KEFRI NEWSLETTER

KENYA FORESTRY RESEARCH INSTITUTE No.9 March 1989

PART OF THE KEFRI'S CENTRAL RESEARCH NURSERY AT MUGUGA

Scientists demonstrate the spacing and the techniques behind the high quality seedling output. In the background, are the ladies behind the successful ground management of the tree nursery seedlings.

KEFRI, the Kenya Forestry Research Institute with its Headquarters at Muguga, is a national forestry research institute mandated to undertake all aspects of forestry research and development within the content of formal and informal (industrial and farm) management. For more details, please contact: Director KEFRI P.O. Box 20412 Nairobi: Tel. Karuri:0154-32891, 0154-32892

EDITOR'S NOTE

The Eucalyptus may have hope

The Eucalyptus tree remains among the fastest growing tree known to man. Some of its qualities are that it coppices well and has several other values besides providing poles.

For a long time now, the eucalyptus has also been looked at with some suspicion, partly due to the fact that it grows very fast. But, yet in other areas it is a beloved tree as it grows where there is threat of desertification due to too much felling of trees.

Naturally, the eucalyptus consumes more water through transpiration than many other forest trees. For this reason, it is believed that it dries up underground water sources leading to the drying up of rivers and other water sources. This latter idea has caused quite a lot of worry in Kenya for a few years. Kenya needs to worry in event of such a thing proving to be true.

In a situation like Kenya where more than two thirds of the total land mass is either semi desert or desert, there is reason to be vigilant against trees that may cause our remaining water sources to disappear.

Our scientists are, however, beginning to develop an alternative opinion to this problem. Following the successful experiments with the eucalyptus in the tropical rain forests of the Congo, which have been going on for the past seven years, it is now believed that Congo forests could be saved through the introduction of select eucalyptus tree species. Other promising experiments have been carried out in Australia.

There exist over 200 species of the eucalyptus, each suitable for different ecological zones. With proper information, it is easy to find species that could be useful for marshy areas and those that will adapt easily to semi-arid conditions. This points to the direction that it is best to seek correct information from the experts before embarking on tree planting. Information services already exist at the Kenya Forestry Research Stations and in Forest Department of the Ministry of Environment and Natural Resources.

The Main Central Research Nursery at KEFRI

The Central Research Nursery at Muguga is one of the infrastructures of the Kenya Forestry Research Institute (KEFRI) designed to carry out research in nursery techniques. The nursery is equipped with a glass house, a mist propagator, two plastic green houses, a shade ***banda***, Swaziland beds, raised beds for rootrainers, soil mixing compartments and large space for raising potted seedlings. Procured seeds reaching the nursery are given batch numbers, recorded and then spread in glass house or on troughed beds to dry. After separation and cleaning germination is carried out in the glass house. The germinated seedlings can be pricked out into potting bags, wooden boxes, rootrainers or into Swaziland beds depending on the number and the reason for raising them.

Part of KEFRI'S Central Research Nursery at Muguga

The nursery also assists in the raising of seedlings of major rehabilitation and plantation trees, social forestry and research on vegetative propagation methods. Most seedlings are produced as part of experiments on provenance trials, progeny trials and clonal plantings. A limited number of seedlings are raised for general planting, fencing, and fruit tree orchards for use by the public.

Although the nursery produces about 350,000 seedlings annually, its production in terms of quality has caught many eyes. The high quality production has been the results of research carried out in the past into best soil mixture. The 'Muguga soil mixture' sustains good crops of seedlings in the nursery to their planting stage. Even the notorious pines remains deep green and healthy during their life-time in the nursery. Recently the high quality production received a commendation from the Commonwealth Overseas Development Administration for its mark of quality quite ahead of many.

Get in touch with the techniques used in the production of high quality seedlings preferably by visiting the Muguga Central Research Nursery particularly during the on-season. Otherwise write for more information.

Commemorative Tree Planting Ceremony

The Forestry Research Institute (KEFRI) had its own commemorative tree planting ceremony on 14th March 1989. This was intended to mark the first tree planting ceremony of the year while waiting for the Annual National Tree Planting Day which eventually took place in Uasin Gishu District on Wednesday 3rd May 1989.

The KEFRI ceremony was held at Nderi market, about two kilometers from KEFRI headquarters. Presiding over the ceremony was the District Commissioner for Kiambu, Mr. Fred Mwango. Mr. Mwango was accompanied by his District Officers, Chiefs, Councillors and the local KANU officials. The DC was hosted by KEFRI who were in turn led to the ceremony by their Director, Dr. Japheth Odera.

In his address to the people who gathered to witness the ceremony, the DC underscored the importance of trees in national development. He said that land was a very sacred gift to the Kiambu Community, but that land without trees loses its value. Speaking, occasionally, in Kiswahili, Mr. Mwango said that "Mambo ya mugunda ni makubwa sana katika sehemu hii". He went on to say that local leaders should be on the look out for people who were out to cheat others in bogus land sales. He said that a possible better land use of idle land could be the planting of trees.

The DC said that the previous two years had been particularly good for Kiambu due to good supply of rainfall. This was attributed to the increased forest cover in the District. He told the people that since they had already seen the benefit of forests they should ensure that they plant trees on every spare inch of land that is currently not in use for production of crops.

He went on that, in the past, tree-felling was considered normal because people were born and found trees growing. This trend now had to be reversed as the population of man was rivalling the population of trees. The DC thanked the Director of KEFRI for making available 5 million seedlings for tree planting.

Earlier, in his welcoming address, the Director had outlined the history and role of KEFRI. He pointed out that since 1986 when KEFRI was formed, three commemorative trees had been planted on the same site at Nderi and were doing extremely well.

He said many more trees had been planted around Nderi and other market centres. He thanked local traders for supporting KEFRI tree projects by looking after trees planted near their shops. Dr. Odera said that trees planted around the centre were indigenous species and research was already pointing to the direction that local trees can be improved and grown on a commercial basis. He continued to say that it was KEFRI's intention to encourage the planting of trees on all public lands, along the roads and on unusable pieces of land. He said technology packages on how to go about it were available at KEFRI stations all over the country.

Dr. Odera pointed out that all the trees planted along the Zambezi - KARI road were thriving well and had already weathered the dry season without "casualties". Of particular importance was the Jomo Kenyatta Airport project.

The DC praised KEFRI for the important role they are playing in developing forest resources and promised to give every necessary assistance to the institute. He also said that he is ready to provide KEFRI with a piece of land should they have need in the course of their work. Earlier, he had planted ***Podocarpus gracilior*** tree. He ended his address by encouraging all leaders in the area to take advantage of the technologies available at KEFRI to plant more trees to keep Kenya Green.

Coping With Insect Damage in Forests and in Tree Products

Insects are by far the most numerous of all land living animals. Next to man insects are the most successful group of animals and although we are able to control them to some degree, insect pests can compete strongly with man in the fight for survival. Insects eat growing plants, crops, stored food etc. They feed on animals and even on humans. Many insects live in and destroy wood in all its forms, for example furniture, timber and the living tree itself. They reduce the yield of forests and the quality of timber. For Kenya to be able to compete adequately in the world timber market, and satisfy the local demand it has to produce plenty of timber and of high quality.

Todate, the supply of timber from Kenya forests, whether hardwood or softwood, is not adequate to meet our

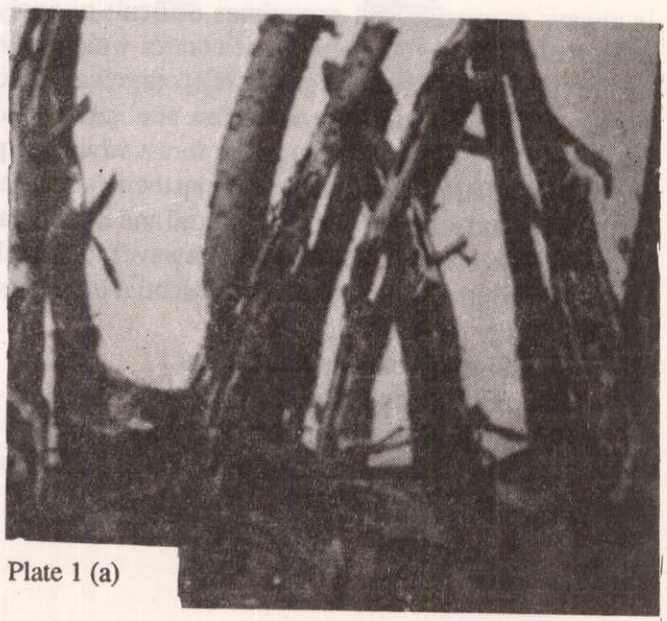


Plate 1 (a)

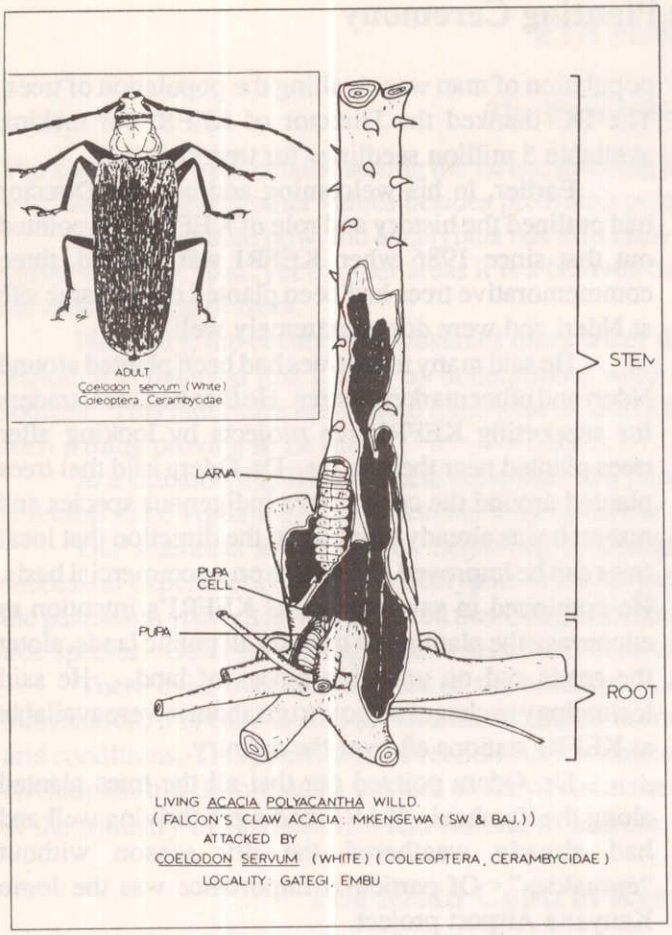


Plate 1 (b)
Living ***Acacia polycantha*** Willd. Falcon's claw Acacia: Mkengewa (Swa. & Baj.) attacked by ***Coelodon servum*** (White)

needs. The natural forests and man-made forests (plantations) are our main source of timber. If this source is to provide the quality and quantity of timber that we require, many of our forest insect pests will need to be controlled.

There are several methods we can use to control insect pests. The most obvious is by using chemicals (insecticides). The method is a temporary remedy and is always expensive and sometimes difficult to apply effectively. Two other methods of control which have a much positive impact and are more economical are to create conditions unfavourable for the pests and introduction of pest predators in the forest which keep the pest populations low and hence keep their damage at a minimum and acceptable level (cultural and Biological controls respectively). Regardless, however, of which method of control is employed, it is essential in the first place to know the following;

1. What insects exist in our forests
2. The pests among these
3. Which of these insects are beneficial, and
4. The life cycle, hosts, distribution and the general biology of the insects.

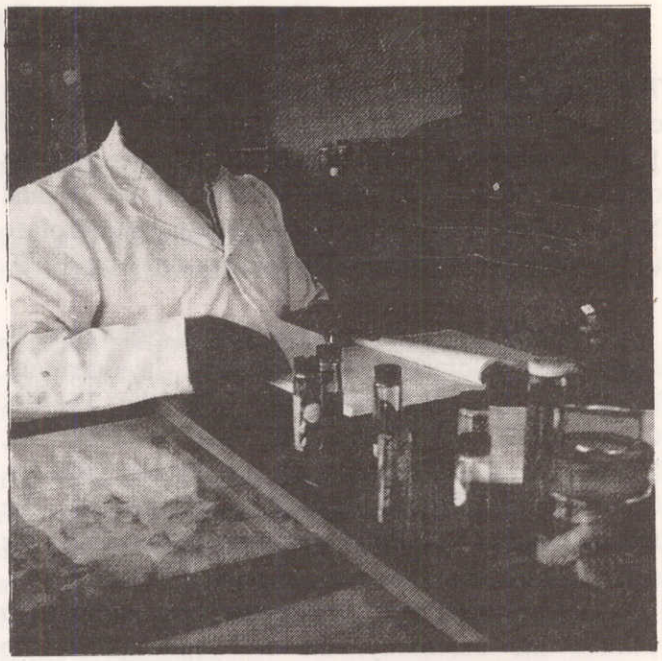


Plate 2
Identification of in-coming problem-shooting insects is done by scientists working in the insect reference collection at Muguga.

The Entomology Programme of the Kenya Forestry Research Institute is continuously working towards understanding these problems. But, due to the expanding afforestation programmes in the dry areas and agroforestry programmes especially in private lands, the growing demand for entomological services will continue to grow side by side.

Insect Reference Collection at KEFRI, Muguga, was started in 1950 and todate it comprises about 42,000 pinned, identified adult insects plus immature stages of various species and termite specimens preserved in 75% alcohol. The collection is mainly comprised of insects collected from Kenya, Uganda, and Tanzania and a few from outside East Africa. Todate the identified insects, both pinned and preserved stand at nearly 6000 species. The insects fall in the following orders: ***Coleoptera, Dermaptera, Dictyoptera, Diptera, Hemiptera, Hymenoptera, Isoptera, Lepidoptera, Neuroptera, Psocoptera, Orthoptera*** and ***Thysanoptera***. Insect allies, ***Acarina*** and ***Diplopoda*** are included.

The unique collection provides immediate identification of insects, found attacking trees, lodged at the Institute. Those insects which cannot be identified locally are sent to the Commonwealth Institute of Entomology (C.I.E.), London.

In the case of an outbreak, please contact the Institute at the earliest stage of attack for a successful diagnostic and prescription attention.

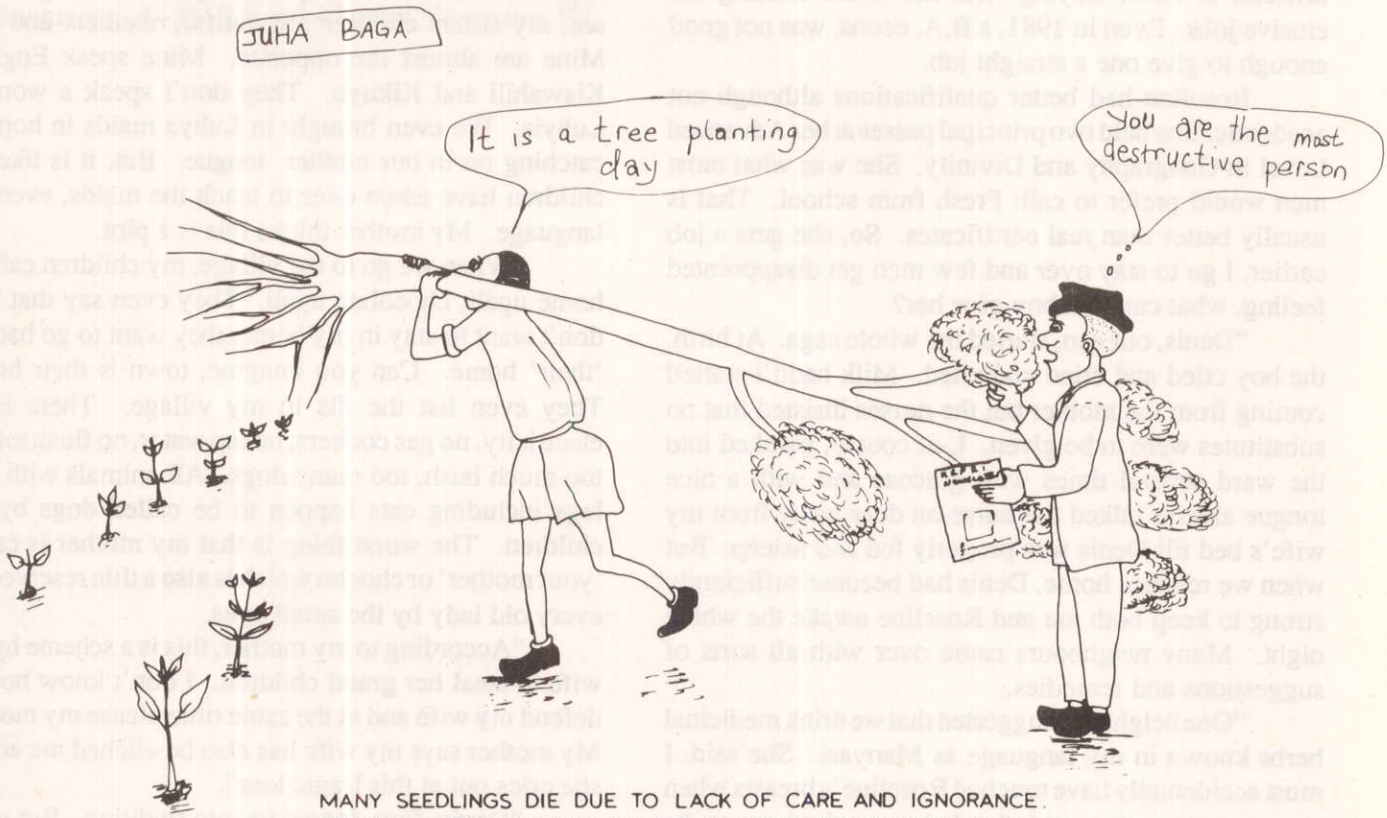
A Looming Threat to Cypress in Kenya

It has been established that an insect pest, ***Cernaria cypressi*** (European aphid) that is indigenous to Europe but which has recently been introduced into Southern Africa including Tanzania, is currently threatening forest plantations in the region. This insect attacks members of the cypress family ***(Cupressaceae)*** including ***Cupressus***, ***Callitris*** and ***Widdringtonia***. It is not yet clear if it also attacks our cedar, ***Juniperus procera***, but this is quite likely.

The insect attacks older foliage, from bottom to the crown upwards. Attacked foliage yellow and finally turn brown within one season of attack. Death occurs in two to three years following persistent attack. Incidences of attack by this pest is already a matter of grave concern to Tanzania forestry.

This insect can easily come into the country through the movement of forest produce including sawn timber and tree seedlings. We must do everything possible to keep this pernicious pest out of the country. Be on the look out.

Dr. J.A. Odera
(Director-KEFRI)



MANY SEEDLINGS DIE DUE TO LACK OF CARE AND IGNORANCE. CORRECT SEEDLINGS FOR DIFFERENT AREAS ARE IMPORTANT IN TREE PLANTING.

Will Children Force Tradition back on Us

This story was related to me by a neighbour whose mother suddenly departed for her village in tears. A few things have been deliberately fictionalised to avoid biographical detail.

Peter who is the narrator was born of a traditional home which had naturally not faired well with the advent of missionaries. His father, Achieno, was to embrace the white-man's faith quite late in life. And this is how the story goes.

"I don't know exactly what took place between my mother and my wife. Clearly, these are two women I would never want to hurt as long as I live. As you know, my father passed on just after my University Studies. I was not exactly married then, but according to the village "eyes", someone's daughter was staying with me. No, I was staying with her. You see, my wife Roseline left school the same year I left University, but because she got a job earlier than I did, it became difficult to resist staying with her while chasing the elusive jobs. Even in 1981, a B.A. econs. was not good enough to give one a straight job.

Roseline had better qualifications although not academic. She held two principal passes at her Advanced Level in Geography and Divinity. She was what most men would prefer to call: Fresh from school. That is usually better than real certificates. So, she gets a job earlier, I go to stay over and few men get disappointed feeling, what can that boy give her?

"Denis, our son, started the whole saga. At birth, the boy cried and cried and cried. Milk hadn't started coming from the mother but the nurses insisted that no substitutes were to be given. I, of course, sneaked into the ward several times with glucose and with a nice tongue always talked the nurse on duty away from my wife's bed till Denis was properly fed and asleep. But when we reached home, Denis had become sufficiently strong to keep both me and Roseline awake the whole night. Many neighbours came over with all sorts of suggestions and remedies.

"One neighbour suggested that we drink medicinal herbs known in my language as Manyasi. She said, I must accidentally have touched Roseline's breasts when she was expecting and the baby required us to be cleansed before we could stay peaceful. I shyly protested but knowing pretty well that hose breasts had been cupped in my hands so many times. Was it not a joy to hold them before Denis came. I tell you, tradition can be something. The pastor's wife told us to pray and put a bible in our bed. But the cure to the crying was most ~~outstanding~~ astounding.

"Roseline's mother who had earlier given a name to Denis suddenly changed tune and said, that I had to produce a name. Since my father had just passed on, I thought it would be a good idea to name Denis after him. This did not help. I was told to try out several names of my ancestors and quite unexpectedly the kid stopped crying when my grandfather's name was mentioned. That was unfair, I thought.

Imagine, my elder sisters have children named after my grandfather, and so are all the children of my cousins. The name is what I would consider 'common'. But it worked.

"However, my mother's tears were from a very unrelated episode. My wife had a brush with a few of our maids. Due to division of labour, I usually supervise my wife, who supervises maids and children. Her duties include hiring and firing. My mother has a different view of things, but I had thought that as long as she is in the village, she needn't know the details of our domestic arrangements.

"In a way, my mother is right. My sisters' children are quite different from my own. They have proper respect and are less noisy when they are with visitors. As I am the first born son, my children are expected to set the example in my home village. You see, my sisters children are dutiful, obedient and shy. Mine are almost the opposite. Mine speak English, Kiswahili and Kikuyu. They don't speak a word of Luhyia. We even brought in Luhya maids in hope of catching on in our mother tongue. But, it is like the children have taken over to teach the maids, even the language. My mother thinks this is a plot.

"When we go to the village, my children call the home ugali, chocolate ugali. They even say that they don't want to stay in my home, they want to go back to 'their' home. Can you imagine, town is their home. They even list the ills in my village. There is no electricity, no gas cookers, no tap water, no flush toilets, too much bush, too many dogs. All animals with four legs including cats happen to be called dogs by my children. The worst thing is that my mother is called 'your mother' or chocho which is also a title reserved for every old lady by the small ones.

"According to my mother, this is a scheme by my wife to steal her grand children. I don't know how to defend my wife and at the same time please my mother. My mother says my wife has also bewitched me and so she cries out at this tragic loss".

"Denis, first, forced us into tradition. But when Edward, that is my second son, came, together with Denis they became urbanised. This alienated my mother who had always been close to me. As a career woman, my wife finds it difficult to bring up the children according to tradition. She is also not prepared to let the children go to the village as they would be spoiled by their grandmother. My mother cannot be permitted by custom to stay in town for longer than a month. She therefore cannot be much of a teacher either".

I have no answer to this story. It is quite moving, but I believe that many children are growing up in urban areas with values that would make their ancestors turn in their graves.

Announcements

- An International Conference on 'Global Natural Resources Monitoring and Assessments preparing for the 21st Century' will be held at Venice, Italy, September 24th to 30th 1989.

  For more information please contact; The General Conference and Budget Co-ordinator; Dr. H. Fred Kaiser, c/o USDA Forest Services, P.O. Box 96090, Washington D.C., USA.

- A meeting on 'Recent Development in Poplar Selection and Propagation Techniques' will be held at Hannversch - Mundren Research Institute, Germany, FR from October 2nd-5th 1989.

  For more information please contact; Dr. H. Wisgerber, Forschungsinstitut fur Schnellwa-chsede Baumarten, D-3510 Hann-Munden, Germany, FR.

- A 'Cone and Seed Pest Workshop' will be held at ST John's Newfoundland, Canada from October 4th - 6th 1989.

  For more information, please contact R.J. West, Forestry Canada, Newfoundland Centre, P.O. Box 6028, St John's Newfoundland AIC 2x8, Canada

- A meeting on 'Tropical Forest Products and Economic Development with special emphasis on Research needs in Africa' will be held on November 19th - 25th, 1989, at Yamoussoukro, Cote d' Ivoire.

  For more information please contact; Ch. Sales, Centre Technique Forester Tropical, 45 bis Avenue, F - 94130 Nogent-Sur-Marne, France.

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