

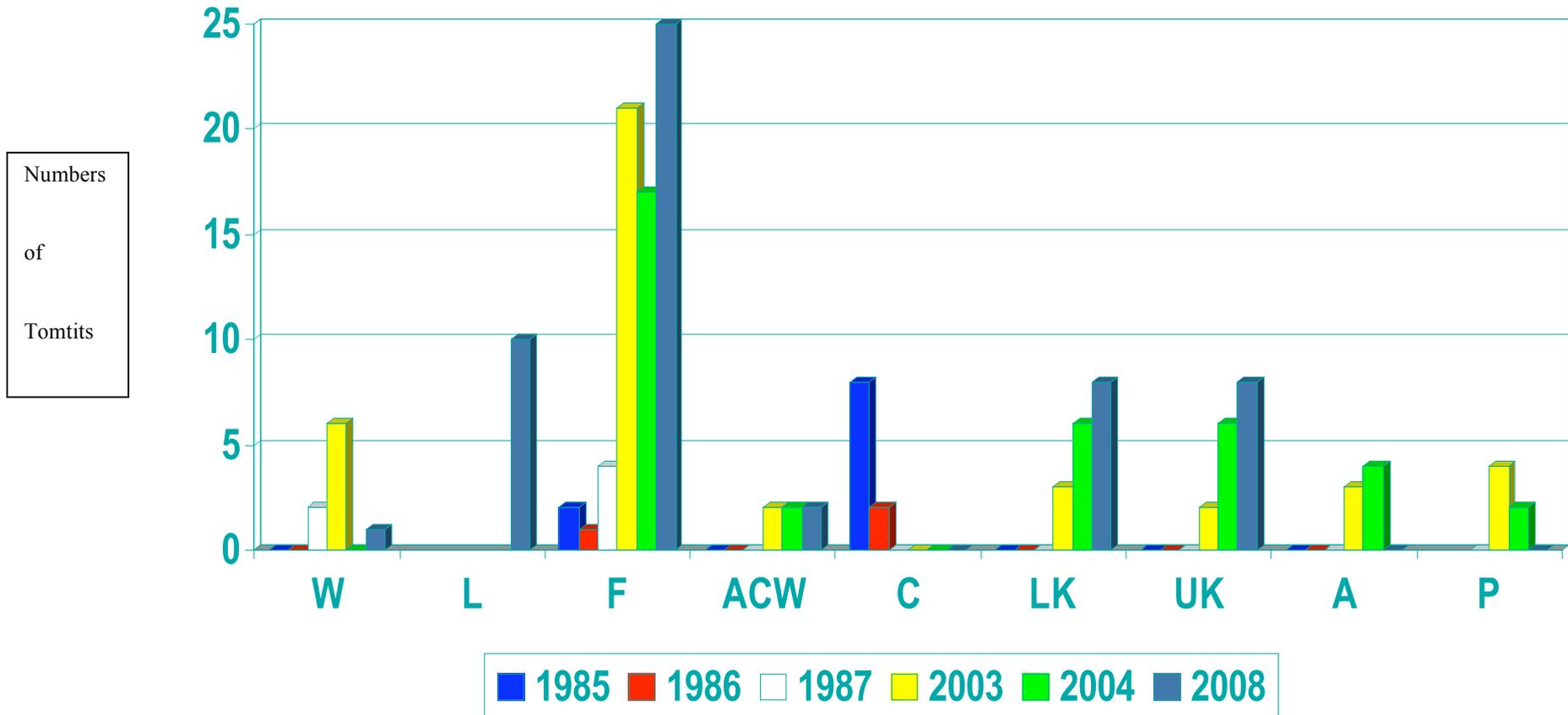
**Tomtit Distribution Transect Survey in the Ark in the Park designated area in the Waitakeres,
September 21st 2008, and comparison with previous data.**

Excellent conditions on 21st September for the slow walk counts along the tracks noting tomtits passing overhead on 10m either side of the tracks. The new Lakeside track (a re-routed section of Fenceline) was walked for the first time.

This survey does not have any statistical analysis, does not follow the rigid requirements of the distance sampling technique and does not follow a set 500m transect along each trk. The main purpose is to note the sightings that are occurring and the new sightings from previous surveys. Regular sightings in the same areas would indicate established territories. The GPS data mapped will be of interest to the volunteers working along bait-lines and the stoat lines. Plus it may be of use to a future student working on a masters or PhD programme. The slow walk count was the method that was used in the 1980s surveys and this has been carried on to maintain comparability.

Years surveyed	Fenceline, Robinson RidgeTks (F)	Waitakere Dam Access R (W)	Lakeside Track (L)	Auckland City Walk (ACW)	Cascades (1980s counts) (C)	Lower Kauri Track (LK)	Upper Kauri Track (UK)	Andersons Track (A)	Pukematekeo Track (P)
1985 Aug	2	0		0	8	0	0	0	0
1986 Sept	1	0		0	2	0	0	0	0
1987 Sept	4	2		0	0	0	0	0	0
2003 Sept	21	6		2	0	3	2	3	4
2004 Sept	17	0		2	0	6	6	3	2
2008 Sept	25	1	10	2	0	8	8	0	0

Graphical Representation of Tomtit Territory Distribution 1985-87, 2003-2004, Sep 21st 2008



(To edit: right click on graph, click chart object, click edit and add alterations to chart)

**Pukematekeo, Anderson, rewalked on 6th Oct, Pukematekeo, ACW rewalked on 8th Oct 2008.
Comparison made with previous data.**

The Pukematekeo and Anderson Tracks were re-walked by Mick Cleland and Barbara Hughes on Oct 6th to recheck the nil result on these tracks from the 21st Oct 2008. The weather conditions were wet, windy and cold on the ridges. Tomtits had been observed on the Puk and And trks in 2003-04 when more intensive territory research was happening (pers com Hughes B. 2003 RSNZ Teacher Fellowship). It was felt that there would be more tomtits on the tracks with the extensive predator control happening over the past 4 years since the last survey in 2004. Recent anecdotal reports have been coming in from volunteers that there were more tomtits than previously. Both the Pukematekeo and ACW were re-walked on Oct 8th in weather conditions that were fine with some patches of sunlight and wind on the ridges.

Tomtits are **very territorial** particularly at the start of breeding season and appear to stay in their territories all year round. The previous year's fledglings and the vagrants are seen off fiercely by the resident male tomtit at the end of summer. Often the breeding female is also chased away prior to the winter though there are a number of cases where both male and female stay together for the whole year. With reference to **territory size** Jo Bisset noted in her 1979 masters thesis that density of birds along transects averaged at 11 birds per 100m. "These transects only measured the distances between males in one major dimension. Investigations revealed one pair of tomtits used over 15 000m²" (Bisset,J. 1979 *Petroica macrocephala toito*. MSc. University of Auckland P.79). It was observed in 2003-2004 in the Hunuas that tomtits were found every 100m along the roads and tracks (pers com Hughes B. 2003 RSNZ Teacher Fellowship). Taking this into account and with reference to Jo Bisset's research, the area of a tomtit territory appears to be in the vicinity of 100m X 100m which is 1 ha.

On four of the trks surveyed many of the sightings and positions were consistent with those found in 2003 and 2004. New positions were noted eg a pair found at the look-out point on the old Fenceline Trk and this is a regular sighting according to the volunteers working that area (E 2645925, N6476347). Another example of tomtits being found where they had not been observed but had been searched for extensively in 2003 and 2004 was on the Fenceline section that joins to the Cascades Trk (E2646252, N6477578 & E2646291, N6477326). For future reference, GPS grid co-ordinates have been taken of most sightings along the Fenceline, Robinson Ridge, Anderson, Pukematekeo and ACW trks. The level of accuracy of the readings is dependent on the number of satellites that were picked up. It was noted a number of times that new sightings were found not only with a male present but also with a female in the background. Overall on most tracks there were more sightings and this would seem to strongly indicate that the consistent Ark predator control since 2003, especially of rats, is helping the survival rate of the tomtit. The graphical representation

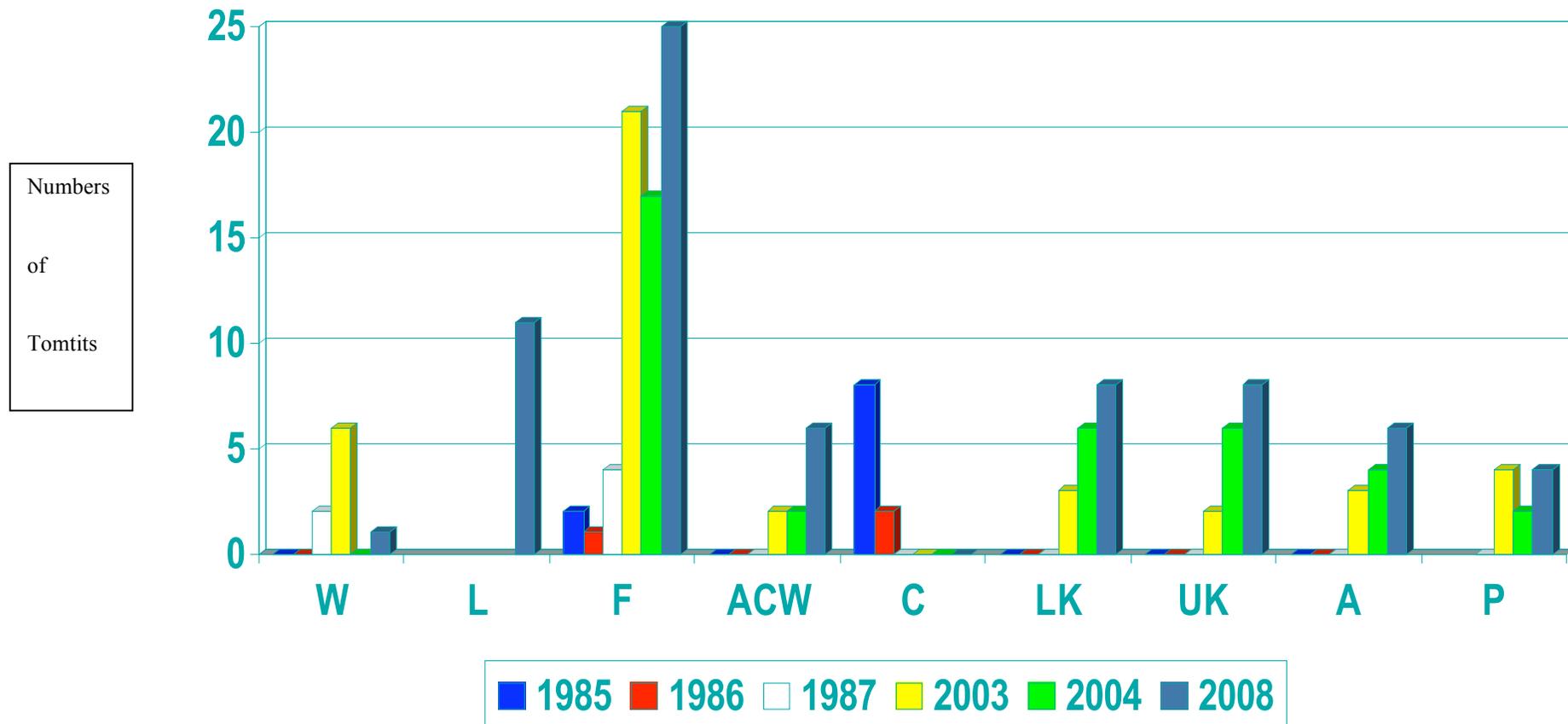
below reinforces the general increased trend. Well done to the regular organisation by Karen Colgan and to the hard working volunteers!

In terms of **recognition of tomtit calls** there are four commonly heard ones:- the often recognised short oily,oily oily song, the high pitched alarm/territory call, the soft zet call, and the churr call commonly used when males are prebreed feeding of females or when both parents are feeding their chicks. Jo Bisset mentions 14 call types are uttered including the zet calls which appeared to serve a sequestrative function by spacing foraging birds in overlapping territory areas (Bisset,J. 1979 *Petroica macrocephala toito*. MSc. University of Auckland P.93). In working with these birds they **respond to activity and talking** by people but you have to be quick to observe them as the males may appear only briefly to investigate, hence they were called *torotoro* by Maori people meaning The Scout. Particularly the females will come in close and emit a soft **zet** call that is hard to pick up. You can easily miss spotting them. The more you watch these birds the less you feel you know them. We have a great deal to learn.

Comparisons Tomtit Distribution in the Ark in the Park area of the Waitakeres

Years surveyed	Fenceline, Robinson RidgeTks (F)	Waitakere Dam Access R (W)	Lakeside Track (L)	Auckland City Walk (ACW)	Cascades (1980s counts) (C)	Lower Kauri Track (LK)	Upper Kauri Track (UK)	Andersons Track (A)	Pukematekeo Track (P)
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**Graphical Representation of Miromiro- Nth. Is. Tomtit Number Comparisons 1985-87, 2003-2004, 2008.
 (Inc 6th and 8th Oct results 2008)**



Key:

W = Waitakere Dam Access Rd

L = Lakeside (new re-routed part of Fenceline Trk)

F = 'Old' Fenceline to Long Rd, Robinson Ridge, part of Cascade Tk onto Fenceline

ACW = Auckland City Walk

C = Cascades

LK = Lower Kauri Track

UK = Upper Kauri, Long Road Tracks and walk up from statue on ACW to UK trk and LK trk split

A = Andersons Track

P = Pukematekeo Track

1985-87 data collected by G. Moon, J. Skinner, J Staniland, M. Taylor,
2003 data collected by K. Colgan, T. Henry, B.Hughes 15 Sep 03
2004 data collected by K. Colgan, B.Hughes, S. Phillips 26 & 27 Sep 04
2008 data collected by K. Colgan, Y Vaneveld & M Siddens, S Phillips,
J Staniland, B Hughes & M Cleland. Sep-Oct 2008

Barbara Hughes 12th October 2008