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Moths Podcast and Scientist Interviews

Automeris io, Korscheltellus gracilis, Lasiestra spp.

Like moths to a flame, some people are irresistibly drawn to the woods at night. Carrying bed sheets and armed with special lights and lures, they come seeking moths. In July 2012, in 49 states and numerous countries across the world, scientists and ordinary folk alike fanned out to get a closer look at these insects during the first ever National Moth Week - now an annual event across the world.

Transcript

Ari: From the Encyclopedia of Life, this is One Species at a Time. I'm Ari Daniel Shapiro.

There are countless animals that have a kind of power over humans – that lure us in, that compel us to write mythologies, that make us gaze through a pair of binoculars. Usually the animals are big, charismatic things – like tigers, or pandas. But charisma can come in much smaller sizes too, and trigger just as powerful an attraction.

A few months ago, it's this appeal of the small that turned people out in droves.

Moskowitz: They're amazing. Let it settle – now you can see those red underwings.

Woman: Wowww.

Kid: Oh, wow, that's like, awesome.

Ari: We're in Frost Woods Park – a patch of green in East Brunswick, New Jersey, and our first of three stops. It's nighttime – about 9pm. And these couple dozen kids, parents, and neighbors – are on the lookout for moths.

Moskowitz: There's something kinda magical about being out at night with all kinds of biodiversity – everything from the size of a pinhead up to a moth the size of your hand.

Ari: David Moskowitz is the co-founder of something called National Moth Week. In late July, for an entire week, over 300 hundred moth-inspired events were hosted in every state in the US – except North Dakota –

Moskowitz: North Dakota, where are you?

Ari: – and in numerous places around the world – Costa Rica, Gambia, Bulgaria, even the Azores in the middle of the Atlantic.

Moskowitz: There's always something to find. It's like a treasure hunt.

Ari: The other co-founder, Liti Haramaty, says National Moth Week's intended, in part, to cast aside the view that moths are just a swarm of ugly, winged pests.

Haramaty: Some of them are as beautiful as butterflies, or even more beautiful than butterflies.

Ari: Such as the Io moth, or Automeris io, Haramaty's favorite – a bright yellow one with two big black eyespots on its wings. She says that looking for moths can be really rewarding. For one thing, in the US, moths outnumber butterflies by about 15 species to one.

Not to mention that finding moths at night is pretty easy.

Haramty: All you have to do is turn on a light at night, and they'll come to you – you don't have to go look for them.

<generator starting up>

Ari: Two and a quarter miles above sea level, perched atop the continental divide of Cottonwood Pass in central Colorado – our second stop – a generator roars to life, powering a bright halogen light.

It's nighttime, and the faces of a dozen people light up in its soft blue glow. Most of them are lepidopterists – who study moths and butterflies by profession – and they're in Colorado for a big science meeting that wrapped up a few hours ago. Someone's unrolled a screen in front of the halogen – to catch the moths flapping through the cold mountain air.

Landry: It's a hepialid – [Korscheltellus] gracilis. For the first time in 30 years.

Adams: Hold on just a second – it looks like there's something much bigger on the other side. Oh yeah, here we go. Here's a noctuid. I think it's a Lasiestra. It's still kicking a little bit.

Ari: Jean-François Landry – who drove here from Quebec, James Adams – who flew in from Georgia, and the rest of the group are collecting these high elevation moths, for museums and for themselves.

Landry: In terms of unknown diversity – new species, this is kind of the frontier.

Ari: By far the youngest person up here is Megan McCarty. She's 16, from Indiana, and is an avid lepidopterist in the making.

McCarthy: Oh, this is just a killing jar. I basically put moths in here, and I have poison in here. And then I'll put them in my collection.

Ari: Her dad, David McCarty, has tagged along too.

David: I'm a supporter of moth love. I like to see the action, but it's just something that Megan does. I like birds.

Ari: Our last stop is in the middle of the island of Oahu, in Hawaii – up past a series of pineapple plantations – on a lush path in the Ewa Forest Reserve that's usually closed to the public. That's because this trail runs along a knife-edge ridge, only 25 feet wide, with a drop on either side. But Cynthia King – an entomologist from Hawaii's Division of Forestry and Wildlife – is keeping careful watch over the 18 people who've assembled in the fading daylight.

King: Everybody else have their stuff – water bottle, flashlight, rain jacket? Awesome.

Ari: A strong gust of wind sweeps across the ridge. Wind's not good for spotting moths – it doesn't allow them to settle on the lit-up sheet.

But it turns out it was ancient winds that blew most of Hawaii's moth species – 850 and counting – from the mainland out to its islands. That's why the moths in Hawaii tend to be smaller than the ones you'd find in North and South America. Little moths can travel much farther on the wind.

Finally, the breeze settles down, and a single moth emerges out of the darkness. A tiny, mottled flutter.

Kawelo: Oh, ooh. <bag opening>

Ari: Kapua Kawelo, who's out here with her two kids, gently lowers the moth into a baggie.

Kawelo: Hey, there's a moth over here. You guys wanna check it out?

Ari: Cynthia King comes over to investigate.

King: This is a little sphinx moth.

Ari: Or Hyles wilsoni perkinsi. The group spots another several moths but before long, it's time to pack it in.

They head back, walking carefully along the ridgeline. And they talk softly about searching for such small treasures beneath the night sky. Their headlamps twinkle along the path like a constellation of slow moving stars.

Ari: Special thanks to Rose Eveleth, Erica Kramer, and Nikki Motson for collecting the audio for this story. And for taking some great photos – which you can see by visiting eol.org.

Our series, One Species at a Time, is produced by Atlantic Public Media, in Woods Hole, Massachusetts. I'm Ari Daniel Shapiro.

Meet the Scientist

Meet Liti Haramaty and David Moskowitz, the founders of Moth Week:

Liti Haramaty

David Moskowitz

Where do you work?
Liti: Co-founder, National Moth Week; Laboratory researcher, Institute of Marine and Coastal Sciences, Rutgers, The State University of New Jersey.

Dave: Co-Founder, National Moth Week; Senior Vice President, EcolSciences, Inc.; PhD Program Entomology, Rutgers University.

What do you study?
Liti: I take part in studying the physiology of phytoplankton and corals, the effects of climate changes on these organisms, and biological activity of natural products from marine organisms.

Dave: I am studying the ecology, behavior and mating strategies of the Tiger spiketail dragonfly (Cordulegaster erronea).

What are three titles you would give yourself?
Liti: Scientist, Mother, Environmentalist

Dave: Ecologist, Conservationist, All Things Nature-addict

What do you like to do when you are not working?
Liti: I spend as much time as I can outside, hiking and looking for bugs.

Dave: Spend as much time outside as possible!

What do you like most about science?
Liti: Always learning new things and meeting interesting people.

Dave: The constant new discoveries.

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The One Species at a Time podcast series is supported by the Harvard Museum of Comparative Zoology.