

Ending the Silence

BY TOVA FLEMING & DR. MICHELLE STEVENS



Photo of wild hogs in foreground and reed dwellings in the distance by Nik Wheeler

Ecocide and Renewal in Iraq's Marshlands

Noisy fans carve paths of relief through the hot thick midsummer air of a classroom at the University of Barcelona. Small paper make-shift fans flutter like migrating butterflies across the rows of tables as thirteen Iraqi scientists from the Basra Marine Science Center, University of Basra, Iraq, prepare to present their research on the Mesopotamian Marshes, Shatt al Arab River, and Gulf to a group of international peers who have convened at the World Congress for Middle Eastern Studies, July, 2010.

This is the first time these scientists have had a chance to present their research to an international audience. "Scientists in Iraq have been living in a blackout for thirty years because of the dictatorship. They are starved for dialogue with the international community," said Raida Fahmi, Chair of Hima Mesopotamia's Board of Directors.

In addition to the isolation of Iraqis from the rest of the world, the Western media has played a role in distancing and distorting our perception of the Iraqi people and landscape. Search images of Iraq on the internet and you will find a landscape with no horizon save crumbling buildings. The earth and sky are draped a shroud of beige. American soldiers

dominate the majority of images, women in black wail in grief, men scream into cameras, and children stare with eyes that appear much older than their years.

The intellectual blackout imposed by the Baathist regime, in combination with the Western media's portrayal of the Middle East, obscures a vibrant and passionate people with a rich cultural and ecological history as well as an ecological crisis of tragic proportions occurring throughout the Tigris and Euphrates watersheds. The media distortion also conceals the people trying to save the Tigris, Euphrates, and Mesopotamian Marshes.

Surrounded by desert to the west and south, the Tigris and Euphrates Rivers bring life to the Mesopotamian region, and an abundance

of greenery and diversity to the Iraqi landscape. As the rivers begin to converge in southern Iraq, they create a system of interconnected lakes, mudflats, and wetlands that historically covered over 5,790 square miles (15,000 km²), an area twice the size of the Everglades. This complex and diverse ecosystem makes up the al Ahwar marshes—it is the largest system of wetlands in the



Photo of Ma'dan community in 1974 by Nik Wheeler

Middle East and Western Eurasia.

The marshlands support a dazzling array of wildlife including one to ten million wintering waterfowl (approx-

imately two-thirds of the western Asian population), the Euphrates soft shelled turtle, and the endangered endemic Basra reed warbler. The marshes provide an economically important fishery and a spawning ground for migratory fish and shrimp species that come to the marshes from the Gulf to breed, as well as an ancient and vibrant culture.

Theologians believe the Mesopotamia Marshes are the site of the Garden of Eden. They are the birthplace of the three Abrahamic religions: Judaism, Christianity, and Islam. When healthy the marshes sequester carbon, prevent the dust storms now devastating air quality and exacerbating health issues, bring essential nutrients to the marine environment, and support a traditional culture with roots dating back 3000 years. Additionally, the marshes support the agricultural production of dates, millet, rice and wheat.

This traditionally managed landscape spans the border between southern Iraq and Iran and is home to 350,000 to 500,000 Ma'dan, or Marsh Arabs. These predominantly Shi'ite Ma'dan do not necessarily see themselves as part of the arbitrary borders of political boundaries, but as belonging to the marshes themselves. Dr. Michelle Stevens interviewed some of the Ma'dan that fled Iraq to San Diego and recorded their thoughts on the relationship with the marshes: "We grow like a bird in the marsh. Everything is in front of us. We canoe inside the marshes for reeds, for the animals and for fish...the marshes are like our body, our blood. You cannot miss one part. It all should stay as marsh."

In the Marsh Arab culture, nature and culture are inextricably intertwined. The Iraqi poet, Dr. Rasheed Bander al-Khayoun spoke of the potency of this relationship:

The people of al Ahwar need water in the marshes ... Their spiritual need surpasses the material need, since draining the marshes means putting the boats out of service and an end to regional poetry specific to al-Ahwar, and to singing, which can only be performed in that theatre of water and reeds and rushes. Indeed, draining the marshes means the death of a way of life that people have practiced for

tens of centuries. There is no doubt that the people desperately want their environment to return to its natural state ... All the people dream of is the marshes full with fishes, birds, cows, and buffalos with modernized passageways and islands, because it is this vision that is in harmony with their spiritual heritages as found in their songs, poems, and tales.

The Marsh Arabs have become an integral part of the ecosystem through their management of the ecosystem over thousands of years. Traditionally, their homes floated on carefully crafted islands made of reeds; the structure and craftsmanship of the homes date back to the time of the Sumerians. Water buffalo are a cultural icon and keystone species of the ecosystem; they are vital for survival for the Ma'dan culture.

During the 1980's the marshes became a battleground of the Iran-Iraq war. In 1991, in an act of cultural genocide and ecocide, Saddam Hussein's regime drained 90% of the marshes in an attempt to flush out resistant factions believed to be taking refuge in the marshes; the United Nations Environmental Program proclaimed it to be "one of the world's greatest environmental disasters". The Ma'dan were forced to flee. They became environmental refugees squatting on land they held no claim to. Finally, with the fall of Saddam Hussein the Ma'dan began returning home with their water buffalo as locals began reflooding the marshes, haphazardly breaking down the dikes and dams. In 2003-2005, Iraq had good water years and local restoration resulted in the rehydration of up to 60% of the marshlands. In some areas fish and reeds recovered quickly; however, according to the article "The Restoration Potential of the Mesopotamian Marshes of Iraq" published in Science, 2005 by C.J. Richardson and colleagues, only 10% of the newly flooded areas were functioning as healthy wetland systems.

The marshes can be geographically broken up into three areas. The Hammar marsh lies to the south and west of the Euphrates, the Central marsh is located between the Tigris and Euphrates rivers and the Hawizeh marsh is found to the east of the Tigris and is fed both by



The Tigris River

the confluence of Tigris and the Karkeh River that runs through Iran. In October 2008, the Haweizeh marsh was added to the List of Ramsar Wetlands of International Importance. The same year Iran began diverting water from the Karkheh River, drying this spectacular marsh.

In fact, water diversions in Turkey, Syria, and Iran coupled with several years of drought are devastating the Marshes and the Iraqi people at large. Last summer hydroelectric plants along the Euphrates were forced to shut down, leaving people with no electricity in temperatures as high as 135 degrees Fahrenheit. A recent article in *Radio Free Europe* noted that according to, Aoun Dhiab, the Director of the National Center for Water Resources, [Iraq], ... "the Tigris and Euphrates rivers are 'in a dire state,' especially the Euphrates, 'which has been reduced to a mere creek due to insufficient quantities of water released by Turkey and Syria.'" Additionally, the UN recently released a report that the Tigris and Euphrates could be completely dry by 2040.

Reduced flows to the Shatt al Arab River (created by the confluence of the Tigris and Euphrates Rivers) have resulted in a decrease of nutrients available to marine life and fisheries. Additionally, the reduction of fresh water flows allowed the intrusion of salt water into the rivers as far north as Basra. The water is not only salty but increasing in temperature. These changes in the aquatic environment have reduced Shad populations by 75% and are adversely affecting other aquatic organisms such as shrimp and the fisheries that rely on them.

In April 2009 the Basra Marine Science Center, University of Basra, hosted the fourth International Conference on the Rehabilitation of the Iraqi Southern Marshes. Because of her years of work with wetlands and Nature Iraq (Iraq's first conservation organization performing restoration work in the marshes), conference organizers asked Stevens to be the keynote speaker. Stevens describes the experience of arriving in Basra: "The environment I witnessed in Basra had shattered buildings and rivers so polluted with the algae (*Dunaliella sp*) that the water turned bright pink. Garbage was everywhere, and stray dogs snuffled through the garbage, well fed but in ill health. Heavy particulates from dust caused the air to appear sepia-toned and visibility was similar to dense fog...Reduced flows have exacerbated water quality problems." In fact, the second leading cause of death among Iraqi children is diarrhea from drinking polluted water.

Frustrated that the many local conferences held inside Iraq were doing little to create meaningful change in upstream water use, five hundred scientists attending the conference in Basra signed a petition to "appeal to governments of the neighboring countries and international societies to help by insuring and assigning a specific share of water for the Mesopotamian Marshes. For thousands of years the cultures and ecosystem of the al Ahwar marshes have flourished and been sustained through life giving waters, we request enough water to

restore and preserve the biodiversity and long lasting cultural heritage of this region".

Additionally, Dr. Ali Malik, Director of the Basra Marine Science Center (BMSC), and Dr. Adil Yousif al- Handal (BMSC) asked Stevens to help them organize a conference outside of Iraq to inform the international community on emergency freshwater scarcity for the people and marshes of southern Iraq. "We want the world to hear our voice," said Dr. Yousif, "We held several conferences in Iraq about the marsh problem but these remained local, and no one outside Iraq could know about it, we have very bad contact with the outside world due to the ongoing situation."

In response, Dr. Stevens contacted Matthew Hall and Tony Miller (Centre for Middle Eastern Plants, Royal Botanic Garden Edinburgh), organizers for the World Congress for Middle Eastern Studies, Barcelona (WOCMES), Spain 2010, to arrange two symposia featuring the work of ten Iraqi scientists on biodiversity.

The call for international help from the Iraqi scientists and the organizing of the two symposia prompted the formation of the non-profit Hima Mesopotamia: Water and Peace in the Middle East. Stevens organized roundtable discussion at WOCMES to discover the best role for the international community and Hima Mesopotamia in this ecological crisis.

Dr. Nadia Al-Mudaffar Fawzi, Assistant Professor of Marine and Environmental Pollution, Marine Chemistry Department, BMSC, brought an incredible amount of expertise, insight, and focus to both the panels and the roundtable and played an integral role in shaping the mission of Hima Mesopotamia. Dr. Fawzi was the only Iraqi woman from the BMSC at the conference. Her approach to the crisis in the watershed is inclusive and holistic, "We must work to protect the entire Tigris and Euphrates watershed, not just the Mesopotamian marshes," she said. She is currently working in the marshes conducting socioeconomic studies and interviewing Ma'dan women who may not otherwise be accurately represented in such studies.

Dr. Fawzi's holistic approach to the watershed found consensus among the roundtable participants at WOCMES. Other ideas included the necessity of looking at solutions on a local, regional, and international scale; the importance of a socially inclusive response including economic concerns, business leaders and unlikely allies (such as working with oil companies to obtain water through mitigation) in solutions; the creation of a network of support, outreach, and communication with and between grassroots organizations along the Tigris and Euphrates watersheds; and finally, and perhaps most importantly, telling the stories of the scientists, and traditional and local people living along the watershed.

The discussion between Iraqi scientists (with hands-on experience with the watershed and firsthand knowledge of the local and regional situation) and the larger international community generated and clarified Hima's

purpose and mission:

Hima Mesopotamia strives to connect people working on water issues throughout the Middle East and to draw the support of the international community to these groups by telling their stories.

~~Our Vision: The restoration and maintenance of the ecology and cultural heritage of the Tigris Euphrates watershed.~~

Our Mission: To nurture the eco-cultural heritage of the Tigris-Euphrates watershed through

1) Outreach, coordination and capacity-building among grassroots organizations working throughout the watershed, policy makers, and the international community.

2) Synthesis of scientific information and traditional and local knowledge.

3) Providing a forum for cultural and environmental information exchange between individuals, local, national, and international groups via art, media, public speaking and scientific conferences.

At the conference in Barcelona, a young Turkish researcher told Stevens about Doga Dernegi—a grassroots movement opposing the Ilusu dam which would rival Three Gorges Dam in China. In order to meet European Union greenhouse gas emission requirements, Turkey turned to hydroelectric power and is currently building 1700 new dams (many in Kurdish areas) along the watersheds. These dams will affect over 2 million people in Turkey and will drastically reduce water flows downstream. When Dr. Stevens traveled to Turkey, she found that while many of the dams may not be stopped, their operations could be improved. Currently, water is held behind the dams for 2-5 hours; this completely dewater the riverbed; then a surge of 3 meters of water is sent downstream. These conditions create an environment in which aquatic and riparian life cannot hope to survive. The World Bank and the European Union refused to fund the dam; no environmental or social assessments have been done by the government and no consideration for archaeological sites has been made. The Ilusu dam will drown the 10,000 year old city of Hasankeyf.

While in Turkey to conduct research on public opinion about the dam and learn about the ecological conditions of the Tigris and Euphrates Rivers, Stevens met with Dicle Tuba Kılıç and Engin Yikmaz of Doga Dernegi in Istanbul, in the lush garden of the Sphendon Hotel. She arranged a meeting with Doga Dernegi's President, Guven Eken; the connection galvanized a partnership working for social justice and ecological integrity along Mesopotamia's two rivers. Following the meetings with Doga Dernegi, the group arranged for Dr. Stevens' travel and research on the Tigris and Euphrates Rivers for the next three weeks. Stevens visited dams and talked to engineers and evaluated ecological and social conditions on each watershed.

Today, Hima Mesopotamia is gathering international support, and has an international advisory board including members from Nature Iraq, Basra Marine Science Center, Kuwait Institute of Scientific Research, Doga Dernegi, Institute Of Oceanography & Fisheries, Alexandria, Egypt, International Buffalo Federation, Royal Botanic Garden Edinburgh, Centre for Environmental Stewardship and Conservation, Pakistan Wetlands Programme, and researchers from Universities across the United States.

Additionally, Hima Mesopotamia is planning two symposia for the Society of Ecological Restoration International conference in Merida, Mexico. The symposia will bring together representatives from Iraq, Turkey, and Kuwait for the first time. Communication among grassroots organizations and scientists along the watersheds until now has been virtually non-existent, and is vitally important to creating equitable water allocation and the restoration of the ecosystems.

It seems that after several decades of war in Iraq, we forget that people are never solely victims but are filled with vibrancy, passion, love, art, dreams, and hope. We forget that humanity's battlegrounds are also ecological systems. Wildlife and people are both affected by war. Additionally, when we think of the instruments of war, we tend to think of human technologies such as aircraft, missiles, automatic weapons, and tanks. Amidst stories of the dominant contemporary world view that tell us we are separate from the natural we forget that the arsenals of war include the manipulation or management of ecological life support systems in acts of biocide. Water will be one of the most divisive issues in the coming years. We have the unique opportunity to use water as a way to encourage cooperation and help heal cultural strife in this ecologically and culturally rich region.

For more information visit:

www.hima-mesopotamia.org

To follow Dr. Stevens research in Iraq and Turkey visit:
www.iraqmarshresotration.blogspot.com

Tova Fleming is a student at CSU Sacramento, and has been working on the formation of Hima Mesopotamia with Dr. Michelle Stevens for the past year. She is currently serving on the Board for Hima, and hopes to pursue graduate studies focused on the relationship between story and restoration ecology.

Dr. Michelle Stevens is an assistant professor at California State University, Sacramento, in the Environmental Studies Department. She has been working on the cultural and ecological restoration of the Mesopotamian Marshes since 2001, inspired by working as Project Manager for Suzie and Azzam Alwash working on the Eden Again Project. She is now executive director of the Hima Mesopotamia: Water and Peace in the Middle East NGO, and can be reached at STEVENS@CSUS.EDU