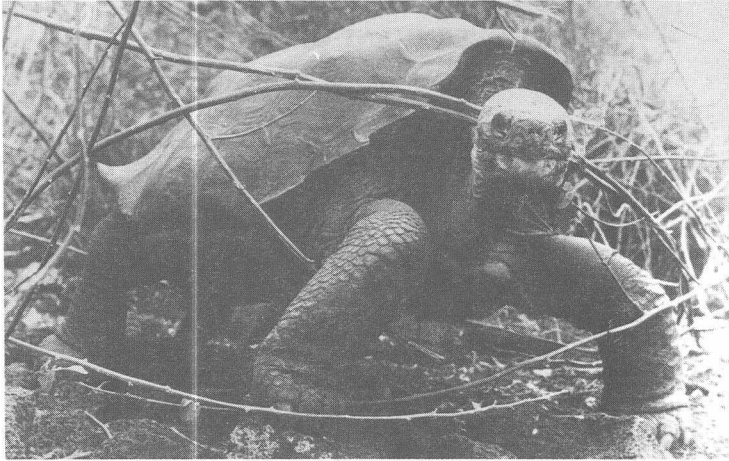


NEWS FROM ACADEMY BAY

ROYAL VISIT

Their Majesties King Carl Gustav and Queen Sylvia of Sweden made a tour of the Galapagos Islands in November-December 1986. While on Santa Cruz Island they visited the headquarters of the National Park Service and the Charles Darwin Research Station's laboratories and the installations where endangered races of giant tortoises and land iguanas are being bred in captivity. Their Majesties were particularly interested in "Lonesome George", who was the sole survivor of the Pinta race of tortoises when the Charles Darwin Foundation was organised in 1959. He is therefore doomed to be the last of his kind, *Geochelone elephantosis abingdonensis*. All the other races of giant tortoises surviving in 1959 have been preserved for posterity.



The generosity of Swedish conservationists has been of critical importance to the Charles Darwin Foundation on several occasions during the last quarter of a century and they are currently financing a major tortoise survey and conservation project. Only last year a new Swedish Foundation, Svenska Galapagos Stiftelsen, was created and King Carl Gustav formally handed over a donation of 700,000 Swedish crowns to the Charles Darwin Foundation. His Majesty is Honorary President of WWF — Sweden.



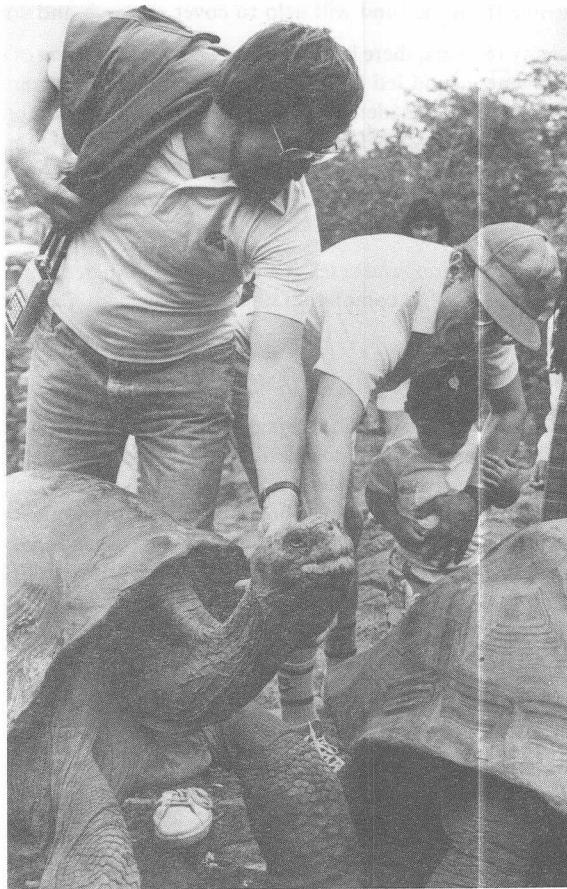
King Carl Gustav and Queen Sylvia presenting a cheque to Juan Black
Secretary General of the Charles Darwin Foundation

Photo by Andy Wilson

THE VICE PRESIDENT OF ECUADOR IN THE GALAPAGOS

In 1986, Dr. Blasco Peñaherrera Padilla, Vice President of the Republic, took his family for a vacation in the Galapagos. He visited a number of islands, escorted by Humberto Ochoa, Chief Conservation Officer of the National Park, Juan Black, Secretary General of the Charles Darwin Foundation, and Günther Reck, Director of the Charles Darwin Research Station. In this way he was able not only to see the wildlife but also to receive authoritative information on conservation management problems, the development of tourism, the education of young Ecuadorean biologists and the research projects of international scientists. He also found time for discussions with staff and students and for visits to the incubators and corrals where the GNPS and the CDRS rear endangered races of tortoises and iguanas. During his stay, Dieter Plage and Sylvia Harcourt arrived with copies of four of the "Survival" films they had made for Anglia Television during the previous three years and these films gave the Vice-President an even more comprehensive picture of wildlife and conservation in the archipelago and its surrounding seas. Dr. Peñaherrera was deeply impressed by the unique qualities of the Galapagos and emphasized his concern for their continued protection against threats of every kind. Before leaving he expressed his enthusiasm in a message he wrote in the Station's visitors' book:

"Pocas instituciones como la Fundación Charles Darwin corresponden tan apropiadamente a su denominación. El ilustre científico que ubicó la especie humana como parte de un cosmos con el que se interrelaciona, que señorea pero del que vitalmente depende. Así es Galápagos; así son, así deben entenderse y cuidarse estas Islas Encantadas; no como un lugar al que se llega y admira, sino como una suerte de caleidoscopico reflejo de los orígenes, el ancestro y el destino de el hombre."



Dr. Peñaherrera introducing his son to a giant tortoise under the watchful eye of Günther Reck, Director of the CDRS.

Photo by Andy Wilson

THE GALAPAGOS MARINE RESOURCES RESERVE

The decree promulgated by President León Febres-Cordero in April 1986 (Noticias 44) established a Commission representing the seven ministries and institutions with responsibilities in this vast area and charged it with the task of preparing a management plan for the Galapagos Marine Reserve. The Commission, under the chairmanship of the Ministry of Agriculture, the government department responsible for the National Park, has sought technical advice and assistance from a number of international organizations with varied experience in the field of marine resources. These include the Great Barrier Reef National Park in Australia, the Woods Hole Oceanographic Institution and the National Oceanic and Atmospheric Administration in the U.S.A.

At the same time, a Technical Committee was set up to work out a detailed management plan for the reserve. The Charles Darwin Research Station (CDRS) and the Galapagos National Park Service (GNPS) are deeply involved in these planning operations. The plan is to be completed by June 1987. On it depends the future of an area of the greatest significance to world science.

THE CHARLES DARWIN FOUNDATION ENDOWMENT FUND

By the end of 1986, The Nature Conservancy International Program was able to announce that the Campaign for the Galapagos Islands was within sight of its target of a 1,500,000 dollar endowment fund. Although the interest from this fund will not be nearly enough to cover the running expenses of the Research Station, it will provide a vital element of stability. All too frequently in the past, important conservation projects have suffered costly interruptions because of unpredictable fluctuations in the CDF's cash flow. The income from the fund will help to cover research and conservation expenses.

As the CDF had never had any reserves, there had previously been no problem of managing investments, but the prospect of an endowment fund led Kitty and John Lastavica to recommend that a Delaware Corporation be formed. Under Kitty's leadership, The Darwin Scientific Foundation, Inc., (DSF) has now been incorporated. The first Chairman of the Board is Mr. S. Dillon Ripley and the members are Mr. Charles J. Hedlund, Chairman of the Board of the Nature Conservancy; Mr. Robert McC. Adams, Secretary of the Smithsonian Institution; Mr. Craig MacFarland, President of the CDF; John Eaton, Esq., and Mr. John Lastavica.

In order to avoid certain legal restrictions and taxes, it is important, though not mandatory, that the fund-raising process should continue after the completion of the Endowment Campaign.

REPATRIATION OF CAPTIVE-BRED LAND IGUANAS

A decade ago feral dogs invaded the colony of Land Iguanas (*Conolophus subcristatus*) on Cerro Cartago, Isabela Island, and it appeared that the entire population would be exterminated. To prevent this, two projects were mounted. Such survivors as could be found were transferred to the Darwin Station where, with improvised equipment, successful captive breeding methods were eventually evolved. A complementary project eliminated the wild dogs in the Cerro Cartago area. Repatriation of captive-bred youngsters could then proceed. Over the years, 245 iguanas have been released in their ancestral territory.



First Land Iguana to be hatched in captivity
at the Charles Darwin Research Station
Photo by Heidi Snell

Their development has been carefully monitored by National Park and Darwin Station staff. Although a complete count is impossible in this rugged terrain, 70 healthy repatriates were found, examined and weighed in 1986, so the programme is obviously succeeding. During the search, the scientists were pleasantly surprised to find remnants of the original population that had somehow eluded the dogs. The captive-bred iguanas are all individually marked so that they cannot be confused with descendants of the survivors. There are still problems: the dogs are gone but cats, which eat the small youngsters, are still present and are more difficult to control. Nevertheless the situation is improved to an extent that could hardly have been believed ten years ago. A GNPS warden, a CDRS herpetologist and a scholarship student were left on Cerro Cartago for a month with this year's release of young iguanas, to study their progress and assess the success so far of the restocking programme.

THE 1987 FLAMINGO CENSUS

Since 1967, the CDRS and the GNPS have conducted censuses of the Galapagos Greater Flamingo, *Phoenicopterus ruber*. The population has remained relatively stable with approximately 400 adults. From statistical analysis of the previous censuses, we found that it was possible to census at fewer sites and still estimate the total population.

On January 24, 1987 Arnaldo Tupiza, the CDRS Representative on Isabela, co-ordinated the Isabela census. Felipe Cruz, an Associate Investigator, co-ordinated the census on Floreana. Census numbers in these two sites were similar to previous years, with a population of approximately 350 adult Flamingos.

Flamingos are very sensitive to human disturbance and their nests are vulnerable to predation from introduced mammals. Tourism has been growing on Isabela. An airport is currently being considered for the town of Villamil, and tourism there will probably increase more rapidly should the airport be constructed. As the majority of the Flamingos nest near Villamil, it will become of increasing importance to keep a careful eye on our Flamingo population.

EXPERIMENTAL PLANTATIONS TO PROVIDE BUILDING TIMBER

The rapid expansion of the village of Puerto Ayora since the establishment of the Darwin Station and the development of the tourist industry has caused an alarming increase in the demand for wood for building and fuel (Noticias 43 and 44). Since the creation of the National Park the local residents have been allowed continued access to their traditional sources of supply of wood, sand and salt but this has now begun to threaten the ecological balance on Santa Cruz Island. To meet the rising demand for timber, while sparing the National Park, the Park Service and the Darwin Station established tree nurseries and five local farmers are now forming plantations on unused areas of their land. These consist chiefly of the native *Piscidia cartagenensis* but experiments are also being made with *Tectona grandis*, a useful tree introduced to the Galapagos in 1937, which shows no tendency to expand naturally and compete with the endemic species.

VISITORS AND EVENTS AT THE CHARLES DARWIN RESEARCH STATION (CDRS)

1986

January

Fernando Pinos, scholarship student from Central Univ., Quito, begins study of the repatriation of giant tortoises to Española, (Hood Island).

Sandra Abedrabbo, scholarship student from Catholic Univ., Quito, begins study of invertebrate communities in the area affected by the great fire on Isabela.

William Chavez, geologist from Univ. of Guayaquil, comes to study the beaches of northern Santa Cruz.

Cicely Blair and Angela Newton arrive from England to study epiphytes on Santa Cruz.

Census of flamingos carried out.

Sven Gillsaeter and party of Swedish supporters of the Charles Darwin Foundation (CDF) visit the Charles Darwin Research Station (CDRS).

Italian television film team visits CDRS.

Visit by Rafael Macías, Director of the National Institute of Fisheries.

February

Malcolm Coulter, assisted by Micheline Manceau and Danielle Dirion, continues his blue-footed booby researches.

Blanchy Solórzano, Univ. of Guayaquil, takes up post as volunteer botanical assistant.

Peter Glynn, Fernando Rivera and René Espinosa arrive from U.S.A. to continue their studies of corals affected by El Niño, 1982-1983.

Belgian entomologists Léon Baert, Jean-Pierre Maelfait and Konjen Desender are joined by Sonia Sandoval and Giovanni Onore from Catholic Univ., Quito.

Magdalena Macías, Liliana Bohórquez and Amanda Rocafuerte from Univ. of Guayaquil, come to help with the study of marine turtles nesting on Espumilla beach.

Robert Ricklefs, Univ. of Pennsylvania, to supervise studies of blue-footed and masked boobies on Española.

Inauguration of the restored Cristóbal Bonifaz administration building.

March

Galo Terranova, Univ. of Guayaquil, volunteers to assist in the campaign to control the feral pigs on Santiago.

Susanna Pérez, Catholic Univ., Quito, begins investigation of the recovery of bird communities in the burnt-out area of Isabela.

Fritz Trillmich (Max-Planck Inst.), supported by Phil Thorson, Thomas Dellinger, Paul Ponganis and David Hennemann, returns to continue his long-term study of the fur seals.

Roger Zimmermann and Thomas Minello come to monitor the National Institute of Fisheries projects in Galapagos.

Miguel Cifuentes, Head of Galapagos National Park Service (GNPS), Juan Black (Sec. Gen. CDF), and Günther Reck (Director of CDRS) leave for CDF Council meeting at WWF International HQ, Switzerland.

April

Ana Puyol leaves CDRS on relinquishing her post as advisor on environmental education.

Andrew Laurie, assisted by Andrew Balmford, arrives from England to continue his long-term research on marine iguanas.

Dieter and Mary Plage, Friedemann Köster and Sylvia Harcourt conclude their three years of filming Galapagos wildlife for Survival/Anglia Television.

Corley Smith, Sec. Gen. of the CDF, 1972-1982, spends a week at the station.

Maria Patiño, secretary to CDRS Director retires.

British Council representative comes to advise on exhibition of Charles Darwin pictures.

May

Gayle Davis arrives to take charge of exhibitions and publications.

Michael Hollmann takes up post as Librarian.

Mario Hurtado, Deputy Director of CDRS, returns to the National Institute of Fisheries on completion of his period of secondment to the Darwin Station.

Bella Muzzio, Fanny Pinos, Blanchy Solórzano, Liliana Bohórquez, Maria Prieto, Amanda Rocafuerte, Galo Terranova, Guillermo Molina and César Zeballos, all students at Univ. of Guayaquil, end their tour as volunteer assistants at CDRS.

Chris Vanbeueren arrives from Belgium to assist with cartography.

Catherine Erbaugh joins CDRS staff.

- Dennis Proctor comes from Botswana to study invertebrates.
- June** Peter Pritchard visits CDRS with his camera crew.
- Mónica Fabara, Univ. of Guayaquil, comes to help Felipe Cruz with the protection of the breeding colonies of Hawaiian Petrels on Santa Cruz and Santiago.
- Jaime Valarezo, Univ. of Guayaquil, to collaborate with the National Institute of Fisheries in collecting samples of "bacalao" and "lisa".
- Miguel Cifuentes and Humberto Ochoa (GNPS), Günther Reck (CDRS), Jorge García (Directorate of Tourism) and Luis Maldonado (Metropolitan Touring) visit various islands in search of additional sites suitable for tourist visits.
- William and Lois Pitt (Univ. of California) were joined by Carole Shickman, Jere Lipps, Jonathan Rider and Richard Gore in developing their palaeontological studies (molluscs).
- Marco Hoyos arrives from Tech. Univ. of Ambato to study land iguanas on Isabela.
- Wilson Alcívar and Luis Ortiz, scholarship students from Tech. Univ. of Esmeraldas, begin mapping woodland species and experiments on planting trees to meet Santa Cruz needs for timber.
- The Commission on Agricultural Science and Technology holds discussions with CDRS Director, Günther Reck.
- Olga Sotomayor takes up duties as Director's secretary.
- A National Institute of Fisheries commission, composed of Mario Hurtado, Leonardo Maridueña and Jorge Barragán, with Oscar Aguirre of the National Institute for Galapagos, holds discussions with CDRS Director.
- Kristen Nelson, Tom Will and Robert Podalsky, of Peter Grant's team doing long term research on Darwin's finches, return to U.S.A.
- June** Howard Snell, CDRS consultant on land iguana problems, returns from U.S.A. with Adam Asquist and Katelijne Flies.
- July** Carlos Vacacela takes up his post as deputy Director and chief education officer of CDRS.
- Guy Coppois and Chantal de Ridder return from Belgium to continue their studies of snails.
- Diana Córdova succeeds Olga Sotomayor as Director's Secretary.
- John Faaborg and Leslie Donaldson continue their study of the Galapagos Hawk. Susana Struve, Catholic Univ., Quito, will help them.
- Dan Rosenberg volunteers to serve on the ornithology programme and Ana Sancho will assist with herpetology.
- Ramón Andraque takes up his post as public relations officer.
- August** CDRS scientists and GNPS officials go to Quito to attend CDF Executive Council Meeting.
- Thomas Fritts, consultant on giant tortoises, arrives from U.S.A.
- Peter Glynn, Robert Richmond and Paula Scott continue their studies of coral communities assisted by Fernando Rivera and René Espinoza.
- Syuzo Itow and Kunito Nehira (Nagasaki Univ.) arrive from Japan to pursue their botanical researches.
- Marsha Sitnik, Executive Secretary, CDF Secretariat for the Americas, visits CDRS with her son.
- The Vice-President of the Republic and family visit CDRS.

Dieter Plage and Sylvia Harcourt return from England to present copies of Anglia Television's series of Galapagos wildlife and conservation films.

Sylvia Harcourt takes up post as assistant to CDRS Director.

Ruth Garcés, Central Univ., Quito, comes to help Fernando Pinos with his monitoring of the captive bred tortoises released on Española.

September

Craig MacFarland and Juan Black (President and Secretary General of the CDF) survey the work of the CDRS.

The GNPS and CDRS begin their annual training course for naturalist guides.

A party from the French research ship *Jean Charcot* visits CDRS.

Commander Cousteau and members of the crew of the *Calypso* pay a return visit after 13 years.

Official party arrives to consider problems arising from the increasing numbers of tourists.

October

Sylvia Harcourt, Dan Rosenberg and Hernán Vargas set out in *Beagle IV* to make a census of penguins and flightless cormorants.

Hendrik Kastelyn takes up his post as CDRS marine ecologist.

Karen Petersen arrives from Denmark as volunteer assistant in the botanical programme.

Luis Ortiz joins CDRS as research assistant in the botanical programme.

Marcia Wilson leaves for Quito to take part in the International Conference on Crocodiles.

Jorge Espinosa, Sandra Serrano, Miguel Zanipatín, Eduardo Amador, Miguel Rosero and Indira Cedeño (all of Guayaquil Univ.) and Raul Salazar (Tech. Univ. of Esmeraldas) come to serve as volunteer assistants in various CDRS programmes.

CDRS Director, Günther Reck, goes to Quito to take part in the seminar on Planning and Management of the Galapagos.

Prof. Stephen Shohet and a group of students arrive from Univ. of California to study proteins in the blood of lizards.

Visit of the U.S. ship *Seaward Johnson* of the Harbord Branch Foundation searching for organisms that might have pharmaceutical uses.

María de Lourdes Cabreram (Univ. of Guayaquil) joins the terrestrial ecology programme as volunteer assistant.

Malcolm Coulter continues his blue-footed booby investigations.

Officers of the three branches of the Ecuadorean Armed Forces visit the GNPS and CDRS.

Jonas Lawesson, Justine and Felipe Cruz, Sandra Abedrabbo, Susana Pérez and Bosko Nowak leave for Guayaquil to take part in the 10th Ecuadorean Biology Conference.

Party from the San Diego Zoological Society visits the CDRS.

Group from the International Monetary Fund and the World Bank visits the CDRS.

December

The King and Queen of Sweden visit CDRS and announce the creation of the Swedish Trust for Galapagos with funds donated by Mr. Thomas Fisher.

Michaela Hainich arrives from Germany to serve as a volunteer in the herpetological programme.

Lorrie Lagasse and Chris Williams come as volunteer helpers with the education programme.

After their meeting in Guayaquil, members of the conference on marine mammals tour the Galapagos on board the research vessel *Sirius*.

Howard and Heidi Snell resume their long-term studies of the land iguanas, assisted by Jim Seely.

Alexander McBirney, William White and Bruno Barroux begin their geological investigations.

Heinz and Irene Schatz return from Austria to continue their study of terrestrial invertebrates.

Hal Whitehead and his team resume their studies of the social organization of the sperm whales in the Galapagos Grounds.

Marvin Green of Nature Conservancy, visits the Station and the islands on board the yacht *Nirvana*.

Rev. Julio Terán Dutari and Rev. Manuel Corrales of the Catholic Univ. of Quito, come to co-ordinate the programme of student scholarships.

Daniel Boorstin, Director of the Library of Congress, visits CDRS.

Anne Heise, Jim Waltman, Dave McCullough and Greg Keys come to continue the long-term study of Darwin's finches by Peter Grant's team.

1987

January

Rosemary and Thalia Grant arrive from U.S.A. to join the Darwin's finches study team.

Mitchell Colgan, Sain Chai Colgan, David Malmquist, Christie Sadler and Tom Smalley continue their study of the coral situation in Urbina Bay.

A party from Cornell Univ. visits CDRS.

Barbara Hooper of Nature Conservancy tours the islands.

José Calvopiña leaves CDRS to study management of natural resources in Costa Rica.

Günther Reck (CDRS) and Humberto Ochoa (GNPS) examine sites on Isabela where another captive breeding centre for tortoises and iguanas could be set up.

David Quammen, editor of "Outside", comes to acquire material for an article on the captive breeding programme.

Mary Clark, a benefactor of the Darwin Foundation, and a party from Long Island Nature Conservancy visit the station.

Andrew Laurie returns from England for yet another stage in his study of the population dynamics of the marine iguanas. He is assisted by Thomas Dellinger from Germany.

David Anderson, Lori Willimont, Mary Becker, Peter Niewiarowski and Catherine Carroll return from U.S.A. for further study of the boobies.

Peter Grant, accompanied by Stoffan and Astrid Ulfstrand, continues the study of Darwin's finches which he began a decade ago.

February

Elizabeth Pillaert arrives as volunteer assistant in the exhibition hall.

Barry Cohen, Australia's Minister of the Environment, is taken on a conducted tour of the islands, by the Director of CDRS and the Chief Naturalist of the GNPS.

A group from the National Development Council and another from the National Secretariat for Public Information visit the Darwin Station.

Señora María Eugénia de Febres-Cordero, wife of the President of the Republic, visits Galapagos escorted by senior civil and military personnel.

Leo Laporte and Margaret Liniecki join the team investigating the Urbino Bay corals.

Kruger Loor, Univ. of Guayaquil, joins the staff as a volunteer.

February
continued

Amos Ettinger (Israeli Television), Bradley Graham (Washington Post) and Col. Concha, Chilean Military Attaché, visit CDRS.

Amrit Work Kendrick comes to draw up a Plan of Environmental Education for the GNPS.

Toshimitsu Wada of the Mitsubishi Corporation holds discussions with the Station Director.

Martha Reyes of the Central Bank Museum examines the possibility of establishing an archeological museum in Galapagos.

Canadian television team comes to make a documentary film for children.

Oliphant Jackson and a group from British Chelonia study blood samples from tortoises and iguanas in the captive breeding centre with a view to diagnosing possible causes of disease.

Henning and Anne Adersen continue their botanical investigations in the area devastated by the great fire of Isabela.



Lava Heron (*Butorides sundevalli*)
Photo by Fritz Pölking