

by

CARL VERNON

SUMMARY

The Wansley Farm housing development will have an effect on the vegetation at those sections of the farm. There will be further modification to and removal of the natural vegetation and sequence of plant succession. It will be a continuation of the neglect and abuse that has already occurred.

It is not necessary to rescue any plants at the farm. No rare or endangered plant species were found in any section. Protected trees at the site, which legally should not be damaged or removed, were :

Pittosporum viridiflorum and *Sideroxylon inerme*.

INTRODUCTION

LOCALITY Wansley farm of 136 ha is portion 1 of farm 653 in the East London district of the Eastern Cape, at 32° 54' S 27° 55' E.

BACKGROUND The farm, on which pineapples were the last crop to be grown in the 1980s has in recent years been mined as a quarry. The owners now propose to develop a housing estate, of 12 units on the farm (Fig. 1).

BRIEF This study was requested on 21 August 2007 by Mr. Duncan Scott of TERRECO, East London. The budget was 6 hours of field work and report generation at R350 per hour. The deadline was set at 11 September, 2007.

SCOPE The terms were to appraise the state of the vegetation on the farm with specific emphasis on four sections :

- section **A** at unit 1, on high point on the southern boundary of the farm
- section **B** encompassing units 2-6, north-west of section A
- section **C** around the quarry, north of section A and east of section C
- section **D** between the quarry and sections A and C
- section **E** enclosing units 7-12 between the farmhouse and the Qinira river.

METHODS

SITE VISIT Wansley Farm was visited, in company with Mr. Duncan Scott on 6th of September, 2007.

FIELD WORK The botanical communities and state of the vegetation at each section were evaluated. A list was made of the plant species seen there. Access to section B was facilitated by bush clearing along a power line across that section.

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PLANT LIST The plants are arranged alphabetically by their scientific name, growth habit, conservation status and the section where located. The woody plants were classed as trees if they had single trunks, and as bushes if they were multi-stemmed. The growth habit **vine** includes plants which are sometimes classed as creepers or scandent.

PLANT STATUS The symbol * defines that a species is exotic in the Eastern Cape. Any plant classed as a weed is based on definitions in Henderson (2001).

CAUTION A single visit to a site provides only a preliminary list of plants. This is because many plants are cryptic and can only be identified when flowering. The specific identities of the plants listed are provisional. This is because no specimens were collected for verification by a taxonomist.

RESULTS

PLANT COMMUNITIES The habitats at Wansley Farm can best be described as *transformed*. The plant communities on the farm are typical of the inland regions of the East London district. The area was originally grassland with forest and thickets along watercourses and in rocky places affording protection from veld fires. The natural succession of the habitats has taken place, overlain by modifications and disruptions imposed by human activities. On Wansley Farm in the thickets there were dongas - gullies marking former cattle tracks and old roadways that gave access to lands. Their state of regeneration to thicket suggest that they predate the pineapple plantation phase.

The plants recorded at Wansley farm are a representative cross-section of the forest and thicket species to be found around East London. No plant species was found there which was unusual, nor was any species conspicuously absent.

The plants recorded in the sections of Wansley Farm are listed in Tables 1 and 2

Initially, the veld of Wansley farm would have been used to graze stock and portions cleared to grow cereal crops. In the 1960s those activities would have become secondary to a change to pineapple plantation. In turn, when pineapples were no longer profitable, the lands became fallow. The common farming policy throughout those times was the prevention of veld fires. This fire exclusion allowed the thickets to extend into the grassland and for trees to colonise the fallow lands.

RARE & ENDANGERED PLANTS There were no rare or endangered plants were seen at Wansley Farm.

PROTECTED PLANTS The trees *Pittosporum viridiflorum* and *Sideroxylon inerme* were found on the farm.

ENDEMIC PLANTS There were no plants seen on the farm which are endemic to the Eastern Cape.

GRASSLAND All grassland on the farm was transformed from the natural succession. The grass species in the fallow lands were not those of climax

had been invaded by herbs such as *Berkheya decurrens*, *Euryops chrysanthamoides* and *Lipkea javanica*, and in places those weeds were dominant.

There was only a little evidence of recent human utilisation of the trees. In the past some trees had been cut for poles and they have regenerated. There was no evidence that any trees had been debarked for medicine.

In section D, the area around the quarry and up to section A, the vegetation has been disturbed by the quarrying. Soil and trees have been pushed into watercourse, and a large area on the hillside above the existing quarry have been cleared of woody plants. There were several access roads to the quarry and these had been made by clearing the woody plants and pushing them into the adjacent thickets. There was also a large amount of debris just dumped in the thickets.

CONCLUSIONS

For a long time, farming and quarrying activities have taken place on Wansley Farm with no apparent concern for the vegetation. Rather, it would seem that the indigenous bush has been regarded as waste ground.

ACTION REQUIRED No plants need to be translocated. Steps should be taken to reduce the *Lantana* population on the farm.

REFERENCES

- GERMISHUIZEN, G. & MEYER, N.L. (eds) 2003
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grassland such as *Cymbopogon*, *Hyperrhenia* and *Themeda*. Instead they were those species which colonise fallow lands and are able to cope being grazed by stock. The grassland had been colonised by *Acacia karoo* trees, and in places by dense stands of the herbs *Berkheya decurrens* and *Euryops chrysanthemoides*.

FOREST The only forest examined on Wansley Farm was section **C** which was a narrow strip along a watercourse dividing sections **B** and **D**. The lower end of that forest was terminated by rubble from the quarry. The forest was only there because of the extra water consequent of runoff from the surrounding thickets. Because of the lack of residual moisture there was little or no ground cover in the forest. In this relative dryness the forest differed from moist forest with undergrowth of herbs such as *Isoglossa woodii*. The most prominent tree species there were *Harpephyllum caffrum*, *Pittosporum viridiflorum*, *Schotia latifolia*, *Sideroxylon inerme* and *Vepris lanceolata*. These forest trees there provided the seed crop for the saplings of the tree species found in the adjacent thickets.

THICKET The thickets covered most of sections **B** and **D**, and portion of section **A**. The plants found at section **B** are listed in Table 2. This is the majority of all the plants species seen on Wansley Farm. It is likely that even those plants only seen in other sections could be found in section **B**. The dominant growth form in section **B** was a multi-stemmed bush. Thus some of the plants which were trees in section **C** were only bushes in section **B**.

At Wansley Farm the pioneer tree species in the succession from grassland to forest were *Acacia karoo*, *Apodytes dimidiata* and *Cussonia spicata*. These were the most numerous of the trees in sections **A**, **B**, **C** and **D**. As they were found separately, and not in association, they presumably have different edaphic requirements. The only other species which reached tree form in the thicket habitat were *Harpephyllum caffrum* and *Vepris lanceolata*. The other species which are recorded as trees in Table 2 were only found as trees in section **C** and in the thickets they were saplings or bushes.

The dominant bushes in the thickets were *Brachylaena ilicifolia*, *Diospyros dichrophylla*, *Grewia occidentalis*, *Gymnosporia buxifolia*, *Hippobromus pauciflorus*, *Scutia myrtina* and *Trimeria trinervis*. In places the *Brachylaena*, *Hippobromus* and *Trimeria* formed single species copses.

The thickets on Wansley Farm had the growth form which characterises thicket in having a single canopy layer, with no sub-canopy or undergrowth. The bushes on section **B** were tall with a large number of plants per unit area. There were few vines and fewer saplings of trees. Thus the ecological succession from grassland to forest appeared to have halted at the intermediate thicket stage.

INVASIVE ALIENS There were some alien plant species found growing on all sections of Wansley Farm. Only *Lantana camara* had become invasive and had become dominant in places in section **B**.

MODIFICATION BY HUMAN AGENCY A portion of section **B**, at units 4 and 5, had been an agricultural land many years ago and had long since been colonised by trees and was now a thicket. Larger portions of sections **A**, **B** and **E** had more recently been pineapple lands. The lands have been fallow for several years. These have been colonised by grasses and *Acacia karoo* trees. The grassland

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Diospyros scabrida	bush		a	b		d
Diospyros simii	vine			b		
Dovyalis zeyheri	tree			b	c	d
Euclea undulata	bush			b		d
Euryops chrysanthemoides	herb		a	b		
Ficus sur	tree			b		
Grewia occidentalis	bush		a	b		d
Gymnosporia buxifolia	tree		a	b		d
Gymnosporia capitata	bush			b		
Gymnosporia heterophylla	bush			b		
Gymnosporia polyacantha	bush			b		
Halleria lucida	bush		a	b		
Harpephyllum caffrum	tree			b	c	
Helichrysum cymosum	herb		a	a		
Helichrysum kraussii	herb		a	b		
Hippobromus pauciflorus	bush		a	b	c	d
Jasminum angulare	vine			b		
Lantana camara	* bush	weed	a	b		d
Laurida tetragona	bush			b	c	
Lipkea javanica	bush		a	b		
Melia azedrach	* tree		a	b		
Ochna natalita	bush			b	c	d
Olea africana	tree		a	b		d
Pachycarpus linearis	herb			b		
Psidium gujava	* bush			b		
Rhoicissus revoilii	vine		a	b		d
Rhus laevigata	bush			b		
Rhus pentheri	bush		a	b		d
Rubus rigidus	* vine	weed	a	b		
Schotia latifolia	tree			b	c	
Scolopia zeyheri	bush			b		d
Scutia myrtina	bush		a	b		d
Senecio bupleuroides	herb			b		
Sideroxylon inerme	tree	protected		b	c	
Solanum linnaeanum	* herb			b		
Solanum mauritianum	* bush	weed		b		
Trimeria grandifolia	bush			b		
Trimeria trinervis	bush		a	b		d
Vepris undulata	tree			b	c	
Zanthoxylon capense	tree		a	b		
Rhus dentata	bush		a			
Rhus longispina	bush		a			
Solanum aculeastrum	* bush	weed	a			
Sutera polyanthera	herb		a			
Tephrosia grandifolia	herb		a			
Dalbergia obovata	bush				c	c
Diospyros villosa	vine				c	d
Pittosporum viridiflorum	tree	protected			c	d
Euclea natalensis	bush				c	
Euclea racemosa	bush				c	
Mystroxyton aethiopicum	bush				c	
Pleurostyliia capensis	tree				c	
Psychotria capensis	bush				c	
Euphorbia triangularis	tree					d
Ricinis communis	* herb	weed				d

Table 1 PLANTS IN GULLY FOREST SECTION C AT WANSLEY FARM

plant	ex	form	status	A	B	C	D
Apodytes dimidiata		tree		a	b	c	d
Carissia bispinosa		bush		a	b	c	d
Clausena anisata		bush			b	c	
Clerodendrum glabrum		bush		a	b	c	d
Dalbergia obovata		bush				c	c
Diospyros villosa		vine				c	d
Dovyalis zeyheri		tree			b	c	d
Euclea natalensis		bush				c	
Euclea racemosa		bush				c	
Harpephyllum caffrum		tree			b	c	
Hippobromus pauciflorus		bush		a	b	c	d
Laurida tetragona		bush			b	c	
Mystroxydon aethiopicum		bush				c	
Ochna natalita		bush			b	c	d
Pittosporum viridiflorum		tree	protected			c	d
Pleurostyliia capensis		tree				c	
Psychotria capensis		bush				c	
Schotia latifolia		tree			b	c	
Sideroxydon inerme		tree	protected		b	c	
Vepris undulata		tree			b	c	
exotic plant	*						
section							
hill top				a			
west slope					b		
gully forest						c	
quarry slope							d

Table 2 : PLANTS IN THE THICKETS OF SECTION B AT WANSLEY FARM

plant	ex	form	status	A	B	C	D
Acacia karoo		tree		a	b		d
Apodytes dimidiata		tree		a	b	c	d
Berkheya decurrens		herb	weed	a	b		d
Brachylaena illicifolia		bush		a	b		d
Burchellia bubalina		bush		a	b		d
Canthium inerme		bush			b		d
Canthium pauciflorum		bush			b		
Capparis sepriaria		vine			b		
Carissia bispinosa		bush		a	b	c	d
Clausena anisata		bush			b	c	
Clerodendrum glabrum		bush		a	b	c	d
Coddiea rudis		bush		a	b		d
Cussonia spicata		tree		a	b		d
Diospyros dichrophylla		bush		a	b		d

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Diospyros scabrida	bush		a	b		d
Diospyros simii	vine			b		
Dovyalis zeyheri	tree			b	c	d
Euclea undulata	bush			b		d
Euryops chrysanthemoides	herb		a	b		
Ficus sur	tree			b		
Grewia occidentalis	bush		a	b		d
Gymnosporia buxifolia	tree		a	b		d
Gymnosporia capitata	bush			b		
Gymnosporia heterophylla	bush			b		
Gymnosporia polyacantha	bush			b		
Halleria lucida	bush		a	b		
Harpephyllum caffrum	tree			b	c	
Helichrysum cymosum	herb		a	a		
Helichrysum kraussii	herb		a	b		
Hippobromus pauciflorus	bush		a	b	c	d
Jasminum angulare	vine			b		
Lantana camara	bush	*	weed	a	b	d
Laurida tetragona	bush			b	c	
Lipkea javanica	bush		a	b		
Melia azedrach	tree	*		a	b	
Ochna natalita	bush			b	c	d
Olea africana	tree		a	b		d
Pachycarpus linearis	herb			b		
Psidium gujava	bush	*		b		
Rhoicissus revoilii	vine		a	b		d
Rhus laevigata	bush			b		
Rhus pentheri	bush		a	b		d
Rubus rigidus	vine	*	weed	a	b	
Schotia latifolia	tree			b	c	
Scolopia zeyheri	bush			b		d
Scutia myrtina	bush		a	b		d
Senecio bupleuroides	herb			b		
Sideroxylon inerme	tree		protected	b	c	
Solanum linnaeanum	herb	*		b		
Solanum mauritianum	bush	*	weed	b		
Trimeria grandifolia	bush			b		
Trimeria trinervis	bush			a	b	d
Vepris undulata	tree			b	c	
Zanthoxylon capense	tree			a	b	
Rhus dentata	bush			a		
Rhus longispina	bush			a		
Solanum aculeastrum	bush	*	weed	a		
Sutera polyanthera	herb			a		
Tephrosia grandifolia	herb			a		
Dalbergia obovata	bush					
Diospyros villosa	vine				c	c
Pittosporum viridiflorum	tree		protected		c	d
Euclea natalensis	bush				c	
Euclea racemosa	bush				c	
Mystroxyton aethiopicum	bush				c	
Pleurostyliia capensis	tree				c	
Psychotria capensis	bush				c	
Euphorbia triangularis	tree				c	
Ricinis communis	herb	*	weed			d

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Table 1 PLANTS IN GULLY FOREST SECTION C AT WANSLEY FARM

plant	ex	form	status	A	B	C	D
Apodytes dimidiata		tree		a	b	c	d
Carissia bispinosa	-	bush		a	b	c	d
Clausena anisata		bush			b	c	
Clerodendrum glabrum		bush		a	b	c	d
Dalbergia obovata		bush				c	c
Diospyros villosa		vine				c	d
Dovyalis zeyheri		tree			b	c	d
Euclea natalensis		bush				c	
Euclea racemosa		bush				c	
Harpephyllum caffrum		tree			b	c	
Hippobromus pauciflorus		bush		a	b	c	d
Laurida tetragona		bush			b	c	
Mystroxyton aethiopicum		bush				c	
Ochna natalita		bush			b	c	d
Pittosporum viridiflorum		tree	protected			c	d
Pleurostylia capensis		tree				c	
Psychotria capensis		bush				c	
Schotia latifolia		tree			b	c	
Sideroxyton inerme		tree	protected		b	c	
Vepris undulata		tree			b	c	
exotic plant	*						
section							
hill top				a			
west slope					b		
gully forest						c	
quarry slope							d

Table 2 : PLANTS IN THE THICKETS OF SECTION B AT WANSLEY FARM

plant	ex	form *	status	A	B	C	D
Acacia karoo		tree		a	b		d
Apodytes dimidiata		tree		a	b	c	d
Berkheya decurrens		herb	weed	a	b		d
Brachylaena illicifolia		bush		a	b		d
Burchellia bubalina		bush		a	b		d
Canthium inerme		bush			b		d
Canthium pauciflorum		bush			b		
Capparis sepiaria		vine			b		
Carissia bispinosa		bush		a	b	c	d
Clausena anisata		bush			b	c	
Clerodendrum glabrum		bush		a	b	c	d
Coddiea rudis		bush		a	b		d
Cussonia spicata		tree		a	b		d
Diospyros dichrophylla		bush		a	b		d

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exotic plant *

section
hill top
west slope
gully forest
quarry slope

a b c d