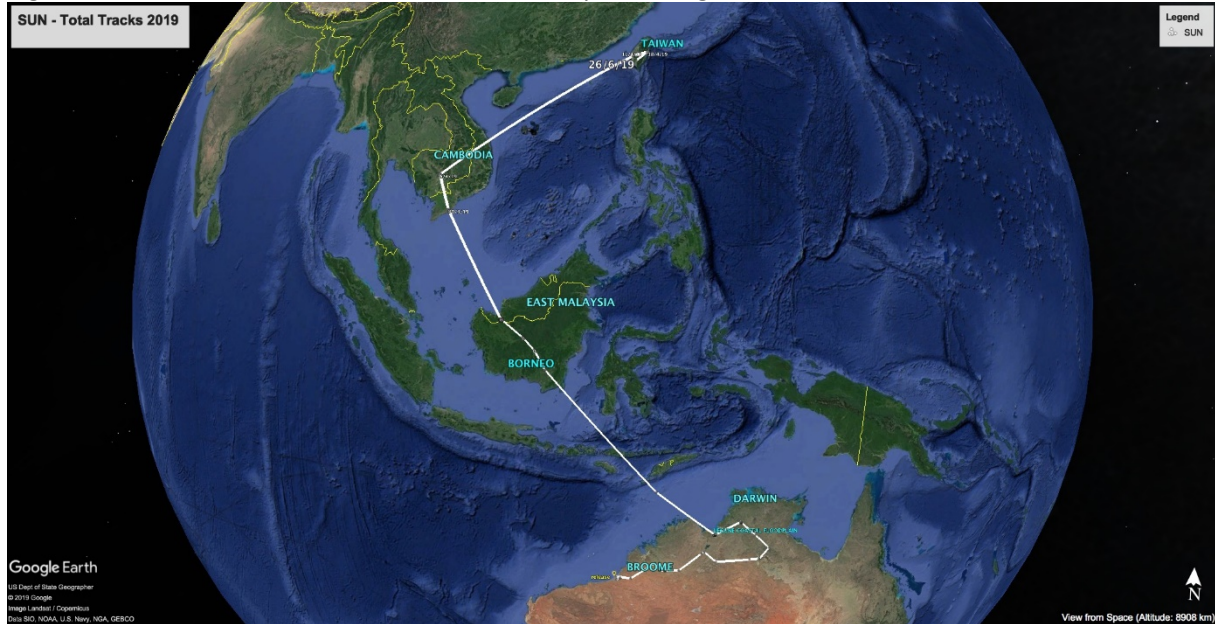
Fig 11: SEP – Located in Sumatra on the 12<sup>th</sup> March 2020.





**SUN (PTT 83591) – The Journey ended in Taiwan.**

Fig 12: SUN – 2019 tracks to Taiwan before unexplained signal failures.



***Whimbrel 2017 – Stand-by for action (by Katherine Leung)***

Whimbrel LA, now in its fifth year of life, has been very loyal to its territory between 40-50km south of Anna Plains Station entrance at Eighty Mile Beach since it was back to North-west Australia in October 2019. It is expected to start its third northward journey in late April.

Migration summary of Whimbrel LA (as of 15 Mar 2020):

No. of days since transmitter deployment	No. of days since arrive back in Australia (2019)	Count-down to migration (estimated)
1,127 days	156 days	41 days