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NEWS-LETTER OF THE SOUTH AFRICAN ASSOCIATION OF BOTANISTS NUUSBRIEF VAN DIE SUID-AFRIKAANSE GENOOTSAP VAN PLANTKUNDIGES

ERTS, SOUTH AFRICAN PARTICIPATION: A proposed project entitled "Monitoring the Extent and Occurrence of Fire in the different Veld Types of South Africa with particular reference to its Ecological Role and Role in Range Management" by Dr. D. Edwards of the Botanical Research Institute, Pretoria, has been selected for inclusion in the programme of investigations for the new ERTS-B satellite. This has been the only project approved by NASA from a number of proposals submitted by South African scientists. Apart from meaning that this country will once again be represented in this international programme of satellite sensing of the earth's natural resources, the project will also mean that South Africa will again have immediate access to satellite imagery over the whole country.

NEW ERTS INVESTIGATIONS: Space satellite pictures will be used in a broad range of new studies of Earth's natural resources and man's use of them, NASA announced on July 12th. Investigations in the United States and 48 other countries will be conducted by 93 research teams in Federal, state, and foreign governments, international organizations, universities, and private companies.

The investigators will analyze remotely sensed data in the form of imagery or on magnetic tape from NASA's first Earth Resources Technology Satellite (ERTS-1), launched two years ago, and from ERTS-B, carrying the same sensors, which is expected to be launched early next year.

The studies, selected from 669 proposals, include work in eight disciplines or categories: (1) Agriculture, forestry, range land; (2) Environment; (3) Interpretive techniques; (4) Land use; (5) Marine resources; (6) Meteorology; (7) Mineral resources, oil, civil works, hazards; (8) Water resources.

More than half of the domestic and three-fourths of the foreign investigations will demonstrate potential applications for operational use of Earth resources monitoring from space. Data products will be furnished to the investigators through the Federal Data Centres operated by the Departments of Interior, Agriculture and Commerce. NASA will fund the domestic investigations at a cost of approximately

\$5,9 million. Foreign investigators will be supported by their own countries.

The new studies, called ERTS Follow-on Investigations, replace or extend approximately 200 domestic and 100 foreign investigations conducted with data from ERTS-1.

ERTS circles the globe 14 times a day, scanning a swath of Earth's surface 185 kilometers (115 miles) wide in green, red, and two near-infrared spectral bands. From a 912-kilometer (567-mile) circular, near-polar, sun-synchronous orbit, the satellite passes over almost the entire globe every 18 days and can view each cloud-free area repetitively at the same local time of day and thus at the same Sun angle.

In its two years, ERTS-1 has returned some 1000,000 pictures, including imagery with less than 30 per cent cloud cover of all the United States and three-fourths of the world's land masses and coastal areas.

The imagery is provided to investigators and to several U.S. government agencies and put on public sale through Federal Data Centres.

The repetitive multispectral imagery of Earth taken by ERTS-1 has been used for such wide-ranging practical purposes as: Monitoring urban development and planning future land use; Locating air and water pollution; Mapping strip-mine and forest-fire scars; Locating geologic formations that may indicate the presence of minerals and petroleum; Updating maps and coastal and navigation charts; Estimating crop acreage; Surveying the breeding grounds of migratory waterfowl; Monitoring the advance of glaciers; Studying flood hazards and managing water resources; Helping to locate underground water supplies.

The ERTS project is managed for NASA's Office of Applications by the Goddard Space Flight Centre, Greenbelt, Md. The spacecraft prime contractor is the General Electric Company.

S.A.A.B. ANNUAL GENERAL MEETING: Most of the items of the A.G.M. held in Grahamstown in July have appeared in subsequent issues of Forum Botanicum. However, several items are extracted from the minutes for noting.

1. The meeting endorsed the proposal by Council that in future S.A.A.B. arrange its own Congress independently of S₂A₃. The voting was 35 for, 1 against and 2 abstentions.

2. Association's Emblem: the emblem of S.A.A.B. will in future be *Protea cynaroides* as depicted on the S.A. Medal for Botany.
3. On the recommendation of Council it was unanimously agreed that S.A.A.B. should put forward recommendations that *Protea cynaroides* be adopted as South Africa's National Emblem.
4. proposals to alter certain items in the Constitution as put forward by the Secretary were accepted.
5. The meeting passed a motion of grateful thanks to the Honorary Secretary, Dr. Albert Eicker, who was retiring after four years in office.
6. The incoming President, Prof. O.A.M. Lewis, thanked the outgoing President, Prof. C.F. Cresswell, for his contribution to the strength and progress of the Association during his two years as President.

DR. P. GROVES of the C.S.I.R.O. in Canberra, Australia, is visiting the country at present. He is stationed in the Department of Pasture Science at the University of Natal working mainly on aspects of *Themeda* ecology, but also on the ecology of various South African plants that have turned weedy in Australia.

In this regard he recently journeyed down to the South-Western Cape and while there gave a series of seminars and lectures in the Botany Department, University of Cape Town and the Botany Department and Department of Nature Conservation, University of Stellenbosch.

His subjects were:

1. Physioecology of *Themeda australis* in S.E. Australia.
2. Productivity and dynamics of *Themeda australis* grassland in S.E. Australia.
3. Growth and nutrition of fynbos-type vegetation in Australia.

S.A.A.B. (SOUTH WESTERN CAPE BRANCH): Two recent meetings of the Branch were:

1. Prof. T.T. Barnard on Linnaeus, his publications and the source of South African material mentioned in all his works. Prof. Barnard over many years of work and visits to the Linnaean Society in London is the recognised expert on the subject of early botanical publications and South African botany.
2. Dr. J.W. Morris spoke at an informal discussion group on the "Computerisation of the National Herbarium in Pretoria".

BOTANICAL ART EXHIBITION: The South African Association of Arts (Northern Transvaal) recently held an exhibition of botanical paintings in Pretoria to honour Cythna Letty who is in her eightieth year. In addition to the paintings from her private collection the Association obtained 130 paintings on loan from the Botanical Research Institute to show the type of work that Cythna Letty had done mainly for the publication "Flowering Plants of Africa".

The works of other well-known botanical artists such as M.E. Connell, Jill Kimpton, Aleida van der Merwe, Esmé Hennessy, Fay Anderson, Lois Martin Povall, Rosemary Roos and Rhona Collett made up the rest of the exhibition.

The majority of paintings on display were offered for sale by the artists.

VACANCIES, GRADUATE RESEARCH ASSISTANTS - RARE AND ENDANGERED PLANT SPECIES

SURVEY: A field survey of rare and endangered plant species is about to be started in the Western Cape Province. Applications are invited from graduates in Botany to fill two posts as Graduate Assistants to serve under Dr. A.V. Hall of the Bolus Herbarium of the University of Cape Town. An Honours Degree in Botany is preferred, together with a strong interest in field ecology and conservation. The posts, which are tenable for one year, with a possibility for renewal for a further year, will offer an outstanding opportunity for gaining field experience of Cape vegetation. The salary for persons with the above qualifications will be R3 400 per annum, with an additional field allowance of about R3-50 per day. The closing date for applications is 15th December, 1974.

Applications should be addressed to: The Registrar, University of Cape Town, Private Bag, Rondebosch, C.P. 7700.

This project is sponsored by the National Programme of Environmental Sciences.

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