cause it was partly thanks to him that the Chinese pigs were imported in the first place.

When U.S. researchers first became interested in studying Chinese pigs in the early 1980s, they faced a serious roadblock: Trade restrictions made it illegal to bring any of the animals into the United States. Markert and Carter, who was then associate vice chancellor for research at the university, approached Helms in early 1986 to explore the possibility of lifting the ban. At the time, Helms was chairman of the Senate Agriculture Committee. Within months, recalls Carter, Congress passed legislation allowing Chinese pigs into the country.

Once the way was cleared came the question of how the import would be arranged and who would pay for it. A meeting was held between officials from the ARS and representatives of several universities, including NC State, to explore the possibility of forming a consortium to divvy up the costs and the animals.

By mid-1988, however, only Illinois and Iowa State, along with the ARS itself, had agreed to come up with the estimated $600,000 each institution would have to pay to bring the animals over and quarantine them for 4 months. Carter says that at that point NC State decided it couldn't afford the entry fee.

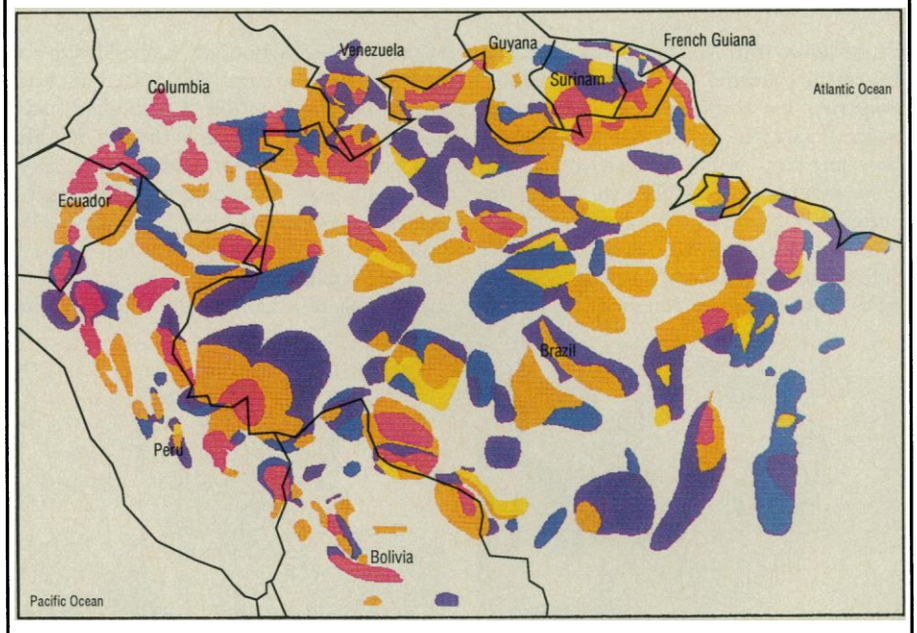
A contract was drawn up between the three institutions in July 1988 and an agreement was reached with the Chinese on 28 September to buy 147 pigs. They arrived early last year and were quarantined in Florida until 29 July, when they were divided up among the consortium members.

But by September 1988—after the consortium was formed but just before the contract with the Chinese was signed—NC State had not only changed its mind, but, according to Carter, it had also made several requests to join the consortium. The reason for the change of heart: The estimated cost of the whole operation had dropped to $1.4 million, or $350,000 apiece if it were split four ways. Carter says he had a written pledge for that amount from North Carolina pork producers.

So why didn't the consortium let NC State in at the last minute? Carter says he made the initial approaches by telephone to Roger Gerrits, an ARS official who helped organize the consortium. Gerrits declined to discuss the matter with *Science*. Illinois's Gomes says that the consortium members had nothing in writing from NC State until July 1989, when the pigs were about to be released from quarantine. But even then, ARS director Ronald Plowman wrote back to Carter suggesting that the consortium members meet with NC State representatives "to explore possible cooperative relations" after the animals had reached the three institutions.

Carter says there were several phone calls back and forth over the ensuing months, culminating in a letter signed by Plowman, Gomes, and David Topel, dean of Iowa State College of Agriculture. "After much discussion and careful consideration," the letter states, "we have decided to abide by the present agreement and not enlarge our circle of cooperators." The letter points out that the agreement prohibits transfer of pigs to any other party for 5 years—and then only "as mutually agreed upon."

■ COLIN NORMAN



Amazonian Biodiversity

The map shown above is the fruit of a workshop held in Manaus, Brazil, in January. It represents the first effort to consolidate the full spectrum of ecological information about Amazonia and decide which areas should receive highest priority for preserving biodiversity. The map's color scale runs from blue (lowest priority) through purple, yellow, and orange to red (highest priority).

Moving spirits behind the meeting, which drew more than 100 scientists, were Thomas Lovejoy of the Smithsonian and Ghillian Prance of the Royal Botanical Gardens at Kew in London. Consulted by the W. Alton Foundation, Lovejoy and Prance suggested that it was time to put into motion a project long talked about in ecological circles: mapping species distribution and consolidating hydrological, geological, and ecological research on the Amazon.

Workshop participants began by dividing into nine working groups: plant systematics, plant ecology, mammals, ornithology, herpetology, ichthyology, entomology, geomorphology, and units of conservation. The groups produced seven maps that were consolidated into three: zoology, botany, and geomorphology.

The zoology and botany maps were then combined into the final product shown above, which indicates that about 55% of Amazonia is a priority for conservation. The areas of highest priority are those that are so species-rich and high in species present only there that they should be effectively "fenced off" from further development, according to workshop participants. The remaining white areas, according to Lovejoy, are not necessarily regions where development should be allowed unchecked, but those where more ecological research is needed.

Publication of the map is intended to be part of an ongoing strategy of conservation. The Peruvian government is already using the map to set up a conservation area and it is likely that other governments and funding agencies will use the map as a guide to conservation efforts.

■ HARRIET KULIOPULOS

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