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For Iraq's Great Marshes, a Hesitant Comeback
By JAMES GLANZ

ABU SUBAT, Iraq, March 1 - The family of marsh Arabs that had lived in this smashed house was named Tweresh, said Hamid Muhamed Hashim, walking carefully in his cracked leather sandals over the fallen bricks.

He had visited them; his cousin used to live right over there, Mr. Hashim said, pointing to another ruin sitting amid the rubble of its collapsed roof, the doors and window frames torn from the walls either by looters or the fleeing families themselves.

"This was the main guest room," he said quietly, as if the owners were still here.

A dike that Saddam Hussein's government finished nine years ago had drained this marsh, once part of an incomparable ecosystem spread across 7,000 square miles of southern Iraq that Mr. Hussein systematically destroyed.

After sealing this dike, the government gave families 24 hours to leave and never come back, Mr. Hashim said. The ruined houses were left sitting on dusty little hills in a barren and bone-dry desert. He was 15 then.

But when Mr. Hussein's government fell in April 2003, villagers went to the dike and gouged holes in it using shovels, their bare hands and at least one piece of heavy equipment, a floating backhoe. Since then, something miraculous has occurred: reeds and cattails have sprouted up again; fish, snails and shrimp have returned to the waters; egrets and storks perch on the jagged remains of the walls, coolly surveying the territory as if they had never left.

As Mr. Hashim walked down a short muddy embankment to his boat, the air filled with a cacophony of frogs croaking in full-throated appeal to their potential mates. The re-emergence of life from the bleak Iraqi desert, said Ali Messen, another marsh Arab, from the town of Chabaysh, has made him feel "like a person detained in prison who is set free."

In certain places, and with a fraction of their former bounty, the marshes have started to come back from the dead.

Now, financed by an array of American, Canadian, British, Italian and Iraqi agencies, teams of scientists are trying to determine how fast and how fully this region can return to what was. The work includes soil and water sampling, computer modeling of water flows, training of local scientists and restocking some of the marshes with indigenous fish. One program also comes with veterinary and health services for the marsh Arabs.

To do their research, those scientists are delicately negotiating their way around tribal

boundaries, a continuing insurgency and the extreme passions and politics that the marshes excite in the south of Iraq.

The clannishness bred by the region's long isolation is a factor not to be overlooked, said Dr. Azzam Alwash, an American civil engineer originally from Iraq who is working in one of the teams.

"I used to call the marshes our Sherwood Forest," said Dr. Alwash, who is project senior director at the Washington research organizations Eden Again and New Eden. "It was a place of refuge for people who didn't want to be under the control of the central government."

Mr. Hussein's obsessive and vindictive drainage program, in fact, was intended to obliterate this prime refuge for deserters from his army and the southern Shiite guerrillas, many of them marsh Arabs who fought his government long before the Americans arrived.

Whatever the complexities of the region, reversing Mr. Hussein's depredations and bringing back one simple resource, water, is at least the first step in changing the course of recent history here, said Dr. Thomas E. Rhodes, the representative in southern Iraq for the United States Agency for International Development, which is financing some of the work.

"The conversation starts because there's water there," Dr. Rhodes said, "and the conversation is guided by how much water is there."

"After that," he said, "it's every man for himself."

Under the protection of local sheiks, village leaders, Iraqi scientists and heavily guarded American officials, this reporter visited a number of reflooded sites in recent weeks, traveling mostly along a stretch of road some 75 miles long, running north from Basra to the town of Qurna - as legend has it, the center of the Garden of Eden and west to Chabaysh, a marsh Arab town on the way to the major city of Nasiriya.

The trip covered places where marsh Arabs, with little or no official supervision, were returning and putting up clusters of their reed huts in the marsh equivalent of boom towns, and other spots where old settlements remained spooky and deserted. Great expanses of desert are still dry; other areas now stretch away in grand vistas of water and reeds, dotted by slim wooden boats.

From the road an observer could see boats that were often piled to within a few inches of sinking with bundles of reeds, which the marsh Arabs harvest and feed to their water buffaloes or sell at market.

But with an ethereally tuned sense of balance in an element that is so plainly their own, the boatmen, who often stood upright and pushed the craft with poles, never came close

to overturning. Veiled women dressed in bright colors picked up the bundles of reeds at the shoreline and carried them on their heads along the side of the road.

Obvious everywhere in the pleasant spring sunshine was a passion for the marshes.

"Surely the marshes can be recovered as they were before," said Dr. Malik H. Ali, director general of the marine science center at the University of Basra, where some of the marshland research is being carried out.

When asked how much of the original marshlands could be restored, Dr. Ali replied, "Eighty percent, that will be acceptable." But others have suggested that no more than a third of the marshes can reasonably be restored, and Dr. Ali added, in what many here would regard as a vast understatement, "Certainly, it needs a lot of political involvement."

In truth, a much deeper set of challenges confronts the people here, beyond the technical problem of undoing what Mr. Hussein wrought. Dozens of dams in Turkey, Syria and Iraq have reduced the historical flow of the Tigris and Euphrates Rivers where they merge and nourish the marshes. Rich oil fields beneath some of the former marshes ensure that no force on earth will push the rigs out and bring water back anytime soon.

Drained areas have been reclaimed as agricultural plots where farmers say they no longer want the land inundated.

And many of the displaced marsh Arabs themselves, estimated at 350,000 to 500,000 people by the United Nations, have lived for years in urban centers in Iraq, Iran, Saudi Arabia and elsewhere, and are now of two minds about returning to isolated villages lacking electricity, paved roads, running water and modern schools. With stocks of wildlife much lower than in the marshes of old, it is also much harder to survive by hunting and fishing alone.

Even many of those who are overjoyed about the rejuvenation of the marshes have not embraced their former lives wholeheartedly. Mr. Messen, a former refugee who spent time near the Iranian border, is now a government employee who rents a house in Chabaysh and spends some of his off time in the marsh.

And Mr. Hashim, despite his place in a culture that stretches back at least five millennia, with links to the ancient Sumerians and Babylonians, is upset with his parents for insisting that he and his entire extended family of 14 people move back to the marshes before services like electricity and roads have been put in place.

"We have just constructed a house from mud, from reeds," he said, sounding a little like a New Yorker who has been packed off to summer camp. "We have no jobs. Nothing to do."

Dr. Alwash, the American engineer, said he was developing a pilot project to show that

modern services and the marshes are not incompatible, but he admitted that it was all theory until the great experiment to turn back the environmental clock clarifies some technical and human unknowns.

"The main conclusion is that the marshes are getting back, they are recovering," said Dr. Ali Farhan, of Development Alternatives Inc., an Iraqi who manages a monitoring and restoration project financed by the international development agency.

Still, Dr. Farhan said, "most probably the restoration will be partial."

From the windows of a dual-prop airplane that flew from Basra to Baghdad this month, water could be seen spilling into the desert in blue and green fans from numerous breaches in the insanely complicated web of canals and dikes that Mr. Hussein built to drain the marshes.

During a boat trip with local scientists up the Shatt al Arab, which flows by Basra, water streamed through one such breach. It was a cleanly excavated, 100-foot-wide channel cut into the enormous earthen embankment that had desiccated the swamp around Mr. Hashim's village. Beached at a steep angle on one side of the gap, its bow resting high on the embankment, was a derelict barge spray-painted with the words "confiscated by Al Bahba tribe."

Floating nearby, one of three marsh Arabs in a boat piled high with reeds and an AK-47 lying in plain sight, said that he had been present in April 2003 when about 50 people from several local tribes including one that brought a "floating shovel," apparently a backhoe, dug the hole.

"There was only land on the other side of it, and the water was huge going through the cut," said the man, Abid Hashem Obeid, 53.

Other groups tore through the dike in other places, he said, and the water poured in for 48 hours before it had reached its former level.

The scientists continued on through the gap and began taking samples of the soil, water and aquatic life in the remade marsh. Dr. Najah A. Hussain, who is leading a marsh restoration project at the University of Basra, and Dr. Sadek A. Hussein, another university researcher on the project, contentedly pointed out the loud, almost operatic mating calls of the frogs.

"Nature!" Dr. Hussain exclaimed, drawing laughter.

Dr. Hussain was an author of a paper - with Dr. Curtis J. Richardson of the Nicholas School of the Environment and Earth Sciences at Duke and several others, including Dr. Peter Reiss of Development Alternatives and Dr. Alwash - in the Feb. 25 issue of the journal *Science* that gauged what the scientists called the "restoration potential" of the southern marshes.

The scientists reported that less than 10 percent of the original marshes still function as true wetlands, but that about 20 percent of the original area had been reflooded by March 2004, according to satellite imagery.

High salt content in soil and water, threatens the recovery of the marshes in certain areas, the paper said.

As Dr. Hussain's team pulled up muck and spinachlike aquatic plants from the bottom of this marsh for testing, he confirmed the problems and said the thickets of reeds in this marsh were still only about half as dense as they had been before the marsh dried up.

Some plants, like water lilies, had not come back at all, he said.

On another day, during an overland excursion farther north, the mayor of Qurna, which sits on dry land along the banks of the Tigris but is surrounded by damaged marshes, laid out a broad case for restoring them on environmental, social, political and economic grounds.

Just a short while later, however, on a visit to a nearby farm the portly owner, Muhamed Abdul Saadeh, said that he had grown up on this same spot when it was a marsh, and he assured his visitors that he still respected the memory of his grandfather.

But if the area is reflooded now, Mr. Saadeh said, "we will lose everything."

"Don't let them flood our farm," pleaded Mr. Saadeh, who is receiving support from the international development agency to grow date palms and alfalfa on his land.

Still farther down the road, to the west, where the returning water had already covered nearly everything and muddy, dripping water buffaloes clopped over the pavement, the water was welcome.

"This is our kingdom," said Afif Muhamed Ali Al-Asad, a marsh Arab who teaches English in Chabaysh. .

Sheik Fadal Douiej, a wizened chain-smoking local leader who gave two visitors an all-important pledge of protection in a land that still has a renegade feel, asserted that many consider Chabaysh "an Iraqi Venice."

But the marsh Arabs bringing their reed-laden boats to shore and building reed huts on some of the remaining dry land suggested an earlier time.

Sheik Fadal showed his visitors to a splendid lunch of chicken, carp, pudding and dates in a mudeef, one of the arching, temple-like reed structures of ancient design that somehow remain hushed and cool inside even at high noon. As customary, a black-turbaned cleric recited the brief opening verse of the Koran when the meal was done.

And then the sheik put his visitors in the care of Mr. Messen and several other marsh Arabs in a small wooden boat with a belt-fed machine gun sitting on a tripod in the bow. They pushed off and for about an hour, wove deeper and deeper into the marsh as reeds scraped both sides of the boat along what appeared to be makeshift paths. It was impossible to believe that it had all been dry land two years before.

The murky water was thick with deep green aquatic plants, including water lilies, not flowering at the time, and after a short while all signs of civilization disappeared. There was only sky and water and reeds. Occasionally, other marsh Arabs slipped out of the thickets in their boats and disappeared again.

The boat glided past a pair of water buffaloes placidly chewing their cud and staring at the intruders. Finally it emerged from the vegetation into open water. Ahead, there was a farm on a tiny raised clump of land. A chicken cackled.