Ark in the Park botanical survey of vascular flora

2015

Ark in the Park is a volunteer based ecosystem restoration project covering 2100 hectares of the Waitakere Ranges Regional Park.

A collaborative project by Forest and Bird and Auckland Council, supported by Te Kawerau a Maki.

The Ark manager, Gillian Wadams, asked for volunteers to survey the Ark plants, as an important step in understanding and valuing the Ark in the Park ecosystem. This provides a record and data source for knowledge and management Ark flora. Bruce Calvert took the lead in this project, with the help of a number of volunteers.

It was decided to do species lists along baitlines, because looking at square plots or quadrats is physically difficult in kiekie or supplejack country.

Initial survey work on AWN3 and then IW2 showed the number of species seen was approximately 20 from standing in one location, then an additional 25 for the first 50 m, then another 10 or so for the next 50m, and then 4 or so new species in each succeeding 50 m. It was felt that 100m was a good length for a species list, because this length allowed capture of the almost all species, however some will not have been recorded. Also bait lines are marked by bait stations, which are either 50 m or 100 m apart, making navigation to these distances easier.

A rough grid of transects (survey lines) was chosen, about one km apart, and next to access lines if possible, to cover the Ark. This gave thirty transects.

The method was to note all species of vascular plant visible, in practice up to 2 to 5 m away, but sometimes 10 m or occasionally more for more obvious trees. Binoculars, a 10x lens, and reference books were used in the field, and occasionally a microscope at the Ark office for further clarification.

One way to improve the data would be to list the species as plentiful, sparse, etc, or describe how common they are with a number. Another way could be to strictly limit the distance of listed species from the transect. A suggestion is to list some weed locations, with a view to control by either Ark volunteers or Auckland Council staff.

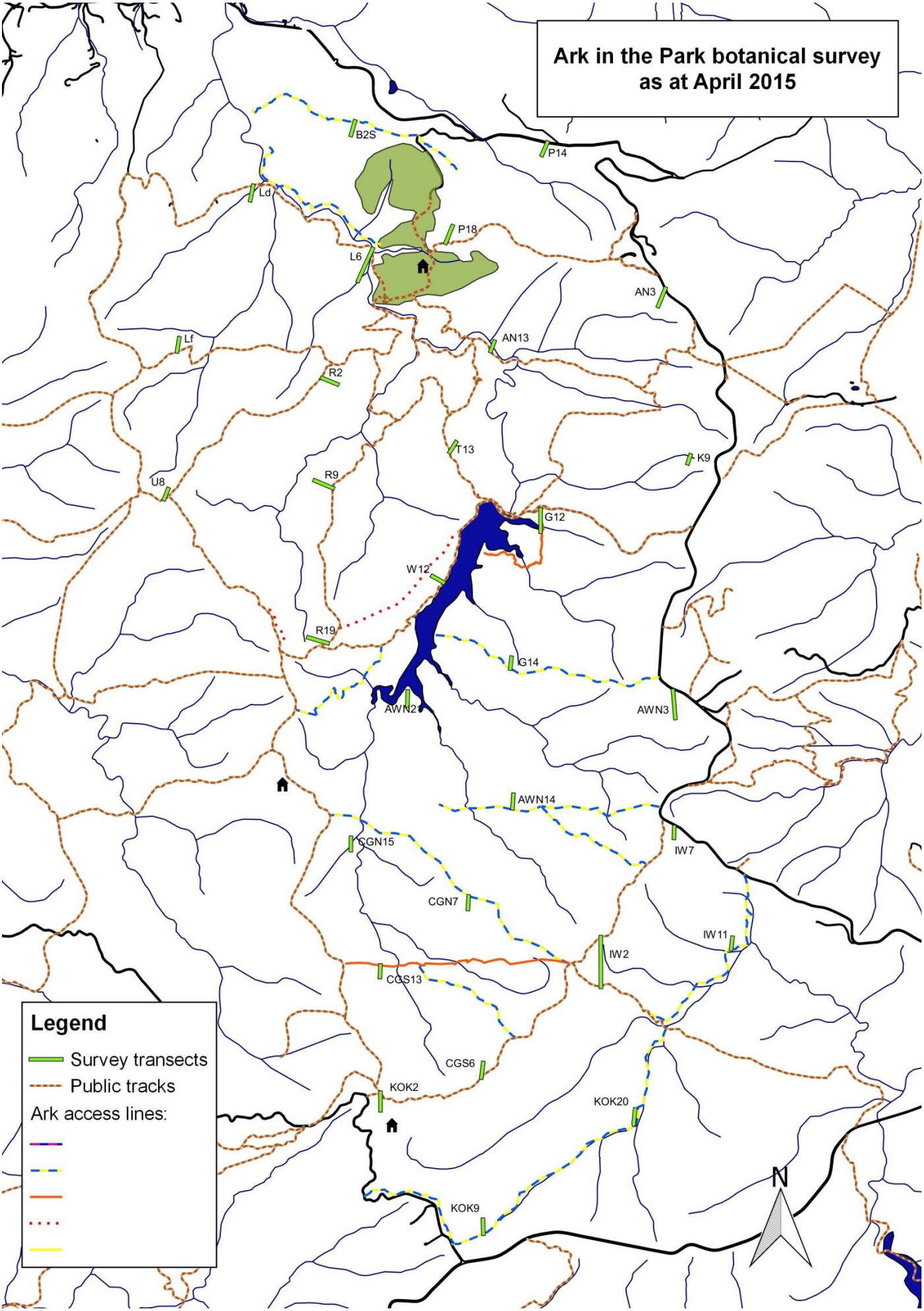
How to interpret the second tab of the Excel file, namely "Botanical survey species list"

An excel file consisting of two tabs accompanies this introduction. One describes the location and characteristics of each transect, the other is a table containing the results of the survey, i.e the plant species list. You can move between these tables by clicking on the labels at the bottom left of the excel file.

When looking at the "Botanical survey species list" you will see the transect names along the top of the table showing survey location data as column headings, this tells you the location of the transect (refer to the map of the Ark area showing transect locations below). Plant species are given on the left, as row headings. In each cell there is a 1 if the species was found on the transect, otherwise the cell is blank.
The rows and columns have been added and a grand total appears at the bottom right.

You can extract a range of information from this table, for example: As an average there are around 61 species per transect – this was calculated by dividing the grand total number of species i.e 1834 by the number of transects i.e 30.

Hovering the cursor over a cell gives you a summary of that cell, this helps display data that cannot be seen on one screen otherwise.


Ark in the Park botanical survey
as at April 2015
B2S
P14
Ld
P18
L6
AN3
Lf
AN13
R2
T13
K9
R9
U8
G12
W12
R19
G14
AWN2
AWN3
AWN14
CGN15
IW7
CGN7
IW11
IW2
CGS13
CGS6
KOK2
KOK20
KOK9
N
Legend
Survey transects
Public tracks
Ark access lines:

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Identifications were done by Peter de Lange.

Gear was lent by Riki Bennett. Species lists for the Auckland region and the Waitakere ranges were provided by Maureen Young and Sandra Jones.
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