In early 2006, Rice Today editors decided to begin featuring a breathtaking photo in each centerfold, starting with the April-June 2006 issue. We anticipated that this would normally be a visually stimulating rice landscape. But coming up with something particularly spectacular for the inaugural centerfold was easier said than done.

Then, fortuitously, Harold C. Conklin, the renowned anthropologist, linguist, ethnobiologist, and preeminent authority on the Ifugao people of northern Luzon in the Philippines, approached staff photographer Ariel "Biggs" Javellana with a proposition. He offered to take him on a couple of unforgettable rides in a small airplane if he would bring along his camera equipment. The expedition would document some 40 years of both change and stability across Ifugao Province's topography encompassing rice terraces, rivers, and forests.

Mr. Javellana accepted. Dr. Conklin located a hard-to-find but suitable small plane with an experienced pilot for the journey. The unpredictable cloud cover in the region cleared for two rare back-to-back glorious days. And the rest is history.

Rice Today got its first stunning centerfold photo (see "Claiming rice fields from wild rivers" on pages 19-21 of Rice Today Vol. 5, No. 2), award winning no less. And Dr. Conklin got his treasure trove of 1,000 photos to pore over and evaluate, capping more than 40 years of study he has made of the Ifugao people's enduring rice culture.
Rice Today is also fulfilling a promise to publish more spectacular photography from this collection. Dr. Conklin, now professor emeritus at Yale University, Connecticut, began his research on the Ifugao people in 1961 and has since devoted half a lifetime to studying these architects of the famous Banaue rice terraces. In addition to the Ifugao’s well-known magnificent skills in agricultural terracing, he has observed and examined their intricate ritual and legal systems; their distinctive patterns of social organization, sex, and warfare; their rich oral literature; and their artistic achievements in wood carving and basketry. For more about the Ifugao, see Contours of change, on pages 8-13 of Rice Today Vol. 3, No. 1. 13

“Unfortunately,” says Dr. Conklin, “during the 1960s, I never had the chance to survey the whole area from the air at the same time. But, thanks to the unusual break in the often dense cloud cover, Biggs and I were able to do this over most of the 140+ traditional Ifugao agricultural districts within the province’s 14 municipalities; see map on page 14. I took my first aerial photographs of the Ifugao area from a small plane in the summer of 1961,” says Dr. Conklin. “I also arranged for concentrated photographic efforts in 1962, 1965, 1968, and 1969. Additionally, I had vertical aerial pictures taken, which facilitated the photogrammetric plotting and mapping of a significant part of the region. During those years, I also took many photos of Ifugao rice agriculture at ground level (see page 22).” Many of these photos and resulting maps appear in his Ethnographic atlas of Ifugao (see box on the next page) published in 1980, some of which are reproduced in this article with permission from Yale University Press for comparison with those taken during the March 2006 Conklin-Javellana flyby.

Dr. Conklin’s Ethnographic atlas of Ifugao: a study of the culture, environment, environment, culture, and society in northern Luzon (Yale University Press, 1980) can still be found in little out-of-the-way bookshops in Manila and through Amazon.com itself, which warned at this writing that “only two copies are left in stock but more are on the way.” Pricey at $296, strategically sized at 18 3/4 x 14 x 1 inches to show the photogrammetric plotting and mapping to scale, and weighing 6.5 pounds, this atlas has been called a work of art and a Philippine national treasure by one reviewer, who adds, “Rarely in this world do we find individuals as dedicated to their scholarly work as Dr. Conklin.” Another reviewer writes, “There are books that are fine and attractive volumes, books that are valuable for their purview of other cultures, books that stand alone as art. This atlas, in truth a working volume and nothing to be set aside in some sterile cabinet, is all of those and then some. There are a couple of books that just for the title of the most beautiful and well-conceived in late 20th century bookmaking—without a doubt this would be one of the very few.” Read more reviewer comments at Amazon.com.

Pictures then and now

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In the photo above right, Dr. Conklin shows long-time Ifugao friend Aurora Ammaano and her daughter Maria Hettel some of the 40-year-old aerial images of the terraced landscapes appearing in his atlas. He says these landscapes have both delighted and baffled him over the years. How have these and similar tropical upland agricultural systems developed? What are their long-term effects on soils, terrain, vegetation, and animal life as well as on human activities? The atlas is at least a partial report of his first 20 years of investigations.

In the photo at left, Dr. Conklin and Rice Today photographer Ariel Javellana inspect more than 1,000 new aerial photos taken over Ifugao Province in March 2006. These exquisite images may add more pieces to the puzzle or, in some cases, raise even more questions than provide immediate answers.
According to Dr. Conklin, his very preliminary inspection of the photos has yielded some fantastic and perhaps surprising findings. “Of course, the greatest changes across Ifugao have been in the vast improvement and expansion of roadway networks and population growth, especially along these routes,” he says. “The town centers of Banaue (photo at top of page 19) and Lagawe are now tremendous little cities instead of small crossroad hamlets.” However, when living over most of the districts, they found that the agricultural centers—the places where the largest pond fields are located—have not been affected by the urban sprawl or the roadway system.

The photos show that no valleys where agricultural activities were under way in the early 1960s have been abandoned since then. Dr. Conklin pointed out that Ifugao Province is blessed with abundant rainfall and irrigated fields are kept inundated during all seasons. “Cement has been the greatest additional ‘concrete’ input,” he says with a smile. “It did not exist before—at all. The cement does not go into the rice; it stays along the roads, which are usually above the terraces and the agricultural land below.”

One thing that truly surprised and impressed Dr. Conklin is the amount of forest land in Ifugao today. “Looking at any early picture of an Ifugao agricultural district (as a whole) will show considerably less forest cover than was revealed by our recent survey,” he says. “In terms of luxuriance, density, and height, the forest landscape is remarkable, a situation not at all in the case in most of the rest of the Philippines.”

Why is this? Dr. Conklin surmises that, as in many other parts of the Philippines, Ifugao overseas workers are sending back remittances, which have allowed many Ifugao remaining at home to buy imported food and be able to eat rice more than once a day. “Certainly, the amount of rice being produced on the terraces has also increased tremendously,” he says, “but unquestionably the Ifugao diet is now less dependent on sweet potato than before. Presumably, most Ifugao didn’t eat rice two or three times a day throughout the year. They often depended on sweet potato tubers cultivated in temporary slopeland fields that did not have access to sufficient water for rice field terracing. The area devoted to these shifting cultivation plots has very greatly diminished and has grown back as second growth forest and woodlots.”

Dr. Conklin speculates why there are so many Ifugao overseas workers who have directly made it possible for local forests in the province to flourish by putting less pressure on the land. “The Hugao were among the first Cordilleran pioneers to venture far from home, initially in-country and then around the world,” he says. “Unique one cultural quirk contributing to so much out-migration from the province is the Ifugao custom of primogeniture, that is, inherited fields are not split up. By Dr. Conklin: “If there are seven children in a family (and even today, there often are), only the eldest will get the ‘lion’s share’ of the landholdings. The rest of the siblings have to seek their livelihoods elsewhere.” Also, there are no absentee landlords. Very little land is in the hands of others outside of Ifugao. Land tenure and land usage in Ifugao have traditionally been tightly managed and integrated culturally. Some other ecological observations that can be made from comparing photos from the 1960s with those taken in 2006 show that many partially terraced areas have expanded a little. However, significant new terraces can be detected in only about three or four districts, such as shown in Hu’yu (see photo at left). “They are very important for these people who have not had much land before,” says Dr. Conklin, “but I don’t think these new terraces are very economic.”

At the spry age of 82, Dr. Conklin is working on yet another book to complement his ethnographic atlas. Featuring Ifugao rice specifically, it will show the staple from a traditional Ifugao viewpoint. “I am tapping into a large body of information that is shared by the people living in the agricultural districts and doing the agricultural work in the pond fields all year long,” he says. “What do they know about rice? How do they feel it, taste it, live with it, use it, classify it, sample it, and use all of its by-products? This will be a culmination of my, to date, 47-year study of the Ifugao people. The body of information is very great. I’ve written and given papers and now I’m trying to put all of it together.”

He anticipates that many of the aerial photos will certainly have a place in his book, but surmises that it might be worth doing something separate on the photos themselves as well. “One really good aerial picture can tell researchers a tremendous amount if they know what’s truly happening on the ground. A collection of such photos showing the variation of landscapes and places—which we now have—can tell us a very rich story.”

Editor's note: The photos featured in this article and other magnificent scenes shot during the March 2006 Conklin-Jovellana expedition can be accessed and downloaded on the Rice Today Web site at www.irri.org/ricetoday.
This view of Happaw, Du’ligan (Dukligan) District (location 5 on map), shows no substantial change since 1913 (inset).
A closer view of Ifugao rice agriculture

At ground level...

Removing rice seedlings from a seedbed for transplanting. Remaining seedlings will be carried to other pond-field plots (13).

Bringing in the rice harvest to the drying ground (13).

A closer view of Ifugao rice agriculture

A traditional Ifugao priest sacrifices a pig to the rice gods during a harvest ritual in Lugo near location 3 on map (1).

Terrace maintenance and dike repair are backbreaking work (14).

A closer view of Ifugao rice agriculture

A closer view of Ifugao rice agriculture

African rice research expands

by Savitri Mohapatra

Four new countries have become members of the Africa Rice Center, signaling increased investment in rice research and the growing importance of rice in Africa

T he 26th session of the Council of Ministers of the Africa Rice Center (WARDA), held in Abuja, Nigeria, 27-28 September 2007, signaled a historic change for rice research in sub-Saharan Africa.

The expansion of the geographic mandate of WARDA, which is primarily based in West Africa, was formally approved and four East and Central African countries were admitted as WARDA members.

The new member states are Uganda—the first East African country to be admitted to WARDA—the Central African Republic, the Democratic Republic of Congo, and the Republic of Congo. These additions take the number of WARDA member states from 17 to 21.

“This is the first time since 1987 that new members have joined WARDA,” stated WARDA Director General Papa Abdoulaye Seck. “But what is more important is that the new member states are from East and Central Africa—regions that, unlike West Africa, were not traditionally known for rice cultivation.”

“With the success of WARDA’s technologies, particularly the New Rice for Africa (NERICA) program, Central and East African countries are seeing for themselves the benefits of investing in rice research,” Dr. Seck said.

In his opening address, His Excellency Umaru Musa Yar’Adua, president of the Federal Republic of Nigeria (represented by the vice-president, Dr. Jonathan Goodluck, who delivered the message) mentioned that, aside from NERICA, another major contribution from WARDA to Nigeria was in the area of rice policy research.

The Council of Ministers thanked Dr. Seck for his strong advocacy for rice research and development, which has led to tangible improvements in contributions from member states—including Nigeria, which has fulfilled its financial obligations to WARDA to date.

“The contribution received from member states in 2007 is equivalent to that of the last 10 years,” the Council affirmed.

The Council strongly backed a new pan-African Rice Initiative (NERICA) that will be launched in 2008 by Benin President Y yi Bi on with WARDA, as part of advocacy efforts to support Africa’s rice sector.

Dr. Seck’s vision and strategy for a more competitive, diversified, and sustainable Africa Rice Center were fully endorsed by the Council, particularly the post-M.Sc. internship program for young educated Africans designed to create the next generation of rice researchers in sub-Saharan Africa.

The Council urged WARDA to strengthen links with subregional and regional bodies and reiterated its commitment that WARDA, while remaining one of the 15 international centers supported by the Consultative Group on International Agricultural Research (CGIAR), be recognized as a Center of Excellence of the African Union.

As the shortage of seed of improved varieties continues to be a major constraint to rice production in sub-Saharan Africa, the Council encouraged WARDA’s involvement, in association with national programs, in seed production and urged it to help in the development and harmonization of seed legislation at the regional level.

One of the highlights of this session was the presence of invitees from the Network of Farmers’ and Agricultural Producers’ Organizations of West Africa. The Council resolved to invite farmer’s associations as observers to the WARDA National Experts Committee meetings on a regular basis.

The 26th session was held under the chairmanship of Abba Sayyadi Ruma, Nigeria’s minister of agriculture and water resources. Before concluding its historic session, the Council approved Togo’s assumption of the Council chairmanship for the next 2 years.