

EARTHWATCHER

A Steppe Forward

Under the expert guidance of Dr. Rich Reading, Earthwatch volunteers and conservationists are conducting surveys of several little-studied species in the vast wilderness of Mongolia's Ikh Nart Nature Reserve. The team are now anticipating a substantial reward for their efforts as discussions with the Mongolian government may result in an expansion of the Reserve, with an upgrading of its status to "National Park".



Earthwatch is working with the International Union for Conservation of Nature (IUCN) to inform a status review of *Caprinae* (wild sheep and goats) and for a regional assessment of mammals in Mongolia. Results have also been used to revise the global status of argali sheep and ibex as part of a larger effort.

This development would encourage funding, provide additional staff, and increase resources for continuation and further development of the research. Dr. Reading hopes to gain approval within the next twelve months, and to secure a local non-governmental organization to then run the Park.

The project's continuing success is also impacting the ecotourism industry – there is great interest in identifying new destinations for wildlife viewing in Mongolia. The research team recently entered into negotiations between the local government, a private company, and the local community, which resulted in an ecotourism camp in Ikh Nart. This will generate income for the reserve to be used directly for park management. The eventual objective is to transfer ownership of the camp to the local community to extend and increase the benefits they will receive. It is hoped this will result in a sustainable model for the management of protected areas and an improved livelihood for local people, who already benefit from, and support, the project.

The cinereous vulture: Earthwatch's efforts have led directly to the Ikh Nart Reserve's designation as an Important Bird Area.

This Earthwatch program has an increasingly strong reputation for performing outstanding research. It has inspired several requests to start similar projects in other protected areas of the country. A recent example saw the team helping managers and rangers from the Gün-Galuut Nature Reserve establish their own conservation, management and research program for that reserve. Dr. Reading and the team plan to continue their efforts in expanding these initiatives throughout 2009 and beyond.

Volunteer on *Wildlife of the Mongolian Steppe*:

www.earthwatch.org/exped/reading.html

Read more:

www.earthwatch.org/exped/reading_research.html

AWARD WINNING RESEARCH

Dr. Rich Reading and team have attained the **Best Supporter of Ikh Nart Nature Research Award** – the first of its kind – from the Environmental Protection Agency of Dornogobi Province in Mongolia. Honoring their work in supporting wildlife research and conservation, the award also acknowledges the valuable support provided by Earthwatch. Previous recognition includes the **Significant Achievement in International Conservation Award** and the **Distinguished Environmentalist Award** – both for conservation of Mongolia's rare and endangered species.



Earthwatch engages people worldwide in scientific field research and education to promote the understanding and action necessary for a sustainable environment

CLIMATE CHANGE

“Climate change is one of the most important conservation issues for all nations. Politicians ignore the biodiversity crisis: they continue to support legislation such as drilling for oil in wildlife refuges; agriculturalists continue to rely on pesticides. Attitudes and actions persistently reflect an ignorance of basic ecology and evolutionary biology.” – Dr. Lee Dyer, Earthwatch scientist



Dear Earthwatcher

Earthwatch is constantly evolving to best address the issues facing a rapidly changing world.

In these uncertain times we need to support a carefully selected range of objective scientific field research projects. 2010 will see a smaller, more focused portfolio that will allow us to deliver on our mission more effectively than ever before.

We are proud of what you have helped us to achieve so far. Earthwatch holds all the researchers we have supported in the highest regard, as do the thousands of volunteers who have contributed their finances, time, and hard work to further our understanding and knowledge of the world around us. We need to be certain that the work we do helps us inform today's critical decisions and inspire tomorrow's citizens and leaders.

Through innovative educational and corporate programs, Earthwatch continues to be acknowledged as a vital and effective engagement organization working at international, national and local levels. While we are making changes to our portfolio, one thing will never change: Our volunteers and supporters are at the heart of what we do. In the future we will offer even more unique opportunities to meet your needs and interests.

Thanks, as always, for your generous support.

Sincerely,

Ed Wilson
President and CEO, Earthwatch Institute

EARTHWATCHER is published in Spring, Summer and Autumn to help keep supporters informed of Earthwatch's global work. Please spread the word about Earthwatch by passing this newsletter along to a friend. If you would prefer to read this online or do not wish to receive this newsletter, please contact our Development Office. Tel: 800-776-0188 ext. 8
Email: SupportUS@earthwatch.org

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THE FUTURE IS IN THE FOREST

Billions of people rely on trees and forests for food, shelter, fuel, medicines, stable soils, clean air and fresh water. Forests harbor more species than any other terrestrial habitat, safeguarding the world's biological heritage, and in recent years their role in capturing and storing carbon dioxide emissions from human activities has come to the fore.

Earthwatch is two years into an international research program exploring how different types of forest are responding to climate change. Funded by the HSBC Climate Partnership, we have established five Regional Climate Centres around the world. Thousands of HSBC employees are participating in research-based learning programs, graduating as Climate Champions.

In Brazil, the project is taking place in the Rio Cachoeira Reserve, where we expect to see around 20,000 trees in 12 sample plots measured, mapped and identified, with the aim of monitoring changes in forest biodiversity and carbon storage in trees and soils.

So far, over 300 tree species have been found, varying between 120 and 160 species per one hectare plot. This density of different species illustrates the importance of conservation in the Atlantic Forest biodiversity hotspot, which has lost 92 per-cent of the original forest cover. The trees include several hundred individuals of the economically important palmito, or heart-of-palm. This palm is threatened by unsustainable harvesting for its growing tip, a local delicacy.

The research findings will assist in creating guidelines for woodland managers and communities within each region, helping them to maximize the resilience of their forests according to changing weather patterns and extreme climatic events.

HSBC Climate Partnership: www.earthwatch.org/hsbc

THE PARASITE PREDICAMENT

As extreme weather events are predicted to increase through climate change, populations of insects such as caterpillars are also likely to swell, with major consequences for the wider ecosystem, according to research conducted by Earthwatch scientist Dr. Lee Dyer.

Across research areas spanning Costa Rica, Ecuador, Arizona, California, Nevada and Louisiana, Dr. Dyer is studying the impact of climate change on insect diversity, and has identified that increases in extreme weather events cause a decline in parasitic wasps and flies (parasitoids) that attack caterpillars. This is problematic for both natural and agricultural ecosystems, as they rely on a balance of predators and parasites to maintain diversity and prevent pest outbreaks.

Recent results comparing storm damaged sites against unaffected areas in Louisiana – following the devastation left by Hurricane Katrina in 2005 – have shown that across the affected areas, the richness of parasitoid species had declined, and six caterpillar species had reached uncommonly large numbers. In Costa Rica, analysis determined that flooding also led to a drop in the parasitism rates on caterpillars.

According to the reports, these are the first empirical data in terrestrial ecosystems to demonstrate a major and controversial diversity hypothesis in ecology – the “Intermediate Disturbance Hypothesis” – the theory that biodiversity is highest when disturbance is neither too rare nor too frequent.

Read more:
www.earthwatch.org/exped/dyer_neworleans_research.html
www.earthwatch.org/europe/news/dyer

ARCTIC CIRCLES

Testing of snow and permafrost – the soil kept at or below the freezing point of water for two or more years – in the Hudson Bay area in the northeast of Canada is highlighting a phenomenon with major implications for climate change forecasting.

The research conducted by Dr. Peter Kershaw and Earthwatch volunteers has found a positive relationship between snowpack, permafrost melt and land subsidence. As permafrost melts, the land sinks, resulting in deeper snow cover. The thicker snow insulates the ground, retaining heat and leading to further permafrost melts and increased land subsidence.

This circularity has serious global consequences, because the frozen ground surrounding the Arctic is principally composed of carbon-rich peatlands. As the permafrost melts, the peat decomposes, releasing into the atmosphere huge quantities of carbon dioxide and methane. These are pernicious greenhouse gases, which themselves feed further global warming. This second recurring loop is likely to have a devastating impact, destabilizing ecosystems across the world.

Dr. Kershaw's work represents the cutting edge of climate change science and his results are widely disseminated. Protocols for snow measurement developed on the project have now become international standards, and were used across the Arctic by scientists carrying out investigations connected with the fourth International Polar Year in 2007 and 2008.

Read more:
www.earthwatch.org/exped/kershaw_churchill_research.html

Join Earthwatch Climate Change expeditions:
www.earthwatch.org/climatechangeexpeditions

Turning the Tide

EARTHWATCH APPEAL NETS OVER £70,000 / \$100,000!

In 2008 Earthwatch launched its worldwide Oceans Appeal – a campaign to support our global oceans research, focusing on understanding and protecting some of the most productive regions of our oceans. The results of this campaign so far have been amazing, only made possible by devoted Earthwatch supporters everywhere.

• Last November, Earthwatch Ambassador and yachtsman Brian Thompson embarked on the Vendée Globe round-the-world yacht race, aboard the Bahrain Team Pindar Open 60, specially

modified to be more environmentally-friendly. Brian recorded data about marine life and blogged to Earthwatch supporters throughout his epic voyage

- Paul Rose, presenter and host of the acclaimed BBC *Oceans* series, has been speaking in support of Earthwatch at various events
- In March, we presented our Earthwatch Film of the Year Award to the outstanding documentary, *Wild Ocean*
- In May, Earthwatch scientist Dr. David Smith spoke to hundreds gathered at the New York Academy of Sciences, delivering a key talk on the value of his coral reef research in the Seychelles

So far, our Oceans Appeal has raised more than \$117,699 / £71,562 from supporters worldwide. This is a fantastic result, and we owe you all our deepest thanks and gratitude.

There's still time to get involved. Our oceans are under threat from human activity, and we can't make a difference without you. Help support the work carried out by Earthwatch scientists and volunteers by making a donation at www.earthwatch.org/oceans2009results.

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TEACHERS: ARE YOU LOOKING TO GIVE YOUR STUDENTS AN EXCITING NEW CHALLENGE?

From monitoring hyaena behaviour in the South African bush, to wildlife conservation in stunning Amazon rainforest, Earthwatch offers unique opportunities to help conduct hands-on scientific research and conservation in spectacular locations around the world, in a safe and responsible environment.

Perfect for students aged 16 or older, **School Group Expeditions** can be organized for teams ranging from six to 20 participants, and teachers can travel with no contribution when they recruit six students or more!*

FULL MARKS FOR EARTHWATCH

Earthwatch is named as the top international wildlife and conservation organization in Bradt's *Wildlife & Conservation Volunteering, The Complete Guide*, and is unique in being awarded maximum points for its "demonstrable achievements" – the area which the book describes as "potentially the most important criterion" for assessment.

www.bradtguides.com

www.earthwatch.org/europe/fullmarks



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Start planning for 2010 now. Contact Amanda D'Aiuto at **800-776-0188 ext. 250** or groups@earthwatch.org.

Amanda will be happy to answer any questions and help organize your expedition of a lifetime!

www.earthwatch.org/expedition/groups/highschoolgroups

*Terms and conditions apply

Earthwatch engages thousands of volunteers in conservation research, education, and action, from rural villages in Kenya to bustling cities like New York, from the Arctic Circle to the Amazon rainforest.



Join the Expeditioner Society

HELP LEAD EARTHWATCH'S MISSION WHEN YOU BECOME AN EXPEDITIONER SOCIETY MEMBER WITH A GIFT OF \$25 A MONTH – LESS THAN A DOLLAR A DAY!

Visit www.earthwatch.org/membership for more information.

Despite generous expedition contributions from volunteers, we can't cover all research expenses on those funds alone. Earthwatch's Expeditioner Society was created to bridge this gap as a special group of leaders who:

- Help research teams recover from emergencies like severe weather or broken equipment
- Grow our programs and increase volunteer opportunities despite rising costs of operation

Contributions to Earthwatch are 100% tax-deductible for US residents



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