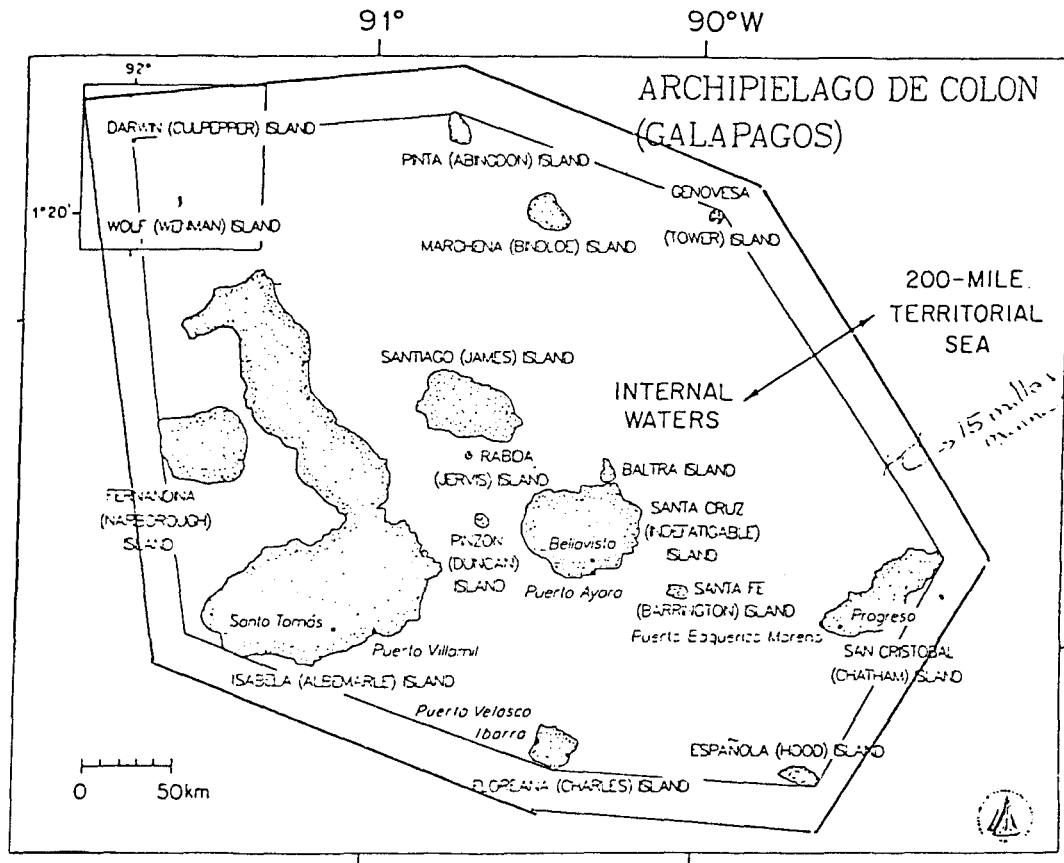


NEWS FROM ACADEMY BAY

PROCLAMATION OF A GREAT GALAPAGOS MARINE RESERVE

A most important development in conservation took place on 29 April 1986 when His Excellency, President León Febres-Cordero promulgated a Decree establishing a Marine Resources Reserve for the Galapagos Islands. The area involved is vast and includes the entire internal waters of the archipelago, together with a surrounding zone 15 nautical miles wide, in all some 80,000 square kilometres (30,000 square miles), as illustrated in this sketch map.



The Charles Darwin Foundation has been urging the creation of a protected marine area for many years (see Noticias 25, 27, 37, 42, 43) but progress has been slow owing to the difficulty of reconciling the various local and national interests involved, which fall under the jurisdiction of the different ministries responsible for the law of the sea, defense, fisheries, tourism and development. The new reserve will be administered by a Commission representing the seven ministries and institutions concerned and will be presided over by the Minister of Agriculture, who is already responsible for the Galapagos National Park. The Commission is authorized "to seek the assistance and collaboration of the Charles Darwin Research Station and such national and international organizations as it considers necessary". The CDRS will naturally give all the help within its means and has already installed a modest marine laboratory, as well as maintaining a research vessel.

The extension of protection from the land to the sea was becoming increasingly necessary. Since the Darwin Station was inaugurated, a flourishing tourist industry has grown up and the resident population has notably increased. The Galapagos waters are still generally in a nearly pristine state but the increasing danger of pollution from the discharge of waste from cruise ships and human settlements is obvious. Occasional small oil slicks have been noted. Two ships have been stranded on rocks in recent years. Tourists and residents make growing demands on the stocks of fish, lobsters and coral. Foreign fishing vessels have been a problem at various times. It is good that such dangers should be countered before they become too serious and that the conservation activities of the Galapagos National Park Service and the Charles Darwin Research Station should be given legal support.

The Galapagos waters are of outstanding national and international importance. Situated at the confluence of the great Eastern Pacific currents, they are of unique scientific importance and the marine resources may prove even more significant than the terrestrial resources, which have hitherto been studied much more thoroughly. Moreover, much of the terrestrial wildlife, particularly nesting seabirds and marine iguanas, is dependent on the sea for its survival. CDF supporters will appreciate that this splendid initiative will make increasing demands on the resources of the Research Station and the National Park Service.

In his capacity as President of WWF International, H.R.H. Prince Philip, Duke of Edinburgh, who is also Honorary Life Member of the Charles Darwin Foundation, sent his congratulations to President Febres-Cordero and his Government on the example they had given of what governments worldwide should be doing to preserve species and habitats for their own and mankind's long-term benefit.

Yom Excellency,

On behalf of WWF I wish to congratulate your Government on the decision to declare the Waters of the Galapagos Archipelago a protected area. Your decision is a fine example of what governments worldwide should be doing to preserve species and habitats for their own and for mankind's long-term benefit.

We are furthermore very pleased that the declaration of this most important reserve is made in celebration of WWF's Twenty-Fifth Anniversary. WWF has always considered it a priority to support your Government in its effort to protect and manage the unique wildlife of the Galapagos Islands. We look forward to continued fruitful co-operation in the future.

Yours sincerely
Philip

Mr Leon Febres Cordero



President Leon Febres-Cordero at the Smithsonian Institution, where he accepted the post of Honorary Chairman of the campaign to raise a 1,650,000 U.S. dollar endowment fund for the Charles Darwin Foundation. He announced a contribution of \$150,000 on behalf of the Government of Ecuador. In the picture he is flanked by Robin and Rick Werner who received medals for their work in support of the appeal.

By the summer of 1986 \$1,200,000 had been subscribed and with continued effort the target may yet be reached. Further contributions may be made either through any national WWF organization or directly to The Nature Conservancy, International Program, 1785 Massachusetts Avenue N.W., Washington D.C. 20036, U.S.A.

RECOVERY OF THE MARINE IGUANA POPULATION AFTER THE EL NINO CATASTROPHE

Andrew Laurie has been studying the population dynamics of the marine iguanas since the 1981-82 breeding season (Noticias 35-40). This fortunate timing has enabled him to compile statistics both for the two "normal" seasons before the phenomenal El Niño event, which caused such massive mortality, and for the two seasons following that catastrophe. If the iguanas' reproductive rate had remained at the slow pre-Niño level, it would have taken decades to restore the populations to their 1981 size. In fact there were dramatic changes in breeding performance. On Santa Fe island, before the Niño event, only 40% of the females nested each season; this proportion fell virtually to zero in the bad season of 1983-84, then rose remarkably to 88% and 85% in the next two years. Not only did the proportion of females breeding double but the number of eggs in a mean clutch rose from 2 to 3. Yet another factor was that young females grew much faster and their average age at first breeding was reduced from 4.5 to 2.5 years. This reassuring development was primarily due to the recovery of the algae which form the staple element in the marine iguanas' diet and which had largely disappeared when the sea temperature rose during the abnormal El Niño year. Another stimulus to body growth and breeding was the reduced competition for the available food supply following the reduction in population numbers. There were even days when the iguanas were so replete that they did not feed at all.

Andrew Laurie will join the Galapagos voyage of the R/V Robert Gordon Sproul in 1987 in order to collect further information on predation, food supply, feeding behaviour, nesting and mating on various islands, which he needs to complete his study. This should supply the CDRS and GNPS with the scientific information on which to base their long term conservation policy.

THE ESPAÑOLA TORTOISES — A VERY SPECIAL CASE

The Española (Hood Island) tortoises were the most endangered of the races still surviving when the Darwin Foundation was organized. Only a dozen were left and they had not reproduced for decades. They were all taken to the Darwin Station where eventually, after much trial and error, they bred successfully. The first juveniles were released on their ancestral island in 1975, when they were 5 years old. By 1986, 184 young Española tortoises had been repatriated and only 7 dead had been found. A further 66 were being reared at the CDRS. This situation encouraged the Galapagos National Park Service (GNPS) to try a further experiment and this year they repatriated a group aged one year as well as another group aged 4 years. Both groups will be carefully monitored and compared to see how they progress. If juveniles can be successfully released at the age of one year, the pressure on the rearing establishment would be reduced. Unfortunately, however successful this experiment proves, it cannot be automatically repeated on other islands which are infested with destructive introduced species. Española is happily free from predators such as rats, pigs and dogs, which kill the young tortoises, and the GNPS has eliminated the goats that were destroying the vegetation on which they depend.

The Española tortoises (*Geochelone elephantopus hoodensis*) are exceptional in that they are one of only two distinct wild populations in the world (the Arabian Oryx is the other) entirely consisting of animals raised in captivity. Père David's deer is another captive-bred species which may be returned to the wild.

By May 1986, a total of 893 captive-bred Galapagos tortoises of various races had been repatriated to their islands of origin and a further 358 youngsters were being raised at the Darwin Station.



Young giant tortoises in the Rearing Center at the CDRS.
Photo by Andy Wilson.

A BOTANICAL WORKSHOP AT THE DARWIN STATION

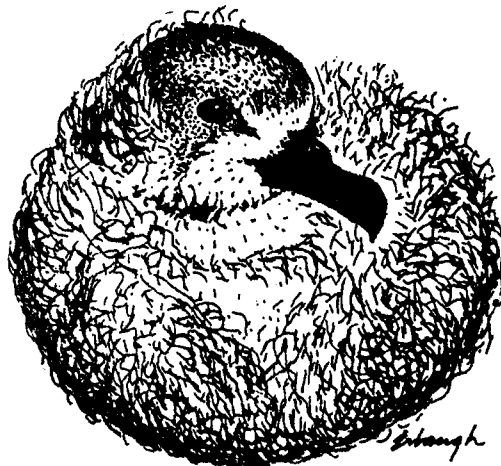
Since Charles Darwin's visit a large number of botanists have studied different aspects of the Galapagos flora but there has been too little co-operation between them and their results, particularly unpublished raw material, are often not available to the Research Station. It is therefore proposed to organize a "Workshop" at Academy Bay sometime during the spring (March—June) of 1987 to co-ordinate botanical information and devise conservation measures.

This is desirable from the purely scientific point of view, but, as Jonas Lawesson points out in a separate article in this issue, it is also urgently necessary to develop a general strategy and raise funds to combat the increasing threats to the native vegetation. The aims of the Workshop are to:

1. Compile the existing data on Galapagos flora and its dynamics. The studies undertaken by means of transects and permanent quadrats will be of special interest.
2. Assess the present status of the Galapagos flora, followed by a classification by priority of certain areas, vegetation types or taxa in need of urgent preservation measures.
3. Assess the change and threats to the Galapagos vegetation presented by human impact (introduced organisms, habitat destruction).
4. Develop and design an appropriate management program for the next 10-15 years against introduced plants and other threats to the Galapagos vegetation.
6. Discuss plans for the use of exotic tree species in Galapagos. Is it possible to grow such species without the risk of their spreading into National Park areas?
6. Discuss and design research projects for the next 10—15 years in the fields of botany, forestry and conservation.
7. Discuss the status of the Galapagos Islands as a biosphere reserve. Is an ecologically stable co-existence between the human inhabitants and the natural areas realistic? What is the present human impact on the natural environment and what will it be in the future?

THE CAMPAIGN TO SAVE THE HAWAIIAN PETREL

Felipe and Justine Cruz have been happy to report that 1986 was another good year in the fluctuating fortunes of their WWF-supported struggle to save the Galapagos race of the Hawaiian Petrel from extinction. (The Hawaiian race is believed to be in even greater danger). There were no extreme weather conditions this season and the petrels were able to raise fledglings from 75% of their (single) eggs in the largest remaining breeding colony on Floreana Island. This remarkable figure was achieved by excluding rats and cats almost completely from the nesting area. It must however be remembered that the figure applies only to one colony and that this project, which is expensive, gives no protection to the dwindling petrel populations on other islands.



Three month old petrel chick
Drawing by Cathy Erbaugh

VISITORS TO THE GALAPAGOS NATIONAL PARK

During the year 1985 the number of visitors to the National Park was 17,850. This total has not varied very much in recent years but it is interesting to note that this time more than a third of the tourists were Ecuadoreans, 6,279 compared with 11,571 foreigners. In the first half of 1986 there was an increase in the number of visitors sufficiently large to cause some anxiety.

RE-OPENING OF THE CRISTÓBAL BONIFAZ BUILDING

Thanks to the generous support of WWF/Sweden and the Olle Nakquist Fund, the CDRS administration building, largely destroyed by fire, has now been restored. It was re-inaugurated on 28 February in the presence of the Swedish Ambassador, the Under-Secretary for Foreign Affairs, the Secretary General of the Darwin Foundation, the local civil and military authorities and the widow and children of the late Don Cristóbal Bonifaz, former Vice-President of the Darwin Foundation.

JOINT OPERATIONAL PLANNING

A joint meeting of the Charles Darwin Research Station (CDRS) and the Galapagos National Park Service (GNPS) was held for a week in September 1985 to agree overall plans for conservation; Craig MacFarland, President of the Charles Darwin Foundation, was in the chair. Owing to the complexity of the scientific, technical, financial and administrative details it was necessary to hold a further meeting in January 1986 but finally a comprehensive programme was worked out closely co-ordinating the activities of the two organizations.

MEETING OF THE PERMANENT COMMISSION FOR THE SOUTH PACIFIC

The Permanent Commission for the South Pacific chose the Darwin Research Station as the site of its 18th Ordinary Assembly, held from 17—24 August 1985. The various South American delegations discussed conservation problems within their 200 mile zones and the adjacent waters. They voted 33 resolutions including one congratulating the CDRS on its achievements in scientific investigation and the preservation of the Galapagos ecosystems.

GALAPAGOS CONSERVATIONISTS RECEIVE WWF AWARD

Following the 48th meeting of the CDF Council at Gland in March 1986, in recognition of their services to the Galapagos, H.H. Prince Sadruddin Aga Khan, Vice-President of the World Wildlife Fund International, conferred the WWF's Award for Conservation Merit on three Ecuadoreans: Miguel Cifuentes, Superintendent of the Galapagos National Park; Juan Black, Secretary General of the Charles Darwin Foundation; and Eugénia del Pino, member of the CDF Council and biology teacher at the Catholic University of Quito.