RULINGIA SP. (TRIGWELL Bridge)

Annual Report
1998

PROJECT #: 493

By R.M.FITZGERALD
Rulingia Project Officer

on behalf of the

Central Forest Region Threatened Flora
and Communities Recovery Team

Department of Conservation and Land Management
50 Hayman road Como W.A.

SUMMARY

Implementation of the second phase of the *Rulingia* sp (Trigwell Bridge) translocation was carried out in July 1998 with the planting of 145 seedlings propagated by the Kings Park and Botanic Garden. Existing sites were supplemented with 105 seedlings and a new population of 40 seedlings was established on the proposed Bennelaking Conservation Park. Support works, including fencing and irrigation have been installed at all sites. At the time of planting all seedlings were between 7-9 centimetres in height.

Enhancement of the existing sites at plots 1,2 and 3, onsisted of the seedlings being arranged and planted to follow and take advantage of the existing gradient, shade and the irrigation system at each site. Plot 1 was enhanced with 45 seedlings planted down the slope approximately 20 meters from the existing site and following the shade line from the existing vegetation. Plot 2 and 3 were planted with 60 seedlings down slope approximately 20 meters from either side of the plots taking advantage of the shade line of the existing vegetation.

Planting of *Rulingia* seedlings in shade was trialed, as previously planted seedlings were observed to have benefited from the shade compared to other seedlings that were exposed to the open elements.

Since planting monitoring has been conducted on a fortnightly basis, this will be extended to monthly over the summer months.

A selection of *Rulingia* sp seedlings were delivered to CALMScience, Vegetation Health Service for testing susceptibility to *Phytophthora* in September 1998. Results are expected to be known in early 1999.

In October 1998 a trial of seed collecting devices were installed around 12 plants, the objective being within acceptable guidelines maximise the collection of seed in preparation for direct sowing trials in 1999 (phase three).

Further translocations and the development and trialing of direct seeding germination techniques over the next two years will, optimistically result in the plant self-regenerating at the in situ sites.

All scope items for phase two of the translocation proposal have been completed.

INTRODUCTION

The Rulingia Recovery Team has been incorporated into the Central Forest Region Threatened Flora and Communities Team. This team met twice during 1998. The team is comprised of the following members,

A.Brown	Chief Investigator WATSCU CALM
K.Williams	Nature Conservation Program Leader CFR
R.Fitzgerald	Regional Wildlife Officer CFR-Rulingia Project Officer
A.Horan	Regional Wildlife Officer CFR
C.Broadbent	Senior Operations Officer SW Capes District
G.Viogt	District Nature Conservation Officer SW Capes District.
R.Brazell	District Nature Conservation Officer Mornington District
C.Brocx	District Nature Conservation Officer Mornington District.
M.Davies	District Nature Conservation Officer Mornington District
R.Turner	District Nature Conservation Officer Blackwood District.
G.McCutcheon	Community Volunteer

Consideration is being given to inviting the Bunbury Naturalists Club to join the team, as the group has become an active source of volunteers in a number of other aspects of the regional flora management program.

RECOVERY PLAN

A draft Interim Recovery Plan is currently being prepared for this species by WATSCU. This is currently in late draft and states the primary objective is to abate identified threats and maintain viable *in situ* populations to ensure the long-term preservation of the species in the wild. It is expected that this plan will be approved and published during 1999.

Monitoring.

Regional and district Nature Conservation officers have been monitoring the sites on a regular basis at fortnightly intervals and where possible opportunistically. Monitoring of the sites and plants incorporates reporting the plant condition, growth rate, leaf and bud numbers and any physical change to the plant. The condition of protection facilities and irrigation system.

SCOPE ITEMS

Propagation Plants

One hundred and fifty plants were received from the Kings Park and Botanic Gardens (KPBG) during the year. These plants were propagated in 1998 from seed and cuttings collected between 1994 and 1996. When collected the plants were of relatively uniformed in size being 4 to 7 centimeters height.

The seedlings were acclimatized and hardened off for several months prior to planting. KPBG provided seedlings with a longer root base than in 1997. This was to encourage

the early establishment of the root systems when planted. Based on growth rates recorded this seems to have had some benefit to the plants establishing.

Genetics

With such a small source population a detailed analysis of the genetic structure /composition of the source plant is not available. The propagated material was obtained from seed and cuttings taken from all the source population including material from clone T207 (CALM reference plant A1) which died in 1995.

Phase three will utilize the seed collected from the existing original plants and the 1997 seedlings, for the trialing of direct seeding in 1999 to determine if this will be an alternative method of enhancing the existing population.

Surveys for additional areas for new populations.

Areas surveyed have been within the range of the original site, expanding out into areas that appear to have the same characteristics as the original site and have remnant vegetation sites that appear to have not been disturbed by way of agriculture. With the proposal of direct seeding in 1999 this will also incorporate the existing sites being utilized.

Soil Analysis

This analysis was carried out in previous years and no further sampling was undertaken in 1998.

96.4 Fencing

All new seedlings have been protected by the use of individual cylindrical wire. The use of individual cylinders allows each to be adjusted accordingly as the seedling progress. Existing fencing is monitored and maintained where required.

MANAGEMENT

Ongoing management of the sites has been maintained throughout the year and will continue for the duration of the project. Tasks attended to have included site protection, grazing pressure, fire threat and disease.

Site protection

The sites are established on private property and CALM managed Conservation Park and Nature Reserve.

Grazing

Protective wire cages has ensured the security of the plants from mammal grazing and bird damage.

Fire

The sites are protected by adequate fire breaks and the presence of low level of fuels. A draft fire management will be initiated 1999 for the phase 3 implementation.

Disease

Normal hygiene practices will be maintained. A number of specimens were delivered to CALMScience for tests to assess the susceptibility of *Rulingia* sp to *Phytophthora*. Results will be known during the year (1999)

TRANSLOCATION

Completion of Phase one of the approved translocation of 1997, has seen the implementation of Phase two in July 1998, with the enhancing of existing translocation sites with 105 seedlings and the establishment of one new site with 40 seedlings on the proposed Bennelaking Conservation Park in July 1998.

Planting techniques, regimes and experience gained and developed from the previous 1997 planting has assisted in developing a successful phase two. The new seedlings were developed with an extra root length to assist in establishing a better root penetration. Utilizing this knowledge and the developed planting techniques combined with the existing irrigation system has seen the 1998 seedling flourishing. As of yet no deaths have occurred.

Pending the results of seed germination viability testing on the seed collected during November 1998, phase three: experimental trial of direct seeding will be undertaken in 1999.

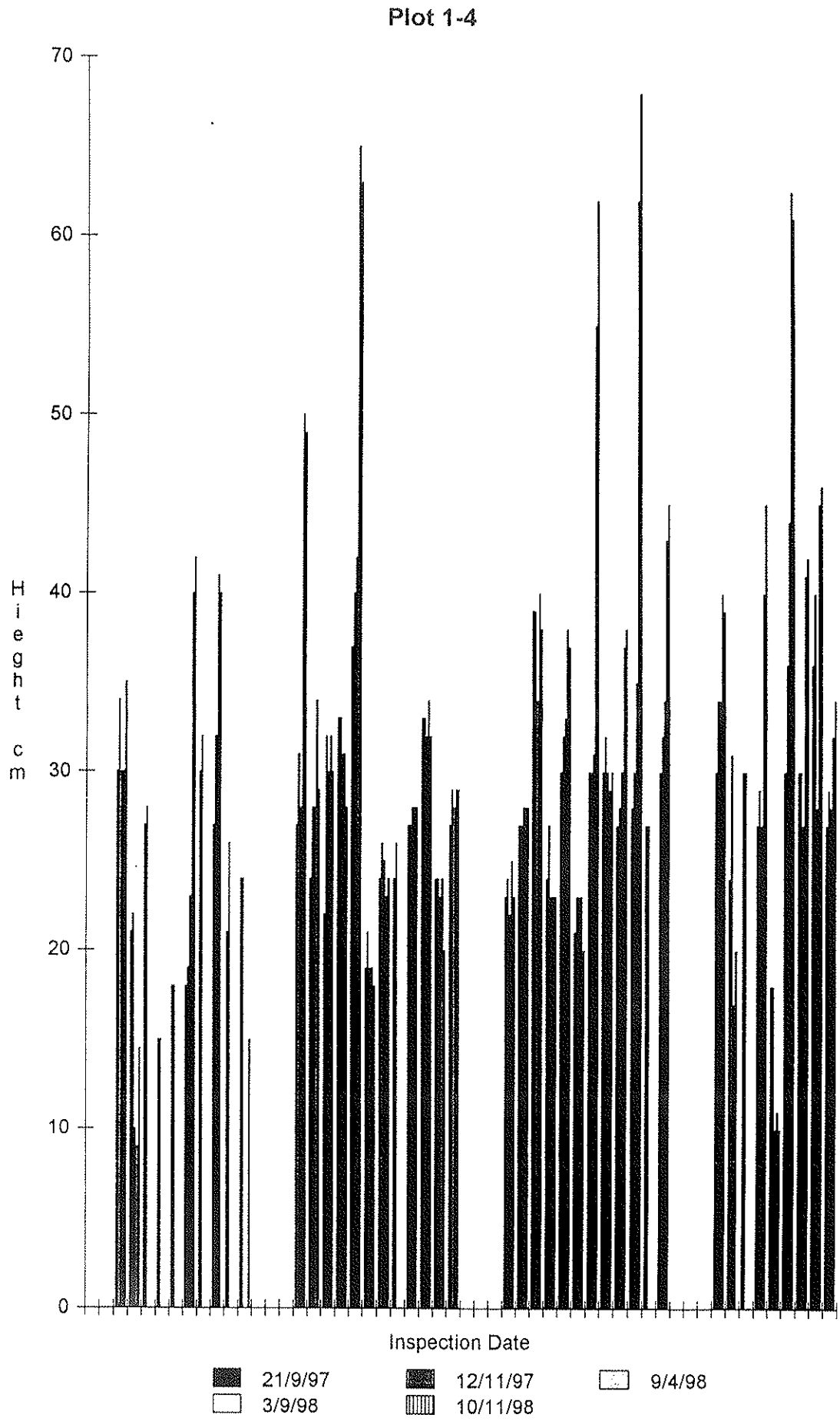
Assistance and advice will be sought from CALM's Threatened Flora Seed Store staff to sample the soil seed base and implement various germination strategies/techniques prior to commencing the field trials. In addition. various methods of preparing the proposed sites for direct seeding will trialed including;

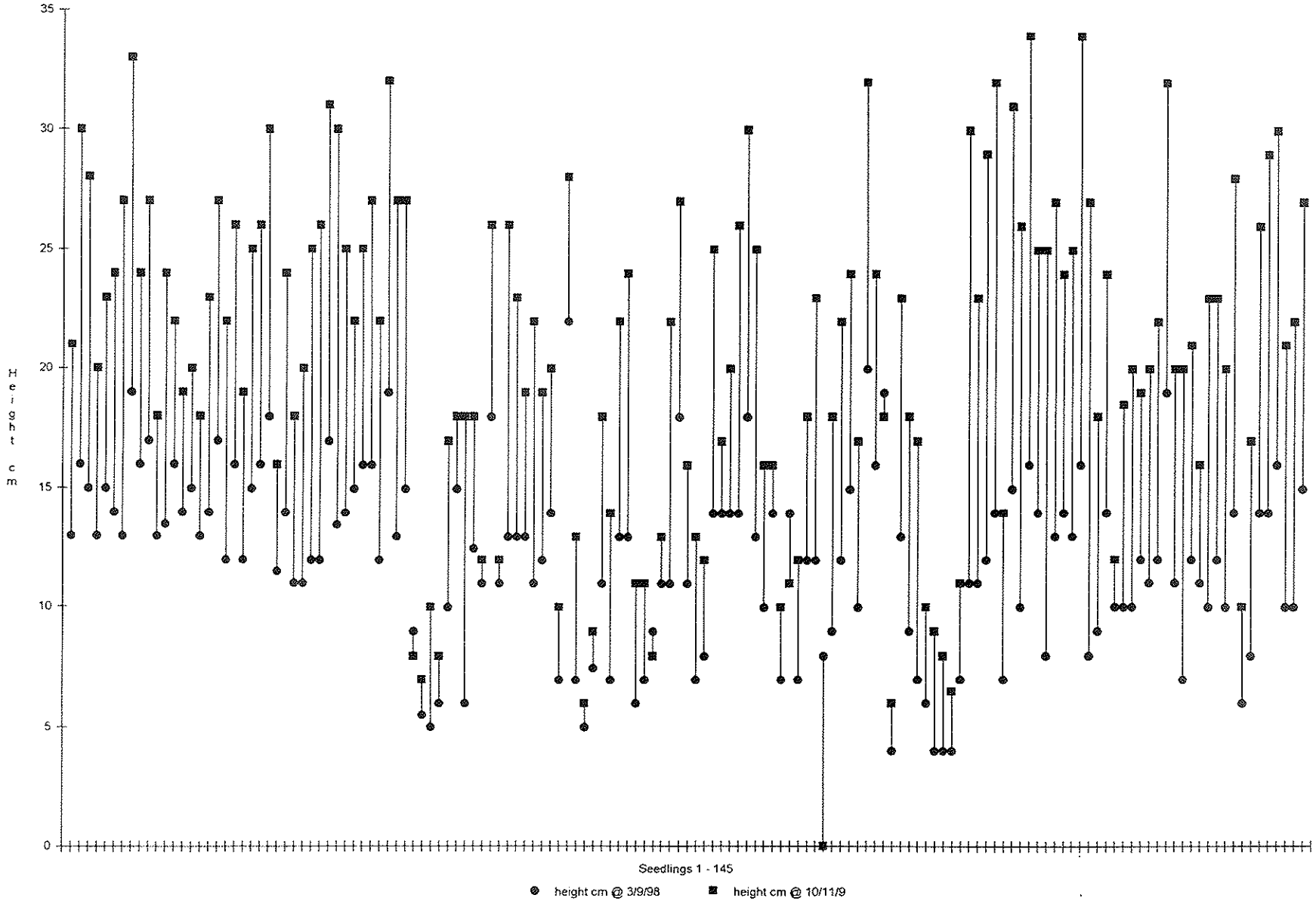
- Mosaic burning of selected areas in April/May 1999.
- Trailing of smoke water on selected existing sites.
- Raking and physical disturbance of selected sites

ATTACHMENTS

Graphs:

Size of plants Plots 1 – 4 (1997 –1998)
1998 seedlings size, plant no's 1-145.


Plot 1-4
70
60
50
40
30
20
10
0
Hieght cm
Inspection Date
21/9/97
3/9/98
12/11/97
10/11/98
9/4/98


35
30
25
20
15
10
5
0
Height cm
Seedlings 1 - 145
height cm @ 3/9/98
height cm @ 10/11/9