

# Results of the Westland petrel satellite tracking programme 1995 season

Amanda Freeman and Kerry-Jayne Wilson  
Department of Entomology & Animal Ecology  
PO Box 84  
Lincoln University  
Canterbury

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Three male Westland petrels, *Procellaria westlandica*, with chicks were tracked by satellite between 11 August and 19 September 1995. The flights are illustrated in the accompanying maps (Figs 1-3).

Paul (Band No L13807) left the colony on his first tracked foraging trip before dawn on 12 August 1995 and returned to the colony on the evening of 16 August 1995. During that time, Paul's locations were concentrated in two areas 90km north-west and 80km west of the colony;  $41^{\circ}30'S, 170^{\circ}40'E$  and  $42^{\circ}10'S, 170^{\circ}20'E$  on the continental slope. Paul was tracked for a second flight on which he departed before dawn on 17 August 1995 and returned on the evening of 24 August 1995. On Paul's second trip, he travelled south-west and locations were concentrated 150km south-west of the colony at  $42^{\circ}30'S, 170^{\circ}10'E$  and as far as 300km south-west at  $43^{\circ}40'S, 169^{\circ}10'E$  also on the continental slope (Fig 1).

Sandy (Band No L 18650) left the colony before dawn on 12 August 1995 and returned at 3 am on 16 August. During his foraging trip, locations were concentrated at  $42^{\circ}20'S, 170^{\circ}20'E$  but also covered areas south west and west of the colony between approximately  $41^{\circ}40'S$  and  $43^{\circ}S$  and  $169^{\circ}20'E$  and  $171^{\circ}E$ . Most positions were on the continental slope (Fig 2).

Spot (Band No L 22370) left the colony before dawn on 18 August 1995 and was not recaptured until 19 September 1995. However, because his burrow was not monitored constantly over that period, there are two occasions when the satellite data suggests he returned to his burrow: 31 August 1995 and 13-15 September 1995. The period 18 August - 19 September is therefore assumed to cover three foraging trips: 18-31 August, 1-13 September and 15-19 September (Fig 3).

Spot spent the first two days of his first foraging trip north-west of the colony. Locations received were concentrated in the area  $41^{\circ}30'S, 170^{\circ}30'E$ . Spot then flew rapidly through Cook Strait on 20 August and spent until 25 August in Cook Strait and on the eastern edge of the Chatham Rise. His homeward flight took him back through Cook Strait on 26 August and by 27 August he was close inshore in the Karamea Bight. He then returned to the area in which he had spent the first two days of his trip and from there he is presumed to have returned to the colony for not more than two hours on 31 August. Two hours was the maximum time between checks of Spot's burrow on that night.

On Spot's second foraging trip he flew in large circles west of the colony on the continental slope. He is presumed to have spent the nights of 13 and 14 September ashore, departing again at 15 September. He visited the same area of the continental slope during his third foraging trip and returned to the colony on the evening of 19 September.

These results show the importance of the continental slope to breeding Westland petrels. They also show that a breeding bird can complete a long distance flight ranging up to 800km from the colony. Although the tracked birds did spend some time in the vicinity of hoki trawlers, they also foraged over a far greater area than that worked by the fishing fleet.

Satellite tracking will continue in August-September 1996 using both male and female birds to investigate the distribution of Westland petrels at sea and their association with fishing vessels. This is part of a larger project on Westland petrel diet, foraging and fisheries interactions.

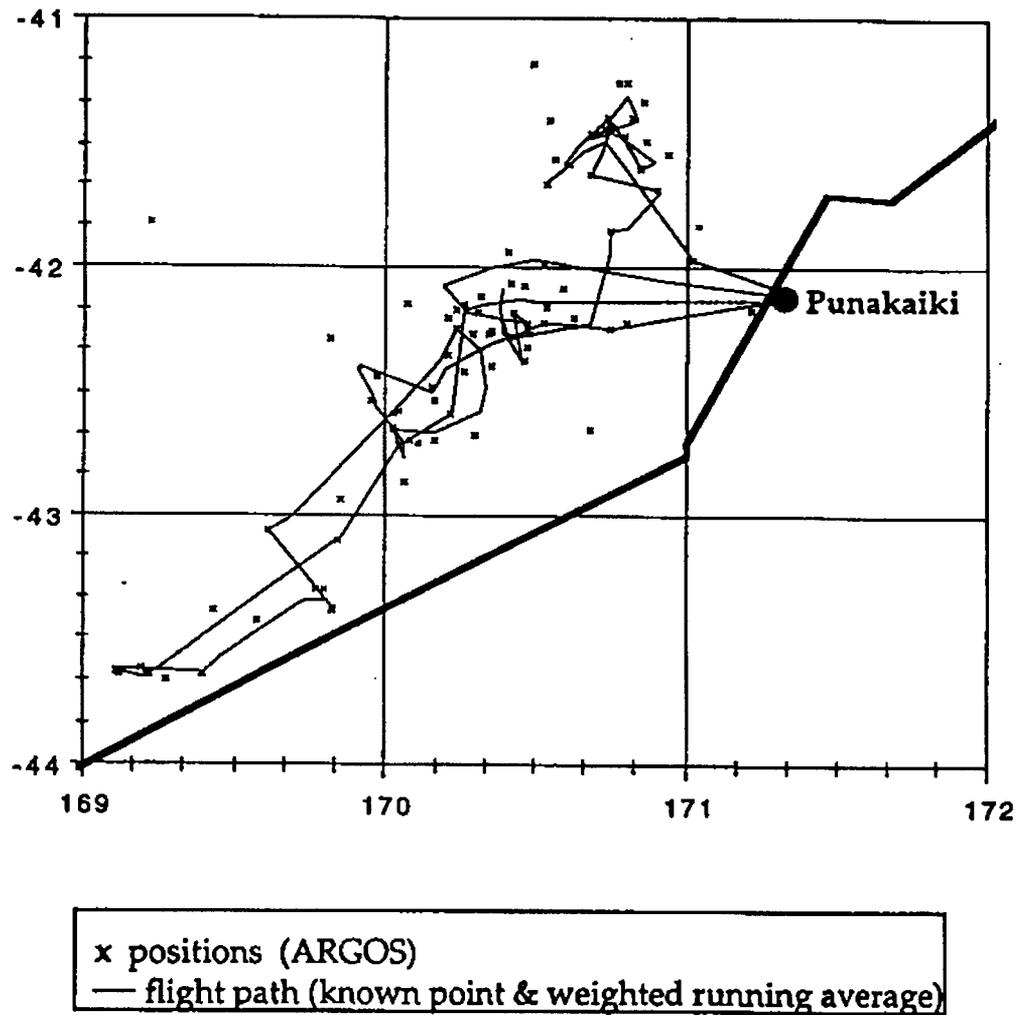


Figure 1. Paul (L13807). Satellite track 12-16 August 1995.

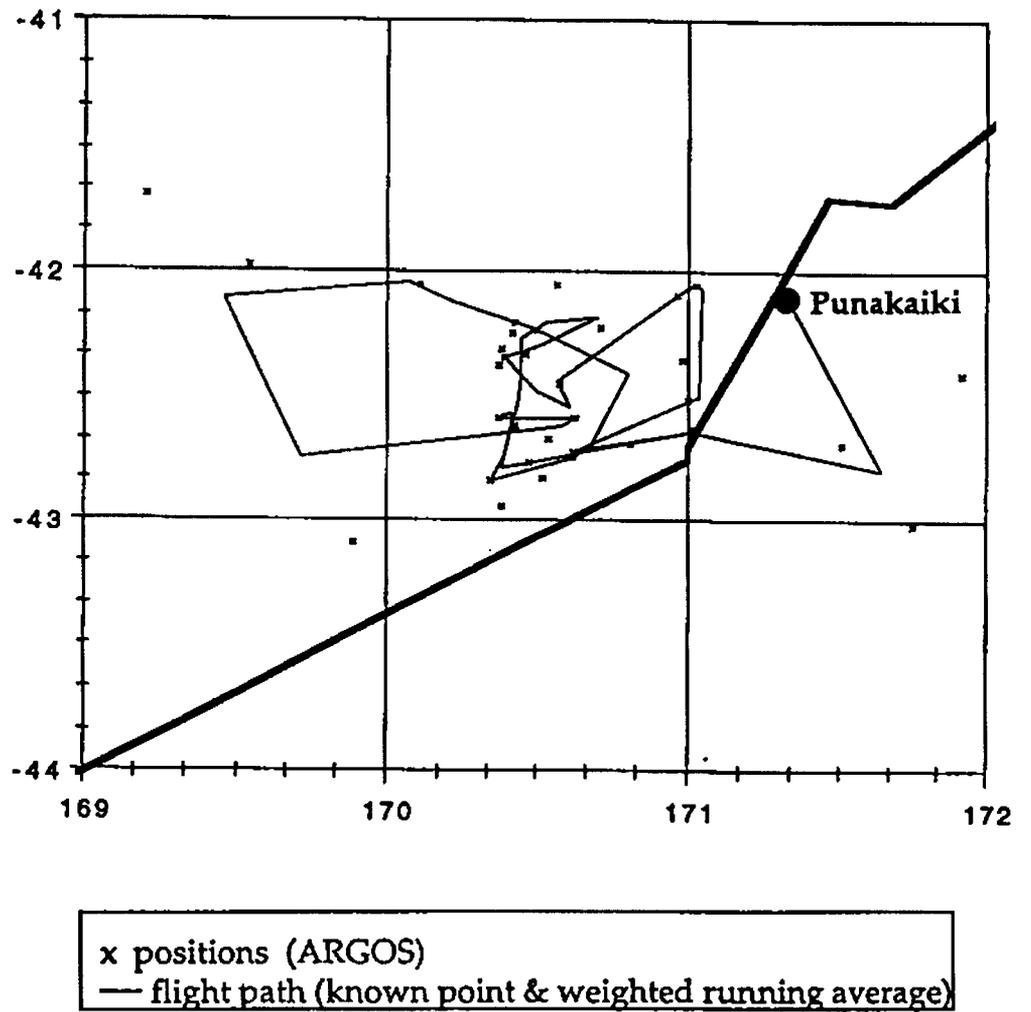
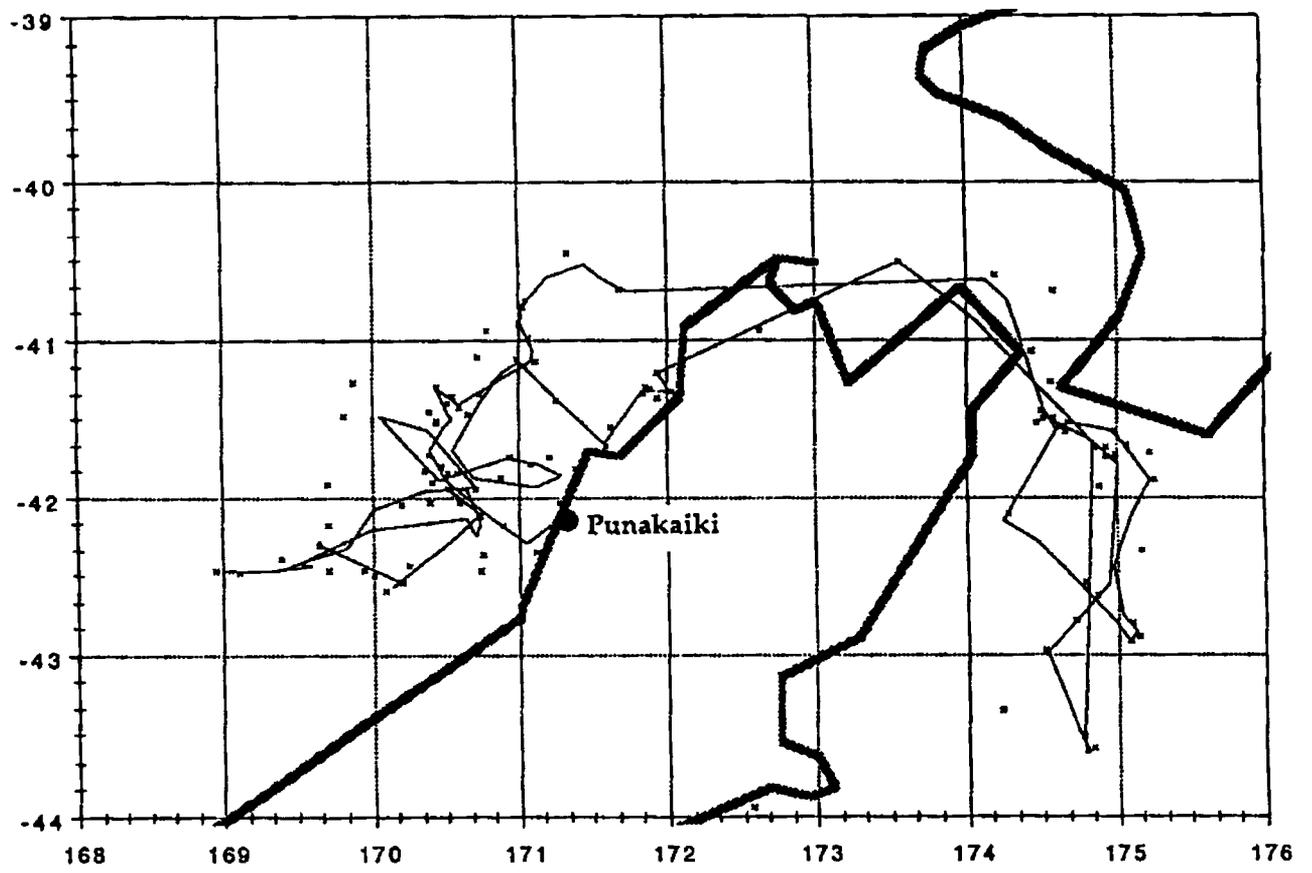


Figure 2. Sandy (L18650). Satellite track 12-16 August 1995.



x positions (ARGOS)  
— flight path (known point & weighted running average)

Figure 3. Spot (L22370). Satellite track 18 August - 19 September 1995.