

The importance of introduced plants as a winter source of nectar for Tui in Pukekura Park and Brooklands

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It was stated in the souvenir programme produced for the official opening of Brooklands on 10 March 1934 that “One of the responsibilities that is appreciated by the Pukekura Park Board is the necessity for increasing the natural food supply of the native birds, and to this end the policy of planting honey and berry bearing trees is to be steadily continued” (Puke Ariki ARC 2003-859, Box 2, MS 1695). The anonymous author of an “Out in the Park” article which appeared in the *Daily News* at New Plymouth on 27 June 1974 wrote that native birds are “an integral part of the Pukekura Park scene and many ornamental plantings have been made with the specific objective of providing more food for them”. More recently, Ian McDowell, Superintendent of Pukekura Park at the time he wrote, was able to record that the introduced “single flowered camellias, tree lucerne, Australian banksias, acacias and winter flowering eucalypts, aloes, kniphofias (or red hot poker) and the Taiwan cherry *Prunus campanulata* were specifically planted throughout the park as they all have flowers bearing nectar accessible to birds with brush-tipped tongues” (*Daily News* 12/8/1995).



Photo David Medway

Tui feeding at flowers of *Aloe arborescens*.
Brooklands, June 2002.

Some Tui (*Prosthemadera novaeseelandiae*) appear to be resident in Pukekura Park and Brooklands (“the Park”), and several pairs nest there each year. Their number increases significantly from about April as birds arrive from elsewhere in search of floral nectar sources to sustain themselves during the cooler months of the year. Tui are common in the Park from then until about October when most leave the area with the end of Kowhai (*Sophora microphylla*) flowering.



Photo David Medway

Tui feeding at flowers of *Camellia japonica* ‘Emperor of Russia’. Brooklands, July 2005.

Tui seem to have adapted well to the loss of most of New Zealand’s prime lowland native forest that was probably their principal habitat in former times. However, it appears that Tui in many parts of mainland New Zealand now rely on the floral nectar of a variety of introduced plants to help meet their energy needs, particularly in the cooler months of the year when those needs are greatest.

I spent about 204 hours on 96 days in June–August 2003 and in June–August 2004 in the Park. During this time I saw Tui feeding 1247 times on nectar of the flowers of various plants, both native and introduced (see Tables 1 and 2). A very significant number of these, 1117 times or 90%, were observations of Tui feeding from flowers of introduced plants. The introduced plants visited most for nectar were camellias (*Camellia* spp: Theaceae family), to which there were 637 observed feeding visits involving 33 species and identified cultivars, and the Formosan Cherry (*Prunus campanulata*), to which there were 339 observed feeding visits.

Table 1. Number of observations of Tui feeding at flowers other than camellias in June–August 2003 and in June–August 2004 (The plants marked * are native New Zealand plants).

<i>Alberta magna</i>	2	<i>Prunus campanulata</i>	339
<i>Aloe arborescens</i>	10	<i>Prunus</i> ‘Accolade’	11
<i>Aloe ferox</i>	2	<i>Prunus</i> ‘Fuku Bana’	5
<i>Aloe petricola</i>	1	<i>Prunus</i> ‘Okame’	10
<i>Backhousia citriodora</i>	3	<i>Rhododendron arboreum</i>	8
<i>Banksia integrifolia</i>	7	<i>Rhododendron delavayi</i>	10
<i>Chiranthodendron pentadactylon</i>	16	<i>Rhododendron</i> ‘Kermesinum’	16
<i>Corylopsis spicata</i>	13	<i>Rhododendron</i> ‘Pink Delight’	1
* <i>Dysoxylum spectabile</i>	93	<i>Rhododendron</i> ‘Rubrum’	14
<i>Edgeworthia gardneri</i>	3	* <i>Sophora microphylla</i>	21
* <i>Metrosideros fulgens</i>	5	* <i>Vitex lucens</i>	7
* <i>Pittosporum umbellatum</i>	4		
Total feeding observations: 601			

The value of camellias as a source of floral nectar for some New Zealand birds has long been recognised, but their importance in that regard has been little studied and remains unrecorded in the scientific literature. As early as 1924, W. W. Smith, who was Curator of Pukekura Park from 1908–1920, wrote that every winter and early spring the Tui was to be seen in New Plymouth “sucking the honey from kowhai, eucalyptus and single camellias” (*Taranaki Herald* 29/12/1924). Duncan & Davies Ltd, Nurserymen of New Plymouth, whose principal V.C. (later Sir Victor) Davies became a member of the Pukekura Park Board in 1932, recognized the value of single flowered camellias as a source of nectar for birds. For example, in their 1939 *Catalogue of Choice Nursery Stock* they included single flowered camellias in a list of native and introduced plants sold by them which produced berries or honey for attracting birds. In an article about Arbor Day which appeared in the *Taranaki Herald* of 4 August 1942 it was stated that “A popular introduced shrub, the single flowered camellia, provides a great store for honey-eating birds during the winter”.



Photo David Medway

Camellia japonica ‘Emperor of Russia’.
Brooklands, July 2004

Jack Goodwin, when he became Curator of the Park in 1949, was impressed by the way in which camellias in the Park had held their own, and he found seedling camellias growing freely everywhere. Goodwin observed



Tui feeding at flowers of *Prunus campanulata*.
Brooklands, August 2003.

that camellia flowers, especially the single pinks and reds, were “beloved” by Tuis and Bellbirds (*Anthornis melanura*) (*New Zealand Camellia Bulletin* 2(4) (1961): 5-8). Subsequent anonymous authors of “Out in the Park” articles in the *Daily News* also attested to the importance of camellias as a source of floral nectar in the Park. For example - “Most varieties of camellia are coming into flower now much to the delight of the tuis and the waxeyes which fly from flower to flower gathering the nectar. Camellias are an important source of food at this time of the year for these birds” (*Daily News* 2/7/1965); “Camellias are featured prominently throughout Pukekura Park. The single flowered varieties are particularly sought after by native birds especially the tuis” (*Daily News* 15/8/1969); “Camellias are

prominent subjects throughout Pukekura Park and create a real attraction for native birds including the occasional bellbird, numerous tuis and of course waxeyes. These birds can be seen on the single flowered varieties foraging for nectar” (*Daily News* 12/6/1970); “Camellias are plentiful and are a constant source of nourishment to the native birds” (*Daily News* 30/7/1971); and “The camellia species are particularly important in providing the nectar-feeding birds with food during the winter months, and in bush settings like Pukekura Park the tui will often be seen at close quarters feeding on these flowers” (*Daily News* 16/8/1979).

Camellias of many sorts and ages are numerous in the Park. Of particular importance among them as sources of floral nectar for Tui during my study, as will be seen from Table 2, were the old, large *C. japonica* ‘Emperor of Russia’ growing on the main lawn at Brooklands, and the plants of *C. tsaii*, *C. hybrid* ‘Margaret Waterhouse’, *C. hybrid* ‘Clarrie Fawcett’, *C. hybrid* ‘Citation’, and *C. reticulata* ‘Shot Silk’ which are in the Camellia Collection on Racecourse Walk in Pukekura Park.



Tui feeding at flowers of *Rhododendron arboreum delavayi*.
Rhododendron Dell, July 2002.

Many of the “unnamed/unidentified cultivars” mentioned in Table 2 are single or semi-double flowered *C. japonica* or *C. saluenensis* seedlings that are unnamed. Several of the camellia cultivars at which I saw Tui feeding during my study have names that have not been registered. For example, ‘Tui’s Tucker’ and ‘Tui’s Mate’ are unregistered names given by George Fuller, Curator of the Park from 1965-1990, to two large, single-flowered *C. japonica* seedlings growing near the Shortland Street entrance to the Park. I have included my observations of Tui feeding at the flowers of *Gordonia chrysandra*. Although this plant is not a camellia, it has camellia-like single flowers and is also a member of the Theaceae family.

Table 2. Number of observations of Tui feeding at camellia flowers in June–August 2003 and in June–August 2004.

<i>C. japonica</i> ‘Emperor of Russia’	93	<i>C. reticulata</i> ‘Ross Clark’	5
<i>C. tsaii</i>	50	<i>C. reticulata</i> ‘Howard Asper’	5
<i>C. hybrid</i> ‘Margaret Waterhouse’	48	<i>C. fraterna</i> ‘Pink’	5
<i>C. hybrid</i> ‘Clarrie Fawcett’	40	<i>C. hybrid</i> ‘Pink WDC’	4
<i>C. hybrid</i> ‘Citation’	39	<i>C. japonica</i> ‘Kon-wabisuke’	4
<i>C. reticulata</i> ‘Shot Silk’	36	<i>C. hybrid</i> ‘Fairy Blush’	4
<i>C. japonica</i> ‘Tui’s Mate’	21	<i>C. reticulata</i> ‘William Hertrich’	3
<i>C. transnokoensis</i>	17	<i>C. cuspidata</i>	2
<i>C. japonica</i> ‘Tui’s Tucker’	17	<i>C. reticulata</i> ‘Inspiration’	2
<i>C. hybrid</i> ‘Dr Lesley’	16	<i>C. reticulata</i> ‘Crimson Robe’	2
<i>C. reticulata</i> ‘Confucius’	13	<i>C. wabisuke</i> ‘Tarokaja’	2
<i>C. hybrid</i> ‘Kunming x Parker’	12	<i>C. japonica</i> ‘R.L.Wheeler’	2
<i>C. hybrid</i> ‘Cornish Snow’	11	<i>C. hybrid</i> ‘Donation’	1
<i>C. rosiflora</i>	9	<i>C. hybrid</i> ‘Wirlinga Belle’	1
<i>C. reticulata</i> ‘Willow Wand’	6	<i>C. hybrid</i> ‘Gay Buttons’	1
<i>C. chekiangoleosa</i>	5	<i>C. tsaii</i> x <i>fraterna</i>	1
<i>C. reticulata</i> ‘Cornelian’	5	<i>Gordonia chrysandra</i>	9
<i>C. unnamed/unidentified cultivars</i>	155		
Total feeding observations:		646	

The anonymous author of an “Out in the Park” article in the *Daily News* of 6 September 1979 considered that Tui are attracted to the Park by a continuing food supply through the winter. My study indicates that many of the camellias and the Formosan Cherries growing in the Park are of prime importance as sources of floral nectar for Tui during that time of year. The availability of suitable native and, especially, introduced nectar resources is almost certainly the main reason why so many Tui are attracted to the Park, and reside there throughout the cooler months. The continued provision of those resources in adequate number and variety will help ensure that the Park remains an outstanding year-round habitat for Tui.

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