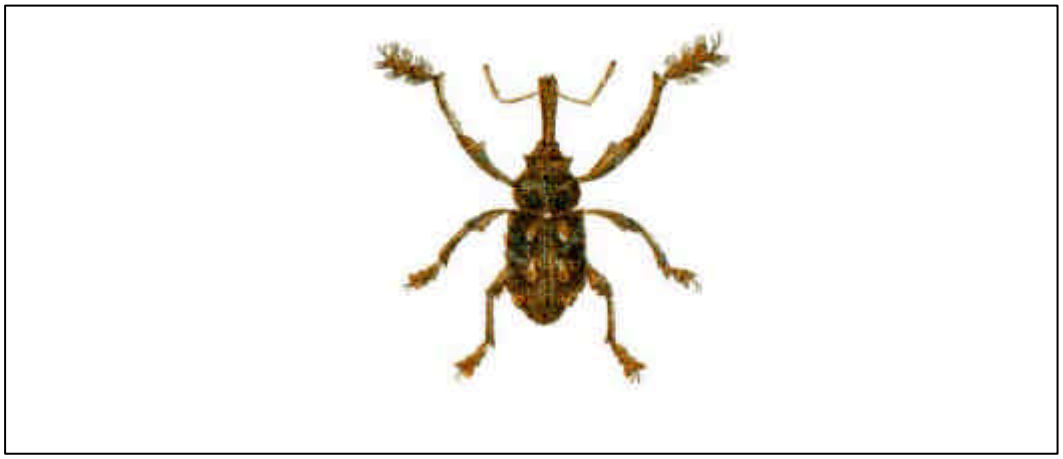
Elephant Weevil impact and control in vineyards – Stage 2: grape grower education about Elephant Weevil (*Orthorhinus cylindrirostris*) in vineyards.



FINAL REPORT to

GRAPE AND WINE RESEARCH & DEVELOPMENT CORPORATION

Project Number: **RT 02/48-5**

Principal Investigator: **Ms Margo Tummel.**

Research Organisation: **Langhorne Creek Vine Improvement**

Date: **16th October 2003.**

Executive Summary:

This project has resulted in the production of a clear and concise information guide and related A2 poster to be used to help vigneron's identify and become familiar with the vineyard pest – Elephant Weevil (*Orthorhinus Cylindrirostris*). These education tools provide basic visual identification of these pests, a summary of observed local behaviour/biology and vineyard symptoms, as well as useful information from known literature. A useful comparison is made to the other primary weevil pest for the region – the commonly known 'Vine Weevil'.

Broad distribution of the guide and poster to wine grape growers throughout the Langhorne Creek region will raise awareness of this insect and promote interest in this project as a whole. It is hoped that these tools will sufficiently empower growers to identify any impacts in their vineyards, which could be attributed to activity of Elephant Weevils. By producing targeted, detailed and clear information about the Elephant Weevil in a strong yet simple format it is hoped that growers will be able to accurately, and enthusiastically, contribute to future stages of this project. These stages will look at incidence, damage, activity and lifecycle related to the Elephant Weevil in the region's vineyards.

The ultimate aim is to inform growers and help them best manage if not eradicate Elephant Weevil from vineyards, thus reducing crop losses and allowing efficient vineyard maintenance.

Background:

There has been an Elephant Weevil problem in Langhorne Creek for several years. In the spring of 2001 it was noted that the problem seemed to be escalating, though in a regionally inconsistent manner. It was estimated that yield was reduced by 15% in some vineyards (vintage 2002) due to damage caused by this pest. This loss in yield may continue for 2-3 years in affected vine blocks due to the requirement to retrain or at worst re-establish vines. The incidence of Elephant Weevil damage is not unique to Langhorne Creek and any project outcomes will be of benefit to the whole industry. The unpredictable nature of pest levels, potential yield losses and lack of grower knowledge about this pest warranted further investigation.

A staged project was devised to learn more about this pest and possible control or management techniques. Stage 1 (complete) comprised a literature review of this topic. This stage (2) is aimed at grower education. Greater knowledge of the biology of Elephant Weevil will hopefully allow future biological control &/or vineyard management control methods.

There are at least four different types of common weevil in the Langhorne Creek region, but the Elephant Weevil is primarily noted as a pest and damage risk in vineyards. The aim of Stage 2 of this weevil project was to provide a user-friendly and convenient education and identification tool for growers. This has used literature information and images to describe the weevil of interest, as well as the type of activity, behaviour and classic signs of weevil damage noted in Langhorne Creek vineyards. It is necessary to educate local growers before further surveys or evaluation trials can be conducted. This education tool is in the form of a double-sided, laminated, coloured glove-box information card, designed and produced in collaboration with the chosen subcontracted presentation business. An A2 poster has also been developed for display in offices.

Objectives:

To produce a user-friendly and convenient education and information guide about the basic biology, activity and damage caused by Elephant weevils in vineyards

To distribute this guide to local grape growers, Technical & Training and Vine Improvement members, as well as other regional grape growers and Vine Improvement Groups.
To produce an informative identification poster about Elephant Weevils for display in offices.

Guides and posters shall be made available free of charge to local members, and to other interested regional groups and their affiliated associations upon request to the Langhorne Creek Wine Industry Council, at a nominal cost to cover production/postage (one sample provided free). Groups shall be notified via newsletter features or email/fax. A poster and guides shall be on display at the Langhorne Creek Wine Industry Council office to provide a public and industry resource. These education outcomes will be a necessary tool to enable success of proposed future surveys and vineyard trials. Future re-production of the items shall be on a user pays basis.

Outcome/Conclusion: (see provided samples – guide & poster)
Samples of the grower information guide and poster produced from this project have been supplied with this report.
An information guide will be distributed to each member of the Langhorne Creek wine industry, and a poster supplied for each vineyard office or interested local vineyard owner. A sample of each shall also be distributed to each regional vine improvement group with the opportunity to purchase further quantities for members if the interest arises. It is hoped that the guide and poster will provide user-friendly and convenient references to growers, thus raising awareness and correct identification of this pest in local vineyards. Sound grower education and interest is required to ensure success of future regional surveys and field assessments.

There was some delay in the time-frame of this stage of the project while confusion encountered with literature descriptions and insect samples were clarified through consultation with SA Museum, SARDI and Adelaide University (Waite) staff.
Thanks are extended to Mr. Mark Gemmel (SA Museum Discovery Centre), Dr. Michael Keller (Plant & Pest Science, Adelaide University, Waite), and Dr. John Jennings (SARDI, Adelaide University) for their assistance.

Budget Reconciliation:

Budget	**Funding required from GWRDC**		**Actual Expenditure**
Design development:			
2x colour visuals			
3 x 1 hr meetings			
Corrections/printer consult			$68.00
Phone/email/disks/stationary	Total $500.00		$602.00
Printing & associated costs:			
Print setup	$1600.00		$1651.92
Photography	$100.00		$215.00
Illustration costs	$300.00		Nil
Samples for GWRDC:	$23.00		$58.80
Courier/postage:	$100.00		$115.00
Typing:	$35.00		Included above
Secondary Review & changes			$425.00
Total	$2658.00		$3135.72
Add 10% GST	$265.80		$313.57
Total funds requested from GWRDC	**$2923.80**	**Total Expended**	**$3449.29**
		Remitted to GWRDC	Nil