

Until 1876 control of Crown forests was through the Civil Commissioner  
 In 1876 'Forests and Plantations' was constituted a separate department of the  
 1876 Ministerial Division of Secretary for Agriculture, its principal offices corresponding directly  
 with the Ministerial Office. 1881  
 1892 Amalgamated with Lands, Mines & Agriculture.  
 41

(regional); Forester or Superintendents of Plantations (Local) with or without Native Guards.

(d) 1881 - 1891 - Superintendent of Woods and Forests responsible direct to the Commissioner of Crown Land and Public Works (Ministerial); with Conservators of Forest under the Superintendent of Woods and Forests (Departmental) and Forester under Conservators (Forest ranger post abolished).

*De Vasselt*

(e) The Inter-regnum (1891 - 1906) - Post of Superintendent of Woods and forests abolished; Conservators mutually independent, individually responsible direct to the Commissioner of Crown Lands and Public Works.

*C.A. Curry*

*1st September 1892 /*

(f) "Forests" transferred to Agriculture - ~~1897~~ Ministerial re-organisation - Secretary (i.e. Ministerial) of Agriculture, Mines and Lands, with Forests the tenth Branch of Agriculture. conservators individually responsible to an Assistant under Secretary for Agriculture. (N.B. Since the designation of the Ministerial Portfolio was that of "Secretary", it followed that the Departmental head became an "Under-Secretary" and heads of Branches Asst. Under-Secretary). This arrangement continued until the founding of the Forest Department in 1906 - see below. Virtually, the 1882-1891 organisation was that of an independent department, but the Commissioner (Minister) at the time considered that he did not need a "head of department", hence the abolition of the post of Superintendent of woods and Forests.

*John Frost*

*12. Sept 1893*

*Alfred Charles Cartney*

(g) Founding of the Forest Department - (1906)

Towards 1904, public concern and agitation regarding the administration of the ministerial portfolio of Agriculture, Mines and Lands, with Forests the tenth branch of Agriculture, led to the appointment of a Commission of Inquiry into the administration of the Public Service, and in accordance with its recommendations, the establishment of an independent Forest Department in the Ministerial Portfolio of Agriculture and Forestry. On the recommendation of the Commission, Mr. J. Storr-Lister was appointed as Chief Conservator of Forests with headquarters at Cape Town and transferred to Pretoria at Union in 1910.

At Union, the Natal Province, then without a separate Forest Department was made a conservancy with a Conservator of Forests stationed at Pietermaritzburg and amalgamated with the other six namely - Western, Midland, Eastern and Transkei of the Cape Province, Orange Free State and Transvaal, in the Union Forest Department of seven conservancies. (See the change from Conservancy to Region referred below).

Further events to be noted comprise -

1913 : The retirement on superannuation of J. Storr-Lister, Chief Conservator of Forests succeeded by C.E. Legat, who -

1931 : retired on pension and succeeded by F.C. Geldenhuys, as Director of Forestry; post of Director abolished to become Chief

### Forest Management.

1934 : Post of Director of Forestry re-established. Departmental responsibility - Secretary for Agriculture and Forestry.

1946 : Independent departmental responsibility in the Ministry of Agriculture and Forestry.

1959 : Designation of Director changed to Secretary for Forestry.

Ministerial Responsibility - must be understood to mean the Minister of State to whom the Governor-General (now President) may from time to time assign the administration of a particular Act of Law; obviously then, this depends on changes in Cabinet which, with respect to forest administration, has since Union brought about the following sequence in forest administration namely - Agriculture and Forestry; Transport and Forestry; Lands and Forests; Labour, Forests and Public Works; Education and Forestry; Defence and Forestry; Lands and Forestry; Forestry, Bantu Education and Indian Affairs; forestry, Sport, recreation and Tourism; Water Affairs and forestry. The association with Agriculture was the longest and during the whole period Forestry served under sixteen different Ministers.

### COLONIES OR REPUBLICS BEFORE UNION

#### NATAL - ZULULAND

The history of forest administration in the Garden Colony of South Africa makes dismal reading. Under the Lieutenant-Governor - Colonial Secretary Regime, the extent of natural forest was reduced drastically by the sale of heavily forested Crown land, by uncontrolled cutting in Crown or private forests, and by eradication by Whites and Blacks alike. The Report of the 1878 Forest Commission disclosed a deplorable state of affairs, confirmed in that by Fourcade of 1889. as a result of the latter a forest service was created in 1891 by the appointment of a professional officer, Mr. Schöpslin, as conservator of Forests on a three year contract, ending in his resignation the following year, when forest administration was placed under the Surveyor - General and patrolled by the Police. After a lapse of thirteen years and on the recommendation of Mr J. Storr-Lister of the Cape Forest Department, a forest service was again established in Natal under Dr T.R. Sim as Conservator by transfer from the Cape, only to end in abolition of the post three years later. Forest administration was then placed under Agriculture lasting until 1910, when Natal became a Union Conservancy in charge of Mr A.W. Heywood as Conservator.

During this series of events, a staff of European rangers and some Native forest guards was maintained, but under no guidance in respect of forest management. The rangers included several owners of farms adjacent to Crown forests, and at least one of them succeeded eventually in removal of all squatters in the forest supervised by him. There were at times proposals for appointment of district forest officers and foresters, also mentioned in the legislation, but there is no record of such appointments until after Union. The issue of licences for cutting of trees to those honest enough to apply, was

apparently done in the office of the Magistrate concerned.

#### ORANGE FREE STATE

Devoid of natural timber forests and having to be content with some savanna-woodlands in the West, riverine tree growth, scattered small trees or scrub in sheltered places in ravines or on mountains, there was no urgent need for forest administration until systematic afforestation and tree planting (arboriculture) was begun under the Crown Colony Government in 1903, leading to the appointment of Mr K.A. Carlson from the Cape Forest service as Conservator with a staff of trained officers and untrained foresters. This organisation functioned independently in the ministerial division of Agriculture with respect to records and accounting until 1910, when the Free State became a Conservancy in the Union Forest Department. A major function of this Conservancy was the trail introduction of trees and shrubs suited to the rigorous climatic conditions of the Province (Ref. Chapter VI Afforestation).

#### TRANSVAAL

In republican, as well as colonial times prior to 1902, forest administration was concerned mainly with the issue of felling permits and licences for trees in Crown forests or on Crown land by landdrosten or magistrates. The only forest officials were two "bosopzichters" (forest supervisors), one in the Pietersburg, and the other in the Vryheid District. In that year Mr C.E. Legat of the Cape Forest Department was appointed as Chief Forester for the Transvaal, responsible to the Colonial Secretary, but having his recording and accounting work done in the Department of Agriculture. Under him served a small staff of foresters and in 1908 the first district officer, Mr C.E. Lane-Poole, professionally qualified, was appointed at Woodbush Forests, Pietersburg District. In addition to some plantation work, this officer was employed on demarcation of Crown forests in that district. At this time many of the indigenous mountain forests in the Transvaal had been over-exploited and closed to cutting for an undefined period. Exploitation then shifted to undemarcated forests in the Lowveld which had become accessible to the Komatipoort Spelonken Railway and required much supervision under difficult conditions. Afforestation on the Highveld and East Transvaal was begun and an additional District Forest Officer with a complement of Foresters appointed. This was the position in 1910, when the forest service became a conservancy in the Union forest organisation.

#### REVIEW OF FORESTS ADMINISTRATION

##### PERIOD I: NETHERLANDS EAST INDIA COMPANY

Systems of forest administration remained practically unchanged. Exploitation extended eastwards to no further than Plettenberg Bay, excluding the forests from near George to Knysna as being inaccessible, whereas Plettenberg Bay was accessible from the Indian Ocean; Knysna Lagoon was blocked by its sandbar. The timber post at George, opened in 1772, was manned by an officer with six assistants, but

Plettenberg  
Bay  
most  
accessible

presumably local woodcutters had to be employed on working of timber in the forest, besides others on extraction and transportation to the Post: The Post was also responsible for delivery of timber in kind and quantity requisitioned from Cape Town and the building of wagons for that purpose.

In such conditions waste in forest and workshop was unavoidable, and unless the workmen were competent and experienced, injury to the forest was understandable; nevertheless the Landdrost was in one recorded instance requested to give his attention thereto and to plant trees in replacement of what was removed as security for the future. Exploitation at Plettenberg Bay assumed large proportions and many private woodcutters settled in that area. Sale of timber, except to the Company, was at first prohibited, later permitted including export. Apparently no forest regulation measures were applied at any timber post or in respect of what was felled or removed by private individuals. Owing to want of sufficient competent staff the administration failed to obtain compliance with rules or regulations, except in close vicinity of Table Bay.

The forests and tree growth inspected and reported on by earlier governors, such as - Devils Peak - Wynberg, Houtbay, Campsbay and Robben Island by Van Riebeeck; Hottentots Holland and Drakenstein by Simon van der Stel; Franschoek - Tulbagh by Willem Adriaan van der Stel, and by a commission in the Zonder End Valley, could not last, in spite of the placats or orders, simply through the want of supervision. Thereafter, and in better times, but not better in relation to action taken, many of these originally well-wooded valleys or ravines became denuded of vegetation and soil by the combined actions of cutting, burning, grazing and uncontrolled torrents. Mountain woodlands suffered the same fate. But the administration at that time, nor those thereafter, cannot in these respects be blamed by the present: the same causes of degeneration still prevail.

It is recorded that two foremen were employed at a Newlands Plantation under direction of Governor W. Adriaan van der Stel, and in compliance with directions from Holland, two trained botanists specialised in horticulture to assist the head gardeners of the Company in the propagation of introduced or local plants. They also had to collect and prepare herbarium specimens for identification. The common name "Yellowwood" for the Podocarps appear in Placaat No. 35 of 1658.

Preservation of the vegetation on the Cape Flats and Downs, with boundaries defined for that purpose, received much attention for protection of the drift sand and as a source of supplies of thatch grass (Duine Riet), buchu and wax berries and firewood. During the short second occupation a special supervisor was appointed for the area between Table Bay and False Bay.

MEEDING At the Plettenberg Bay timber post, where woodcutters employed on working timber for the Company selected trees for felling by themselves, forest administration failed to such extent that a certain Mr Meeding, self-styled "King of Woodcutters" (or indeed of the Bay) was allowed to select for felling only the very best trees in any parts of the forest and make the woodcutters fell only such trees.

(N.B. Meeding was appointed as supervisor of the timber contractors - Vide the Adendum to Chapter X Woodcutters).

## PERIOD 2: BRITISH COLONIAL ADMINISTRATION

The scene had changed: advance in geographical economy predicted changes in political economy with changes in administration adapted thereto: the arrival of the 1820 Settlers brought a sudden increase of 3 000 in the white population with demand for timber for housing, domestic use, bridge-building, fencing and transport equipment. The forests of the Eastern Province were exploited for this purpose, but without any possibility of control. Following thereon was, firstly, the emancipation of slaves in 1834, also with demand for housing; and the Great Trek commencing 1836, combined with settlement of the north-eastern districts of the Cape Colony, all obtaining supplies of timber from these forests and all on the system of "no-mans-land". Meanwhile, immigrant Native tribes occupied the Transkei, Ciskei, Queen Adelaide Province, some penetrating to the Humansdorp and Knysna Districts. These developments were by no means peaceful: many Kaffir wars distracted attention from orderly civil administration. Second in importance was the commencement in 1869 of diamond mining at Kimberley with inroad in the Savanah woodland taken over by Responsible Government in 1872.

In forest administration the government had to contend not only with the growing demand for timber against the decreasing natural resources, but also with the constant clamour of the Knysna woodcutters for more and more wood to earn a living in the rise of civilisation. To accentuate this dilemma, there was the want of administrators versed in the knowledge of forest management and in the art of dealing with problems of this nature, handicapped in such circumstance by want of legislation helpful and appropriate to the need. Matters drifted to a climax of Cabinet level concern. Leading thereto was the report of the Government Botanist, confirmed by that of his successor, on the deplorable state of the administration of his successor, on the deplorable state of the administration and management of Crown forests from the Knysna region through to British Kaffraria: theft of timber exceeding what was licenced; waste in working of timber; destruction of worked-out forests by fire; injury to the regrowth; cutting of wattles, poles and firewood; grazing by cattle inside the forests; erosion of cattle and slip paths; absence of fire protection measures.

Supervision of the forest was in the hands of forest rangers, whose functions ended in police work made difficult by the issue of felling permits scattered far and wide in their patrols without reference to them and permitting the felling of trees where and what suited the permit holder. These rangers were responsible direct to the Colonial Secretary at Cape Town, and it is recorded that in some instances a ranger did actually not know to whom he was responsible; nor was he required to, and with few exceptions able to, advise the authorities regarding the administration of forest in his patrol.

In addition to rangers, Native guards were employed in the Ciskei,

but experience proved that in Native areas they were unreliable, incompetent, open to bribery and selfinterested.

Soon after the incorporation of the Ciskei in the Cape Colony in 1856 Baron J. de Fin was appointed as "Conservator" of Forests at Keiskama Hoek. His functions did not extend further than those of a ranger, and as he was no match for the slim tricks of woodcutters or timber thieves, his post became a sinecure. Outstanding amongst the rangers of those times was Captain Chris Harison stationed at Olifants Hoek in Alexandria with control over the forests extending through Uitenhage to Van Staden Pass. In 1856 he was transferred to Witte Els Bosch, promoted in 1874 Conservator of Forests at Knysna and there after to Tokai at the Cape.

Harison @  
Witte Els  
Bosch  
1856-1874

Reverting to the Knysna region: Administration problems came to a head in 1847. The Government panicked. Drastic action could no longer be delayed. The Auditor-General drew up a set of regulations with accent on financial aspects; his consultant, the Magistrate of George, could not advise him on forest management in such circumstances. The governor resorted to the expedient of disposal once and for all of the crown forests - thus "passing the buck to private forest owners", and as an inducement to buyers, closing the remaining Crown forest; as was done in the Ciskei, where forested land was classified as Waste Crown Land. But the Knysna problem could not be solved by measures of expediency: all the forest lost discontinued. But the rest was not silence: private owners demanded compensation for breach of contract, eventually authorised by Parliament - the woodcutter problem remained and over-exploitation was resumed.

Twenty-five forest lots of 300 to 700 morgen were sold in the George District at upset prices of 5/- to 15/- per acre - the value of one good Yellowwood tree; a few lots of larger extent in Knysna District and eighty-five in Zitzikama. Inevitably, the sale of forest lots opened a lucrative investment for land speculators, whose agitation continued until 1874, after Responsible Government, when, largely on Harison's advice, intervention of the Hon. J.X. Merriman brought a change of policy. By good luck a proposal after the visit of the Duke of Edinburgh in 1867, for an overseas company to acquire all the Knysna forests, did not eventuate. T. Bain

Brierley

Interested in the possibilities of supply of timber to the British Navy the forests between the Bay and Knysna reserved to the Government by the Cradock Proclamation of 1811 following on a visit in 1809 by Lt. Col. Collins, Col. Stockenstrom and Dr Cowdrey. However, following on an investigation by Cpt. Jones, the timber post was closed, the Cradock proclamation withdrawn in 1820 and the forests opened to cutting. In 1818 the Knysna River having been declared navigable by coastal vessels, exportation of timber from Plettenberg Bay came to an end and exploitation transferred to the Main Forest.

Nearer to headquarters at Table Bay, preservation of the dune vegetation of the flats and downs received attention: the boundaries were re-defined and a set of new regulations promulgated providing, inter-alia for strict control of grazing (goats prohibited), cutting of wood, and protection of buchu (spelt boegoe) and waxberry plants. Further measures introduced included -

1892 { Asst. Commissioner of CL & PW  
Gibson Clerk  
Asst. Commissioner. 1892

H.H. McNaughton  
Charles Curry

Dec 7  
Appd. 1880  
" 1881

47

(a) The grant of prizes for tree-planting competition of £200, £100 and £25; - with satisfactory results; and -

(b) The inclusion in transfer titles of plots sold of the regulation relating to conservation.

The construction of the new road from Bellville to Cape Town in 1894 was a boon and blessing, and required special regulations for protection of roadside vegetation as a barrier to sand drift. (In early times, farmers bringing produce to Cape Town and returning with provisions, drew the bungs of casks of unsold wine or brandy to lighten the load on the return journey in order to facilitate crossing of the sand dunes).

The Period ended without any definite policy in force with respect to forest management, nor was the planting of trees in regeneration of worked out forests brought over from the previous Period; and afforestation was still in embryo. The preamble to the Forest and Herbage Preservation act embraced several guiding principles regarding veld burning and forest exploitation, but in absence of purposeful administration the relevant provisions remained dead letter in the statute book.

### PERIOD 3: RESPONSIBLE GOVERNMENT

At the introduction of responsible government in 1872, the ministerial responsibility for forest administration passed from the Colonial Secretary to a Commissioner of Crown Land and Public Works through an Assistant Commissioner or Under-Secretary to whom the forest rangers were directly responsible. The issue of felling permits and timber licences remained with the local Magistrates or Civil Commissioners. In realisation of the inefficiencies of this organisation, inspection visits were made in 1874 by Mr. Charles Curry, Under-Secretary, to the forest stations in the Eastern Conservancy, and by Mr. H.H. McNaughton, Assistant Commissioner, to the Midland Conservancy. Following thereon Cpt. Chris Harison was promoted to Conservator of Forests with headquarters at Knysna in the same year. In this re-organisation the post for Conservator for the George and Knysna Districts, respectively, was abolished and the new Midland Conservancy, including Humansdorp District to Van Stadens River brought under central control.

C.C. Curry  
H.H. McNaughton.

1874

Harison

As regards the Eastern Conservancy, re-organisation was delayed pending the appointment of Mr D.E. Hutchins at King William's Town in 1882. That re-organisation involved the abolition of the post of Conservator at Keiskama Hoek held by Baron J. de Fin since 1856 and also the posts of rangers substituted by foresters.

1882

The foresters were chosen from the police service or the military or from German levy settlers. They were well-instructed in their duties and soon became imbued by the boundless energy and determination of the Conservator. The commencing salary of a forester was £4 per month with a forage allowance of £2 per month - horse and saddlery provided by himself, with two acres of garden ground, if available. Several

foresters of that time had to build their own dwellings - doors, windows and hardware supplied at nearest station, timber from the forest, and other local material - bricks or wattle and daub. Many years had to pass before the Government was able or willing to provide better accommodation for the field staff.

With the aid of the new regulations, the organisation at no extra cost and with increased revenue soon had the woodcutter and timber thief - white, coloured or native - under strict control, ending in a large migration across the Kei River, where for a felling permit of 5/- per month the cutting of trees was without restriction. (In Pondoland, before annexation, the royalty to the Chief was £5 per annum, all paid).

Storr Lister  
1874
29 # III
 Prior to the appointment of Mr (later Sir) D.E. Hutchins, the Government in 1874 secured the services of Mr J. Storr-Lister, colonial-born with Indian forest experience, as Superintendent of Plantations at the Cape, including reclamation of drift sand on the Cape Flats. There followed the appointment in 1882 on a ten year contract of the Compt de Vasselot de Regné in the Ministerial Department of Crown Lands and Public Works as Superintendent of Woods and Forests for the Cape Colony. The Compt, like Mr Hutchins, obtained his training at the school of Forestry at Nancy, France, with practical experience in forest management and administration.

Attached to the Compt and trained by him, was Mr H.G. Fourcade, a qualified Land Surveyor, and Mr A.W. Heywood, qualified in English, French and German languages. Fourcade's first appointment was the production of maps of the Crown forests; later to be appointed as demarcation officer and land surveyor in the Department. To Heywood fell the enormous task of translation of the Compt's correspondence, reports, instructions, and forest codes or manuals. On departure of the compt, he was appointed as District Forest Officer at Uitvlugt on the Cape Flats, promoted to Conservator at Knysna, Umtata, King William's Town and finally Pietermaritzburg. On arrival in the Transkei he first of all had to recruit and train a staff of district forest officers, clerical personnel and foresters. Success therein raised the status of the Conservancy equal to that of any other.

The Period 1882 - 1891 marked an era in forest management and administration and laid a foundation for silvicultural control of the natural forest much of it, however, ruined beyond repair by application of orthodox systems or practices; therefore, the architect himself regarded the methods recommended as a transitory stage admitting improvement on experience, and particularly, awaiting the essential growth data then still missing. To the Report, tabled in Parliament on his inspection soon after his assumption of duty, of the forests from Mossel Bay to the Ciskei, returning via the South Karoo, was attached about thirty documents containing observations, explanations, instructions and recommendation; only four of these could be translated and printed in time for the coming session of Parliament. The recommendations; only four of these could be translated and printed in time for the coming session of Parliament. The recommendations included the training of young colonists at a recog-



nised institute, Nancy at that time, for employment in the Department, and also the need for revegetation of the denuded mountains and rivers in the low rainfall regions in order to reduce surface run-off and prevent erosion and so obtain greater benefit from the rainfall. The Report was accepted by Parliament by Resolution No. 26 of 1883.

Although the Compt was agreeable to an extension of his contract of employment, the Post was abolished in 1891 for "financial reasons". Commissioner J. K. Merriman had been succeeded by Mr. James Sivewright, who held the view that the cost was not justified and that there was no need for a controlling head of the Department under his administration.

This did not last; in the following year the ministerial responsibility for "Forests" was transferred to a Cabinet Portfolio of Lands, Mines and Agriculture with Forests as a branch of the latter.

#### ADMINISTRATION IN REFERENCE TO LEGISLATION-

On advice of the Compt de Vasselot the regulations of 1875 were repealed and replaced by a new set under G.N. No. 406 of 1883. Next for consideration was the Forest and Herbage Preservation Act of 1859 which was eventually withdrawn by the Forest Act No. 28 of 1888.

One of the printed documents attached to the 1883 Report contained a summary of instructions or rules issued to forest officials at the introduction of the new (1883) regulations. The object of these regulations was stated to be -

- (a) To fell the quantity of timber equal in amount to that which the forests can yield in perpetuity so that each year the quantity felled may be replaced.
- (b) To secure the reproduction as quickly as possible of the best species on the part cleared.

With these objects the Crown forests of George and Knysna will be divided into a certain number of blocks, which will be subject to a regular scheme of management. In such a block and in those blocks, where it is practicable, timber marked each year for felling shall be sold in the "log" in accordance with the conditions of sale.

Pending completion of details necessary for the establishment of a regular scheme of management for the working of different forests, the following rules for the crown forests of George, Knysna and Humansdorp were notified for general information -

- (1) Blocks of forests permitted to be worked will be opened in sections of one twenty-fifth of the contents in one or more parts as may be convenient for the Department;
- (2) Each part will be open for two years, thereafter the forest being closed, except in those parts where improvement fellings are considered necessary, but those parts shall not be open and improvement fellings not take place, unless by special orders of the

CCL.Pw.

~~1890~~

1890

1890

Rhodes

J. Sivewright

1893 Laing

De V's

letter 13.3.89

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1883

Regulations  
1883

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Superintendent of Woods and Forests;

(3) In each section the trees to be felled will be previously marked, measured and numbered;

(4) Sections will be open to the public, but licences will be issued to fell only those trees which are marked, numbered and measured and are of the descriptions (? species) known by the Officer-in-Charge to be in season at the time of the year when applied for, and at no other time;

(5) Tariff rates, at per cubic foot, for timber at prescribed rates for different species, poles and firewood at per load of 20 ft. wagon; timber licences at per 100 cubic foot - Hoppus  $\frac{1}{4}$  girth, with adjustment after felling;

(6) Procedure for issue of licences, licence conditions, conditions for working of timber, penalties for damage to forests, free grazing for a span of sixteen trek oxen.

On his arrival in the Zitzikama in 1866 Cpt. Harison had also introduced a system for working of the forests in sections and soon after 1883 Conservator Hutchins applied the new system in the eastern Conservancy. By concentration of the work in the above manner, facilitated further by subdivision of the annual Section into "Vires", order in management was at last secured: no longer was there free choice of cutting or felling permits, theft of timber, careless injury to the growing stock and waste of utilizable timber. Success of the section system depends apart from control of exploitation, on regulation of the yield in accordance with capability of the forest: in the absence of working plans, increment data or of past yield per unit area, it was not possible to determine or even forecast the capability. This was recognised by the Compt de Vasselot, hence his warning that the system introduced must be regarded as transitory.

Actually, the cycle adopted tentatively was not sufficient to bring any regrowth into the next age or size class: much depends on the mast years of different species and on climatic conditions favourable to germination at time of the mast.

#### THE 1892 - 1906 INTER-REGNUM

On the departure of the Compt de Vasselot early in 1892, the four forest conservancies of the Cape Colony, each administered by a resident Conservator, became mutually independent and individually responsible to the Commissioner of Crown Lands and Public Works through an Assistant Commissioner. The arrangement whereby the Conservator of Cape Town, Mr. D.E. Hutchins transferred from ~~King-William's~~ <sup>Kingsm</sup> Town, was given the additional function of Technical Consultant to the Commissioner, was a wise move, but no compensation for abolition of the post of Superintendent of Woods and Forests. His advice on technical matters could not be given on his own volition, he had no authority over the other Conservators, and he was not called upon to

accompany the Commissioner on inspections, nor is there any record in the Annual Reports to Parliament of any such consultations.

Of outstanding importance was the full and correct application of the principles and methods introduced by the re-organisation of the 1880's in the administration, management and control of the Crown forest; however, reading through the annual reports of the several Conservators or Superintendents of Plantations of that period is frustrating, and leaves the impression that the information contained therein would have better served the purpose of an annual report, had it been collated and presented for the colony as a whole. In the want of cohesion or co-ordination, perspective was lost and problems could not receive due consideration, ending in inquiries by select committees or special commissions. The attempt in 1895 at co-ordination and standardisation introduced by the assistant commissioner, brought improvement, although not covering all essential, not providing for collation of statistics and still leaving the printed reports in separate sections for the four conservancies.

The period in question, relative to "Forests" progressed beyond static colonial rule: expansion in afforestation was begun; calling for introduction of suitable and adaptable species of trees, methods of establishment and silvicultural treatment for them, not without problems and dangers in these and other respects; afforestation was highly educative and, therefore, desirable that experience gained should be regularly passed between conservators and district officers. On account of delayed publication of the annual reports the information contained therein became historical and of much less value.

The selection system - For the sake of future reference, it is necessary to record that in the course of time, the use of this term in reference to the management of indigenous forests became a catch word in certain parts serving to indicate the removal of all utilizable mature trees without regard to the need for maintenance of canopy height, shade and shelter for seedlings, protection against insolation and symbiosis of species in particular sites building up the inside structure of the growing stock.

In the Kalahari Woodlands a similar system happened to be applied notwithstanding the inevitable creation of dense thorn scrub with harm to grazing and inroad of noxious plants. In the mountain woodlands of the Cape steps were being taken to prohibit the cutting of tanbark-producing species on the Cedarberg Forest Reserve, but not yet on private farms, in spite of the danger of veld fires from the dead wood.

Any reasonable limit to this review precludes a narration of all more important changes in forest administration during the period or even a chronological citation of events. The three Schedules do, however, indicate the major events in geographical and political economies having a bearing on forest administration. By keeping them within limits, the events of the first two years and those of the last two years of the period are dealt with in more detail, mainly to record the development in forestry to the founding of the Department in 1906.

(1) THE FINANCIAL YEARS 1891 AND 1892

1890 C.J. Rhodes? P.M.  
1890 J. ...

Ministerial responsibility vested in the Commissioner of Crown Lands and Public Works, Col. Schermbucher, with an Asst. Commissioner, Mr H.H. Mc Naughton. Conservancy organisation comprised the transfer of Mr Hutchins from Knysna to Cape Town, succeeded by J. Cooper, a Nancy-trained professional officer. Until the arrival of Hutchins at Cape Town, the two serving district forest officers, A.W. Heywood, Uitvlugt, and C.B. McNaughton, Tokai, and Superintendents at Kluitjieskraal (H.M. Clark), Worcester (H.C.A. Man), Hanover (H.J. van der Byl) and the forest rangers at Cedarberg (Budler) and Vryburg (Scott) were responsible to the Commissioner. The position regarding supervision of Grootvadersbosch and River Zonder End is not clear.

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Plantation Management- In deference to public concern regarding pruning of older crops and thinning of younger, Commissioner Schremsbrucher made an inspection of Kluitjieskraal and Tokai Plantations and gave a positive order that in all compartments planted at an espacement of 10 X 20 ft. the stand density was to be increased to 10 X 10 ft. by interplanting one row and that in future all pines should be in 3 ft. to 4 ft. rows for in situ sowing, or 3 X 3 to 4 X 4 ft. for transplants, and that Eucalypts should not be planted wider than 6 X 6 ft. In addition, the older pine compartments were to be pruned to appropriate heights and the ground between the trees well cultivated. The latter operation led to the adoption of mechanisation by use of the 2-wheel American Planet Junior cultivator. The intention of the 10 X 20 ft. espacement was that when sufficient cover was obtained, the crops would be underplanted with suitable indigenous species. This was done successfully at Tokai, but at Kluitjieskraal the conditions were found to be unsuitable. On the departmental side there was growing concern about the over-dense sowing or planting of conifers or wattles. These questions are dealt with further in Chapter VI Afforestation and Chapter XI Research.

Campbell Commonage Forest - Arising from a further inspection by Mc Naughton, a new tariff for firewood was introduced by G.N. No. 713 of 1891, as follows -

- (a) £1.0.0 to £2.0.0 according to length of load;
- (b) Dry wood at 15/- to £1.10.0.

The species of wood specified as Swarthaak (Black Thorn) included that of practically any kind available. In the absence of any forest official, licences were issued by Government agents, who themselves were firewood agents or merchants entitled to select the trees to be felled. Selection of the larger trees reduced the woodland to scrub to detriment of the grazing and future value thereof.

Cedarberg Forest Reserve - Improvements by G.N. No. 227 of 1891 included -

- (a) withdrawal from grazing of land on which there are Cedar trees;
- (b) appointment of an assistant Ranger during the fire danger season

(in Summer);

(c) notwithstanding McNaughton's advice, the stripping of tanbark was allowed to continue at the tariff rate of 1/- per 100 lb. dry weight for suikerbos (Protea mellifera); Kliphout (Rhus thunbergi); Wilde Pruim (Pterocelastrus spp.) also for Buchu (Barosma crenulata) - medicinal. The stripping of Wabooms (Protea grandiflora) was, however, prohibited.

From adjoining farms one bark dealer obtained 300 00 lbs dry "Protea" which at 15 lbs average involved the felling of 20 000 trees. Failure of Acacia saligna bark for the London market increased the demand for "Protea" bark. At an inspection the following year by Conservator Hutchins the revenue from the Reserve had dropped to £45.17.3, ascribed by Ranger Budler to uncontrolable theft of wood, buchu and grazing. As licences could only be obtained at Clanwilliam with the Ranger on patrol several weeks at a time, the risk of thieving was preferable to delay and time spent on obtaining a licence for small amounts.

Bechuanaland and Griqualand West, including Campbell Commonage referred to above. The land was being denuded for supplies of wood for the Kimberley market. Forest Ranger Scott, intelligent and energetic, could not control the cutting of wood under the large number of licences issued constantly by agent for the government over the vast extent of Crown land; similarly the Native Commissioner in respect of the Native locations; theft was virtually free from detection. An inspection by D.F.O. McNaughton, followed later by that of conservator Hutchins, ended in the issue of new regulations regarding the cutting of wood and proposals for the demarcation of Pokwane and Wodehouse Kraal: The appointment of McNaughton as resident District Forest Officer was short-lived; he was recalled for other duties, leaving Ranger Scott in sole charge.

Other events to be noted were the arrangements made in terms of the 1882 House of Assembly Resolution for Mr C.B. McNaughton to attend the course in forestry at coopers Hill Engineering College, London; the loss of the Manor House Tokai, to the Porter Reformatory; the 1892 Resolution of the House of Assembly on the larger question of drift sand reclamation; the arrangement arrived at with the Cape Town Municipality regarding the management of Table Mountain Plantation by the Department for the Council and the arrangements for re-afforestation of Devils Peak. The Cape Town Government Avenue remained in charge the Forest Officer at Tokai.

#### MIDLAND CONSERVANCY - 1891 AND 1892

Forest Staff - Transfer of Conservator D.E. Hutchins to Cape Town, replaced by James Cooper. (Acting until confirmed). The Forestry establishment is not given; from the text it appears that Mr Fourcade was still employed on surveys of the Crown Forests and Mr Tothill in charge of Storms River. K.A. Carlson was transferred to Kokstad as District Forest Officer. The complement of foresters included Beck, Holtzkampf, Grimble, McGregor, Schmidt and Robberts. There were forest stations at Storm River, Millwood, Sourflats, Farleigh, Kruisval-

lei, Concordia, Quar, Deepwals and Kaffirkop; and six new appointments without experience in forest work.

*At Mr. Naughton's Visit Oct, Nov. 1891*  
Woodcutters Visit by H.H. McNaughton, Asst. Commissioner, in October - November 1891; Meetings with woodcutters - slipping and transport of timber extended to end of December in each year on account of better grazing and less damage to roads or slippaths; outright purchase of timber introduced in 1888 discontinued; over- or underpayments for timber adjusted in cash, instead of in "timber". Italian immigrants at Gouna and British at Kruis River had gone over to woodcutting on account of the plots allotted to them being too small to provide means of livelihood.

Exploitation - Last year, 1891, of free selection of trees for felling by purchasers; systematic measurements of standing trees for yield data; improvement thinnings in worked-over sections; sixteen sections still being worked and twelve new sections marked and opened for working. Railway Sleeper Contracts - Yellowwood only - Quantities supplied in three years 1889 - 1891; Crown forests - 133 415 cu.ft. private forests - 102 952 cu.ft. Gouna Timber depot - stinkwood and yellowwood seasoned in baulks supplied to Public Works Department for use in construction of Knysna River bridge and other governmental works; erection of seasoning shed at Gouna not yet authorised.

Forest Regeneration - First steps taken in replanting areas of burnt forest or worked-over sections: not a simple matter - investigation required in choice of species, preparation of ground, espacements, weeding and aftercultivation, possibly fertilisation. Planting of up to eight transplants pine or gum in place of one tree felled in sections proved unsuccessful and work shifted to burnt strips on margins of forests. Interplanting was begun at Millwood in 1890 by J. Cooper on advice of the Compt; in 1891 by D.E. Hutchins in worked sections or burnt forest margins; discontinued by A.W. Heywood to 1895; resumed by C.B. McNaughton on large scale; stopped by J. Storr-Lister in 1906; resumed by J.S. Henkel with Blackwood until outbreak of the Australian bug. Onwards from 1892 Hutchins concentrated on regeneration of Cedar and replanting of Groot Vaders Bosch with Camphor, Cedrela etc.

#### Access -

Authority was obtained for construction of roads by the Department to inaccessible parts of forests for sectioning or to new forest stations; at the same time transportation of timber from the Main Forest was improved through extension of the forest railway to Deepwals by the Knysna Timber Company and Messrs Thesen and Company. Taking over by the Humansdorp Division Council of the Zitzikama Main Road ended in a fiasco and several years had to elapse before the Council succeeded in making it passable for heavy traffic.

Forester's Quarters - Reconstruction in stone of the sixth forest station was completed and three more were in course of re-erection. The sites for these buildings were selected to afford a view over the main blocks of forests. (N.B. On account of the growth of forests or plantations, this did not prevail everywhere).

EASTERN CONSERVANCY : 1891 AND 1892

Forest Staff - Conservator of Forests J. Storr-Lister, Asst. Conservator - 1; District Forest Officers - 5; Foresters - 20; forest Guards (Native) - 2; Clerical - Chief Clerk, Assistants and Messenger.

Forest Demarcation - Demarcation of Crown forests was completed by the Asst. Surveyor-General in the previous decade, inspected and passed by a demarcation commission and accepted by the Natives or adjoining land owners. The beacons were monoliths or cairns of regulation size, but where stone was not available, earth mounds were erected with encircling and direction trenches. In the course of time some of the latter disappeared as a result of erosion, but many of the former type were destroyed or removed by native squatters or trespassers necessitating later redemarcations involving settlement of disputes.

Valuation of Indigenous Forests - On recommendations of the Compt de Vassel, valuations of crown forests were undertaken, but completed only in respect of those in the Eastern and Transkeian conservancies, in 1891 for the former and 1892 for the latter. The Eastern Conservancy valuation showed the following result -

Total extent of land .....	:	136,628 mgn.
Total extent forested .....	:	81,997 "
Standing value of growing stock .....	:	£1,283,097

For purpose of valuation the growing stock was classified as follows:-

- (a) High forest of reasonable quality - £30 per mgn.
- (b) Good quality low forest ..... - £15 " "
- (c) Exploited low forest ..... - £10 " "
- (d) 3rd grade low forest ..... - £8, £6 or £5

Depending on degree of exploitation or ravage by man or beast, all exclusive of undemarcated forests on commonages, outspans, locations or of forest on farms reserved for the Government, or of natural vegetation on drift sands or plantations. In the assessment of values allowance was made for degree of accessibility; growing stock volumes were taken from timber section measurements or special enumerations or by estimation in destroyed forests.

Forest Operations - Management and control included the gradual extension of plantations and surveying of the work done with an index to species for the Ft. Cunynghame Plantation working plan; the clearing of exterior fire belts for protection of the Katberg burnt forest and the marking of nine felling sections in the Kologha-Amatola Range. Exploitation was controlled by the issue of licences and permits. Of the 4 040 licences issued, 70% were for firewood from the Western Pirie-Thaba Ndoda Range. Seventy-six free permits were issued to headmen of Native locations for the removal by their people of hut or kraal building material and firewood. A record kept by the Foresters of such removals for the year 1891 in Peddie and King William's Town Districts showed that the value of the produce at tariff rates amounted to £20 588. In connection with the Port Elizabeth drift sand reclamation, arrangements were come to with the

Harbour Board for an extension of the railway to facilitate the transportation of town refuse to the sand dunes.

TRANSKEIAN CONSERVANCY : 1891 - 1892

Free Permits for Forest Produce - Section 4 of G.N. No. 209 of 1890 relating to the use of forest produce by Native residents of the Territory provided for the issue of free permits in that connection by local Magistrates. Usually these permits were made out by the Native Interpreter and often at such a rate and so exaggerated as regards kind and quantity of produce that the Magistrate could do no more than keep pace by signing the permits and, since responsibility was shifted from the headman to the Magistrate, the Interpreter had no guidance regarding the quantities applied for. Taken at random from the 1891 returns the following examples illustrate this point: 1 permit for 12 new huts; 31 wagon loads of kraalwood for one occupier; 24 loads of kraalwood; 40 loads for a kraal for 6 oxen and 120 sheep or goats ..... In accordance with Native superstition a kraal had to be burnt and a new one erected in event of a death. In the year 1892 the number of permits granted amounted to 50 294.15.0 at tariff rates. In such conditions supervision and control by the Department were out of the question: the conservancy staff consisted of one Conservator of Forests, six untrained foresters and some native guards - to manage and protect the forests from the Great Kei River to the Natal border, including Pondoland and Port St. Johns. Horse sickness and the flu epidemic aggravated the conditions.

Pondoland- A felling permit at £5 per annum authorised the holder to cut what and where he chose and much as he, with assistants, was able to; all free of control by the Department. A new steam-driven sawmill with modern machinery was erected by Mr G. Trow at Manubi Forest.

Valuation of Forests - The valuation completed in 1892 produced the following results -

Class A	: 18,026 mgn.	at £26	- £	468 676
B	: 27,538 "	"	14	- 385 532
C	: 20,126 "	"	10	- 201 260
D	: 4,905 "	"	3	- 14 715
E	: 9,600 "	"	5	- 48 000
				<hr/>
	80,195 mgn.		£1 118	183
				<hr/>

2) Licences by Magistrates .....  
Revenue of the Conservancy (1892)

1) Gratis Issues .....	£50 295
2) Licences by Magistrates .....	193
3) " by Department .....	1 762
4) Fines inflicted .....	802
	<hr/>

Total ..... £53 052

Total Expenditure ..... £ 2 818



Forest Demarcation- Commissions consisting of the Chief Magistrate, Mr M. Liefeldt, the local District Magistrate and the Conservator of Forests, were appointed to undertake the demarcation of Crown forests. Demarcations for Tsomo, Kentani and Willowvale Districts were completed in 1891.

Interplanting in Indigenous Forests - About 24 000 transplants of different species were raised at forest stations as a commencement towards interplanting in burnt forests. (N.B. Since the herding of stock was permitted in unfenced forest, interplanting could only be done in forests which had been demarcated and fenced).

#### END OF THE INTERREGNUM IN 1906

The founding of the Forest Department and the appointment of its first Chief Conservator in 1906 ended the fourteen-year period during which there was no departmental responsibility for administration of the forest service. Much to the credit of the mutually independent Conservators and their assistants, there was no stagnation in forest development; on the contrary it can be looked upon as a period of progress in development and administration. This can largely be ascribed to the foundations laid in the previous period (1881 - 1891) of departmental responsibility under the Superintendent of Woods and Forests. Loss of cohesion was, however, a disadvantage, especially where operations or undertakings of similar nature, or for a specific object, extended to several conservancies, such for instance as the dry country test plantations, or technical management of indigenous forests, or establishment of plantations. An improvement (see above) in preparation of the annual reports of the Department (or "Branch") was introduced in 1895 by the adoption of a standard form, but the collation of the various tables to reflect the position for the colony as a whole remained a serious handicap, so also the time-lag in publication of the Parliamentary blue books of the reports: much valuable information which should circulate amongst the conservancies became historical and of so much less value.

An attempt to include in this report an historical review of events, progress, results of investigations or trials with the effects thereof on administration ended in frustration by trying to delve through the fourteen voluminous blue books with their mass of tables or returns and individual comments by Conservators District Forest Officers, Superintendents of Plantations and Forest Rangers. All that could finally be attempted was the review given here of conditions or events at the end of the period (1906) for comparison with those given for the beginning (1891 - 1892). Reference to the events in Schedule 1, 2 and 3 will be helpful, and where appropriate, other more important or useful occurrences are referred to; some are dealt with more fully in the subject chapters.

#### Administration

The statement given below reflects the staff position at the end of the Report year (30.9.1906). On the retirement of Mr D.E. Hutchins, Mr J.S. Henkel was transferred to Cape Town in charge of the Western

Conservancy and to take over responsibility for the forestry course at South African College, with the assistance of Mr G.A. Wilnot, M.F., Yale University, appointed as District Forest Officer and assistant lecturer. Other staff changes to be recorded for the period in question included the following -

1. 1895 : Transfer of A.W. Heywood, D.F.O., Cape Flats, to Conservator, Knysna, in succession to J. Cooper.
2. 1896 : Transfer of Conservator J.S. Lister, from Cape Town to King William's Town.
3. 1902 : Appointment of C.E. Legat, Superintendent, Hanover Plantation as Chief Forester, Transvaal.
4. 1903 : Appointment of K.A. Carlson, D.F.O., Butterworth, as Conservator, Orange Free State.
5. E.C. Langton, Asst. Superintendent, Kluitjieskraal, followed Legat to become D.F.O., for Transvaal.
6. Replaced by appointment C.H. Dale at Kluitjieskraal.
7. Appointment of R. Burton on return from Coopers Hill, as Working Plans Officer, Eastern Conservancy.
8. Transfer of P.J. Dormehl from Working Plans, Knysna, to D.F.O., Storms River.
9. Transfer of Mr Elder, surveyor and draughtsman, Cape Town, to D.F.O., Elgin.
10. 1894 : Dr. T.R. Sim, Curator, Botanic Gardens, King William's Town, appointed as Superintendent of Plantations at Fort Cunynghame.

#### Forestry Education

Suitable arrangements having been made with the South African College, Cape Town, the two-year course for forestry students was inaugurated in 1906. The students comprised one nominee from the Transvaal and Orange Free State respectively, and one from the Cape Service, two students who had completed their course at Nancy, three applicants from the Cape and two from England. The Natal Province failed to send a nominee. In addition to the science subjects dealt with by the College, the first year's work included lectures by Mr D.E. Hutchins on world climatology, geography and arboriculture, particularly of tree species considered suitable for propagation in South Africa. The extension service by the Department consisted of lectures on tree-planting by Mr Hutchins to agricultural students at Elsenburg, advice by forest officers to the public, and pamphlets on tree-planting or reclamation of drift sand.

## FOREST STAFF - 1906

1906

1906

CONSERVANCY	District Forest Officers	Superintendents of Plantations	Clerical	Foresters and Assistants	Forest Rangers	Guards Overseers, Caretakers
1 Chief Conservator J.S. Lister.	Head Office Staff not yet appointed.					
2 Western D.E. Hutchins	2	2	2	11	1	3
3 Midland: C.B. McNaughton	3	2	3	18	-	-
4. Eastern: J.S. Henkel	4	1	2	26	2	-
5. Transkeian: A.W. Heywood	3	-	2	31	-	5
TOTAL: 123	12	5	9	86	3	8
Exclusive of non-white messengers and cleaners						

1. The promotion of one Conservator to Chief Conservator and the retirement of Mr D.E. Hutchins towards the end of the year necessitated transfers of Conservators: also amongst the District Forest Officers on account of the death of Mr J. Marr at Storms River.

J. Marr.  
(suicide)

2. Vacancies in the forester staff from death retirement or resignation were adjusted by transfers or new appointments, or by transfers of Superintendents released by closing down of several dry-country plantations.

Annual Reports

The 1906 annual reports covered the nine months ending September 30, 1906. As remarked above, the reports by individual Conservators, inspection reports by certain officers, annual reports by Superintendents of Plantations, public lectures and other documents are not collated for the Colony as a whole, but are published in one formidable volume, including also the special report on Railway Sleeper Plantations. In comparison, the 1907 report is that of the Chief Conservator for the Department instead of individual conservancies, and the period is altered to correspond with Treasury and Parliamentary procedures. The following particulars extracted from the reports are intended to reflect the state of affairs as best can be, but the results must be used with discretion, especially with respect to summarised data.

The Forest Estate -

Area of demarcated land ..... : 495 112 mgn.  
 Area of undemarcated land ..... : 167 454 mgn.

TOTAL ..... 662 566 mgn.  
 Afforested Area: Plantations (approx.) 9 000 mgn.  
                   Reclaimed drift sand 2 830 mgn.

Pure Wattle plantations ..... : 1 400 mgn.

Railway plantation included ..... : 2 816 mgn.

(New plantation begun at Kubusie, Stutterheim District)

Financial Results -

	<u>Revenue</u>	:	<u>Expenditure</u>
Western Conservancy	£ 6 239	:	£16 299
Midland .....	5 011	:	6 807
Eastern .....	7 409	:	14 917
Transkeian .....	8 408	:	13 360
	<u>£27 067</u>	:	<u>£51 383</u>

Including salaries and allowances.

Forest Protection -

Fire belts cleared ..... 753 miles - 1906  
 Fencing erected ..... 282 miles - Total to date  
 Stock impounded ..... 3 850 head - 1906  
 Prosecution ..... 2 100 cases - 1906

The quantity of stock impounded and the number of prosecutions, more than 50% of each in the Transkei, give an indication of the time and

labour involved to the staff on non-constructive work; in many cases of theft of produce the culprits escaped prosecution and in many cases of trespass the stock could not be driven to the pounds.

#### SALE OF PLANTS -

Number : 586 830 of which 418 000 in Western Conservancy.

Forest Management - Railway sleepers - The number produced amounted to 24 294 in 1904; 76 948 in 1905 and 121 948 in 1906. A bonus paid on the price of sleepers in the Knysna Region proved to be of little benefit to the woodcutters: other persons who fared better were the transport riders and shipping agents; the Department suffered through damage to forest roads in wet weather. The payment of a bonus was discontinued in the following year.

Surveying, demarcation and stock enumeration: The erection of concrete beacons and surveying of forests in the Knysna Region were completed by H.G. Fourcade, who then transferred to the Alexandria *2ndary Alm.* forests. Demarcation was continued in the Transkei, and re-definition of beacons and boundaries in the Eastern Conservancy. New demarcations included the destroyed forest situated to the west of George for re-afforestation.

The Growing stock - In the Knysna forests P.J. Dormehl completed stocktaking of all important forests and valuation surveys of 23 665 mgn. The working plan for Sourflats Forests approved in 1903 had not yet been put into operation, since the basis thereof was departmental working which could not yet be introduced, but also, and especially, because sufficient reliable yield data were not yet available. The working plan for Pirie Forest had also been approved for application after completion of the Howse contract. This working plan made provision for interplanting the Howse sections with exotic species. Working or afforestation plans for several of the more important plantations, including Railway Plantations, were in operation and the preparation of plans for other plantations attended.

Forest Cultivators - The issue of cultivation licences to woodcutters was continued in the Knysna Region as an effort towards supplementing their means of livelihood; minimal tariff of 2/6d per mgn. per annum.

#### FOREST EXPLOITATION

Midland Conservancy. The system applied and named the "Selection System" was the marking for felling of practically every mature tree in the annual felling sections. This system of management was summed up as a more-or-less complicated means of supplementing the supply with a sufficient quantity of timber to satisfy as far as possible the needs of a dependent community, recognising that the supply is wholly insufficient for that purpose, but making up the shortfall with various palliative measures. In old worked out forests the quantity of timber marked was left to be extracted in proportion to the current market requirements, which naturally fluctuated considerably. While in any practical treatment it is necessary to remove, in addition to what would come out in a proper "improvement felling", a

certain proportion of the sound mature growing stock for both economic and "silvicultural reasons", the problem remained to determine that particular proportion, because the rates of growth of the component parts were not known; in order to determine these rates, sample areas had been placed under observation since 1896 and, in addition thereto, some 14 072 trees were being measured periodically. On the results of these observations it might then have been possible to determine the yield which could be removed without detriment to the forest. Observation - This ideal was never realised: re-measurements were interrupted; in prevailing circumstances exploitation had to proceed in absence of such data.

Eastern Conservancy. A felling section was marked in Upper Cwencwe Forest under the "selection system". What the responsible District Forest Officer understood by this system was the selection or choice of all mature trees, reservation of only a few sound and healthy seed trees and removal of the remainder. Since the remainder comprised not only commercial species then in demand and of commercial dimension and quality, but also all other trees of any species sold as firewood or poles, etc., the exploitation amounted to clear felling without regard to any other considerations.

Commonage forests. Free permits for cutting of unreserved trees were issued to erfholders of Upper Kubusi and headmen of Native locations. The forests were in deplorable condition, but nothing could be done pending settlement of disputes with the Frankfort Village Management Board and the Fingoes of the Peddie District regarding the disputed rights claimed by them.

Transkeian conservancy. The "selection system" was followed throughout; there was no regulation of yield as yet, sections were surveyed and trees marked with due regard to the "silvicultural requirements" of the forests. Licences were issued for individual trees and occasionally for "outright" sections. The volume of produce removed free of charge from undemarcated forests on Native locations amounted to 2 248 579 cu.ft. and the value thereof to £31,108.

Silviculture Thinning of Cluster Pine at Concordia Plantation (Knysna) sown broadcast and reduced to approx. 3 X 3 ft. at age 11 years showed that the operation was too late and too light for recovery of the trees from their early suppression.

Interplanting of exotic trees in natural forests was continued in the Western and Midland Conservancies. The species used included Cedrela, Caphor and Sequoia besides gum and pine.

Soil Conservation works and measures were applied where necessary in all plantations in the Eastern Conservancy for reclamation of sluits or dongas including torrent control and prevention of surface run-off.

PERIOD BEFORE UNION : 1907 - 1909

Administration

Apart from the transfers of 1906, referred to above, the staff did not require much adjustment in the years 1907, 1908 and 1909. There were a few administrative events which should, however, be recorded namely -

(1) 1907

(a) Knysna Woodcutters. At an inspection by the Chief Conservator of Forests, the number of woodcutters working in Crown forests had increased to approximately 1 500 which with assistants amounted to about 2 000; and the number of cattle to be provided with grazing had increased proportionally. The corresponding numbers for private forests were not known. An alleviation measure approved by Government with provisions on the Estimates was the employment of woodcutters on afforestation. This did not prove to be of any helpful extent, since no afforestation plans had been prepared in advance, including considerations such as accommodation and transportation of labourers, supplies of seed, etc. Arising from an investigation by Dr. Eric Nobbs, Director of Agriculture, in 1904, suggestions regarding an industrial school for girls at George and one for boys at Knysna were considered but did not materialise until after Union.

(b) Forest School, S.A. College. Five students passed of which three with honours; three failed; two - Lane-Poole and Ryan - were not required to take the final examinations.

(c) Commonage and other undemarcated forests. The Gordonia Islands in the Orange River (unsurveyed) and Driefontein (1 830 mgn.) were surrendered for the establishment of work colonies. Forests on Campbell and Barkley West commonages and the forest reserves Pokwani, Drie Rivier and Cedarberg (total 9 770 mgn.) remained without proper supervision by resident Foresters.

(e) Licence fees for grazing on mountain catchments in the Eastern Conservancy realised £3 789; conditions regarding over-grazing and veld burning are not mentioned.

(f) Interplanting of indigenous forests was extended to the Eastern Conservancy by the raising of nursery plants at Pirie, Tamcha, Ft. Pato and Ft. Grey forest stations.

(2) 1908

(a) Report on afforestation in Basutoland by Conservator A.W. Heywood.

(b) A judicial inquiry into the Katberg Forest fires by the Civil Commissioner, Ft. Beaufort.

(c) 18 590 mgn. of forests transferred to the General District Councils, Transkei (N.B. Annual Reports do not disclose what organisation the Councils had for management and control of the forests); vide 1907.

(d) Knysna Woodcutters - Period of instability and concessions; vote

for afforestation reduced in favour of reduction of timber tariffs and increase in price paid for sleepers; drop in revenue.

(3) 1909

(a) Education - Three students qualified in the Diploma Course at S.A. College and two entered for the new course.

(b) Visit by the Minister of Education. Adv. F.S. Malan, to Eastern and Midland conservancies. His report on Indigenous Forests, Woodcutters and Land Development laid on the Table of the House.

(c) Dry-Country Test Plantations. Hanover and Barkly East Plantations handed over to the Municipalities for development of town parks.

(d) Ministerial agreement regarding grazing on Amatola Forest Reserves; temporary grazing at nominal rentals payable by Native Chiefs through the local Magistrate until the land could be afforested; afforestation to be expedited in the interests of conservation.

(e) Plantation Timber - Increasing demand generally including native house building and farm sheds; orders placed for 1 000 telephone poles.

(f) Transfer of Conservators J.S. Henkel to Knysna and P.J. Dormehl to Cape Town.

#### THE POSITION AT UNION - 1910

##### 1. Organisation

The amalgamation of the provincial forest services of Cape, Natal, Orange Free State and Transvaal to form the Union forest Department proceeded smoothly and with only a minor increase in staff, the most important being an appointment of a Conservator of Forests for Natal by the transfer of Mr A.W. Heywood from King William's Town to Pietermaritzburg and providing the necessary staff. In consequence of this move, the Transkei Conservator, Mr C. Ross, was transferred to the Eastern Conservancy, succeeded by Mr P.J. Doran on promotion from District Forest Officer. Until then the Transvaal and Orange Free State Conservancies were divisions of the provincial Agricultural Department, which performed their accounting and record work, eventually to be taken over by the Union Department; the Natal forest service, on the other hand, was at that time an integral part of its Department of Agriculture, therefore necessitating the change to a conservancy. These additions brought the Union Forest Department up to one of seven conservancies, four in the Cape and one in each of the other provinces, with headquarters at Pretoria.

The 1910 Annual Report does not give a consolidated statement of the establishment and in consequence of the re-organisation of the Government departments by the Public Service Commission, the first available list of authorised posts for the forest service now to be found is that in the printed Estimates of Expenditure for the financial year 1912 - 1913. As regards the field staff, changes due to resignations, retirement or dismissal, necessitated the appointment of thirteen foresters. Amongst resignations was that of Mr C.E. Lane-Poole, District Forest



Officer, Woodbush, Transvaal, appointed as Inspector of Forests, Australia. He was succeeded by Mr A.J. O'Connor transferred from Knysna. Mr James Sim, F.H.A.S. District Forest Officer, King William's Town, was seconded to the Rhodesian Government to report on the forests of that colony; his Report thereon was published as Bulletin No. 71 of 1911. Forester O.B. Miller was seconded to the Transkei Territories General Council.

Education. Two students attended and passed the 1909 - 1910 course at the S.A. School of forestry. Two students only attended the 1910 - 1911 course and at the termination thereof the school was closed for the time being. That decision was come to at a conference by the Minister with forest officers held at Pretoria shortly after Union, at which it was decided that for the higher grades of the field staff, the Union should draw on qualified officers from the Oxford School of Forestry, giving preference to Rhodes scholars from South Africa. The matter was discussed with the Rhodes Scholarship Trustees. Thereafter the school for foresters was opened at Tokai.

## 2. The Forest Estate

Inclusive of all Provinces and Railway Sleeper Plantations (14 205 mgn.) the area of forest reserves amounted to - Demarcated - 529 200 morgen Undemarcated - 224 914 morgen total - 754 114 morgen. It is, however, not clear whether the area of forests handed over to the Transkei Territories General Council are included in this statement. Alterations consisted of 11 000 mgn. of Giants Castle, Drakensberg, transferred to the Natal Provincial Administration for a game reserve principally for eland, and 306 mgn. of Reuter Forest Reserve, Letaba District, Transvaal for an extension of the Meidigen Mission. The position regarding the peculiar financial arrangements in connection with Pan and Imperani Railway plantations was brought up for consideration with the view to bringing them in line with that of all other Railway Plantations.

## 3. Expenditure and Revenue

The total expenditure amounted to £84 856, including £37 252 on salaries, allowances, transport and traveling; equal to that was £37 313 spent on plantations and nurseries; protection and development of indigenous forests cost only £6 327 and miscellaneous expenses amounted to £3 961, in respect of all provinces. In addition to this, was the expenditure on Railway Sleeper Plantations of £7 516, including salaries and allowances. Revenue amounted to £90 952, including £38 030 gratis issues of forest produce at tariff rates. An analysis shows that the greater contributions were derived from timber - £22 968, and from firewood and charcoal - £29 235; seed and plants brought in £12 183, tan bark £2 909; the balance was from miscellaneous produce. Forests accounted for £39 116 and plantations for £31 786 of the total of £90 952. In respect of "bark", the yield is incidental to that of timber, poles, hut or kraal building material and firewood with charcoal incidental to all, and at that time still a major source of income.

In relation to gratis issues it may be remarked that with respect to Government departments, the free felling permits issued to contrac-

tors for railway sleepers, telephone or fencing poles, etc., by Magistrates or Civil Commissioners under Colonial rule and Responsible Government, had since been discontinued; the hidden subsidies, colossal wastage and the terrible destruction of prime forests disappeared as from the 1880's administration, continuing somewhat later in Pondoland.

#### 4. Afforestation and Drift Sand Reclamation

The afforestation Table of the 1910 annual report was extended to include all centres in the seven Conservancies. Excluding drift sand reclamation there were 111 plantation units of 38 258 acres in aggregate extent - approx. 18 122 mgn. The extent of drift sand reclaimed amounted to 5 211 acres, but some of the older and larger reclaimed areas had been afforested and classified as plantations. Included in the plantation area is 7 391 acres railway sleeper plantations. The area afforested during the year was 2 842 acres.

#### 5. Protection

The annual clearing of firebelts was attended to and loss from fire was insignificant in relation the extent of forests and plantations; similarly in respect of loss from other causes. The 1 025 prosecutions for forest offences and the 4 857 head of stock impounded are an indication of time and labour spent on supervision.

#### 6. Silviculture

With reference to plantations; the 1907 forestry conference at Uitvlucht the question of thinning undecided; however, in absence of a lead or positive directions, individual local officers in several conservancies continued to thin dense young crops and find a market for the produce.

### REPORT YEARS: 1912 AND 1913

#### Administration

The Chief Conservator of Forests Mr J. Storr Lister, retired on super-annuation, and was succeeded by Mr C.E. Legat promoted from Conservator of Forests, Transvaal. Mr. C.C. Robertson, M.F. Yale University, District Forest Officer, Orange Free State, was transferred to Head Office, Pretoria. Mr. J.J. Kotze, Arts Degree, joined the Department at Head Office in 1912, but in 1913 - 1916 took his Diploma in Forestry at Edinburgh University. Mr K.A. Carlson Conservator, Orange Free State replaced Mr C.E. Legat in Transvaal and in turn was succeeded by Mr P.J. Dormehl from the Western Conservancy. These transfers necessitated several other moves in the senior staff.

#### Legislation- (Ref. Schedule 1)

The provision in the new Forest Act relating to the allotment of timber to registered woodcutters met with strong opposition by local timber merchants and manufacturers; and although the Department was not consulted and did not panic, it did not fail to draw attention in its annual report to the effect the measure would have on the public