

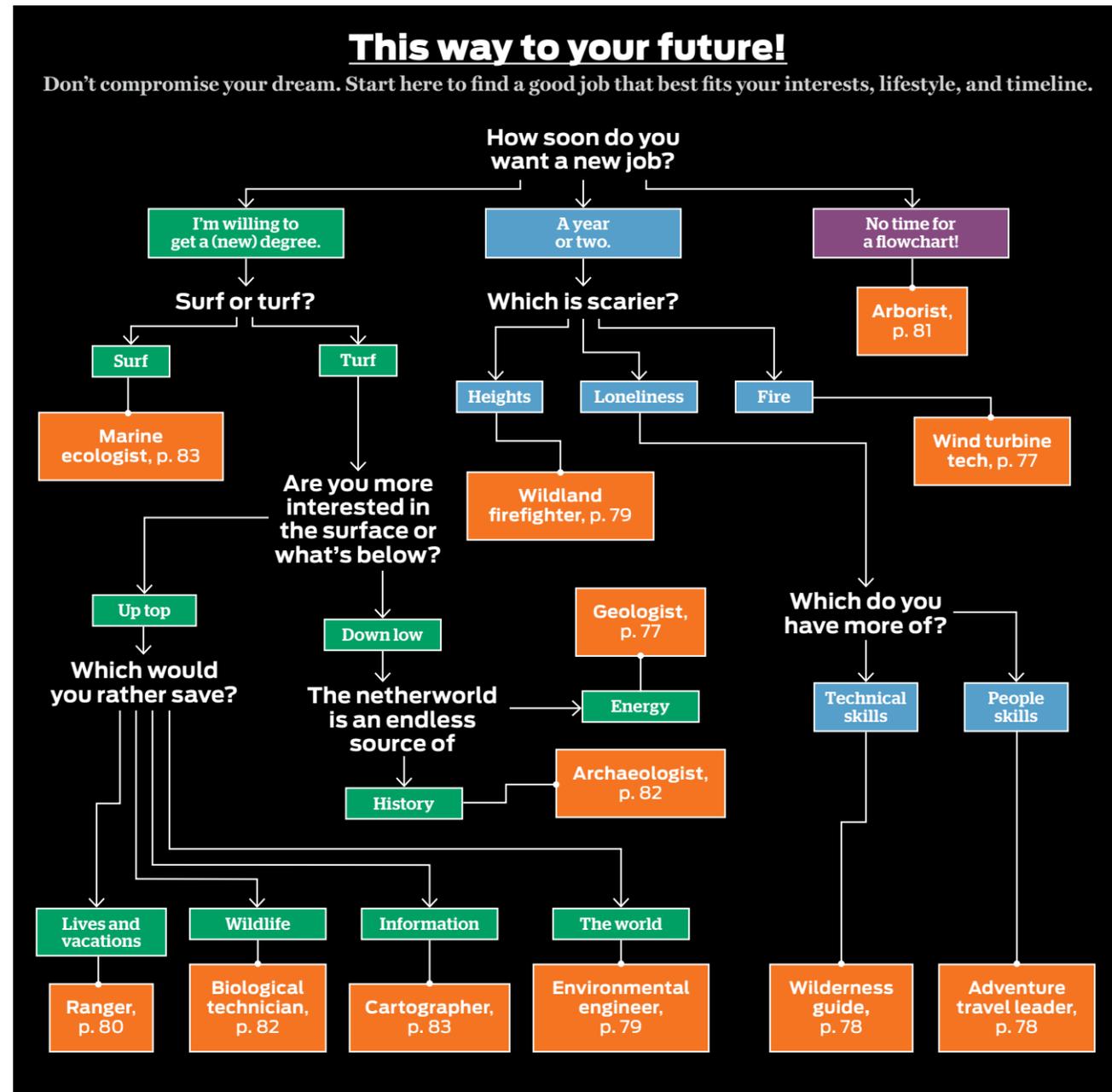
If you've dreamed of
a career in the outdoors,
now's the time to make it real.

BY SARAH L. STEWART

THEY CALL THIS WORK?

Stationed: A Mt. Rainier
climbing ranger (see
page 80) takes in the
view of Mt. Adams.

WITH ECONOMISTS DECLARING that job openings and hires have returned to pre-recession levels, now's the best time in about a decade to seriously consider ditching your desk job. We've identified a dozen different outdoor gigs to help you do just that, and gleaned insights from people who are already living the dream. Some of these jobs pay well, some are in high demand, and some are just so drool-worthy we couldn't resist. What constitutes the perfect job? That's up to you.



How We Chose We crunched numbers from the Bureau of Labor Statistics to figure out which careers are the most promising, based on an average growth of 11 percent by the year 2022. Unless otherwise noted, salaries cited are 2014 median annual income as reported by the BLS; job outlooks are based on 2012 BLS figures, the most recent data available.

POWER PLAYERS

Pull forth the energy that lights our lives.



Wind Turbine Technician

Harrison Gatos, 24
UpWind Solutions / Burlington, VT

→ This could be the quickest cure for the common desk job: Demand for wind techs is high, pay is decent, technical school can get you on the job in as little as two years, and, unlike excavating fossil fuels, it's the future of sustainable energy. This niche industry will add about 800 new jobs in the next decade, mostly in windy states like Texas, California, and Wyoming, as well as the Midwest. The catch: Your office will be 300 feet above the ground on exposed platforms, in mechanical compartments, or even dangling in midair.

As a rope access technician, Harrison Gatos maneuvers by rope and harness to inspect, repair, and retrofit turbine blades, completing four- to eight-week deployments at wind farms from Kansas to Pennsylvania. Working "uptower" can be cold, windy (ya think?), and isolating—due to the grueling travel schedule—but it's not all bad. "You get some really good views up there," Gatos says. (His favorite: A golden sunrise over rural Indiana.) And like many wind techs, Gatos works seasonally, earning his year's pay from March through November.

PAY \$49,000 **PREREQUISITES** A good head for heights **PERKS** Seasonal work at full-time pay **PROBLEMS** Suitcase living **PROSPECTS** 4,000 jobs by 2022 (+24%)



A technician checks lightning strike data.

Research Geologist

→ Like it or not, 90 percent of our energy still comes from the ground beneath our feet. The upshot for geoscientists? Job security. The market is strong for earth science experts—which include not just geologists, but also oceanographers, geophysicists, and seismologists.

Newer energy exploits such as horizontal drilling (think: shale development) and hydraulic fracturing (fracking) are primarily driving demand—and offering the biggest paydays, averaging \$147,000 for geoscientists working in oil and gas extraction.

But you don't have to hunt for fossil fuels for a private company to make a decent living as a geologist. Though more than half of geoscientists work in the private sector, 14 percent are state or federal government employees, working for agencies such as the USGS. These scientists average \$67,000 (state) to \$98,000 (federal) per year—pretty good scratch considering their work can take them to some of the most remote and pristine corners of the country. The catch: These careers require at least a master's (and ideally a doctorate), so they're best for those with time and resources for the schooling.

PAY \$90,000 (average) **PREREQUISITES** Ph.D. preferred **PERKS** Backcountry bliss **PROBLEMS** Paperwork; carbon **PROSPECTS** 44,200 jobs by 2022 (+16%)



WHY I LOVE MY JOB

Julie Dumoulin, 60
U.S. Geological Survey / Anchorage, AK

Research geologist Julie Dumoulin has worked for the USGS Alaska Science Center since 1979, spending summers armed with hammers, a Brunton

compass, and a bolt-action rifle; sleeping in a tent among the thousands-strong caribou herds of the Arctic National Wildlife Refuge; and leapfrogging around the Brooks Range—all so land managers can better understand the resources beneath their feet.

But it's not all a highlight reel. In the field, bad weather can spell misery—and a layer of grime comes with the gig. "Sometimes you just are completely covered with black dust, like you've been down in a coal mine," Dumoulin says.

PHOTO BY TOBYSMITH.COM. ILLUSTRATIONS BY ZÉ OTAVIO

Is opportunity knocking? agricultural engineer / \$74,000 (median) / 4.8% (change by 2022) • animal trainer →



PEOPLE PEOPLE

Endless personability makes your life an endless vacation.



Adventure Travel Leader

John Baston, 49
Mountain Travel Sobek / Emeryville, CA

→ The next best thing to going on vacation? Getting paid to go on someone else's. Full disclosure: With just 4 percent growth through 2022, travel guides will have slim pickings for jobs, and many of them are seasonal. But dreamers gonna dream, and those willing to pay their dues can and do turn this fantasy gig into a real paycheck.

Trip leader John Baston travels a third

of the year—from hiking the Sonoran Desert during spring wildflower bloom to spotting grizzlies gorging on Alaska's summer salmon run. When he's not paddling with a pod of killer whales or watching wolf pups frolic on a deserted Alaskan beach, Baston scouts future locales and plans his next custom trips from his Bay Area office.

While solid outdoor chops are a must

for adventure guides (Baston logged a decade as a park ranger), social skills are equally important. "You have to be able to listen to people and be sincerely interested in their stories," he says.

PAY \$35,000 **PREREQUISITES** People skills **PERKS** See the world **PROBLEMS** If you're awake, you're working **PROSPECTS** 5,900 jobs by 2022 (+3.6%)

Wilderness Guide

→ They say if you do what you love, you'll never work a day in your life. Too good to be true, right? Probably—unless you're a wilderness guide. These life hackers get paid to show others how to do the things they love most, be it rock climbing, mountaineering, backpacking, or fly fishing.

Regardless of your chosen expertise, you'll need patience, people skills, and a mastery of the craft. It's not a get-rich-quick scheme—starting guides often earn less than \$100 per day—but enterprising folks can turn passion into profit.

PAY Highly variable **PREREQUISITES** Outdoor expertise, patience **PERKS** Do what you love all day **PROBLEMS** Bad weather, bad tippers **PROSPECTS** no stats available



Fishing guides find the goods.



WHY I LOVE MY JOB

Charity Rutter, 46
R&R Fly Fishing /
Townsend, TN

By age 29, Charity Rutter's stressful advertising job had fast-tracked her to a type of thyroid disease that doesn't usually appear until middle age. Now, she spends her days along the trout streams of Great Smoky Mountains National Park, teaching anglers to cast, set hooks, and read the water.

"I don't think there is a more

spiritual place in the world than standing in a river," Rutter says.

Point taken, but to make a living as a guide, you've got to be a bit of a backcountry badass: Rutter can predict when and where a fish will hit a fly before it happens.

A successful self-employed guide also needs business acumen and customer service skills.

"You should have to be a waiter or waitress for at least six months before they even try to be a guide," Rutter says. "So much of being a guide is in the way you take care of people."

PHOTOS BY MATT JONES PHOTOGRAPHY / TANDEMSTOCK.COM; THOMAS HANEY



PROBLEM SOLVERS

Things go wrong. That's where you come in.



Firefighters carry their gear into the field.



Environmental Engineer

Lisa Denmark, 36
Environmental Protection Agency /
Philadelphia, PA

→ While the rest of us bemoan the damage we've done to our planet, environmental engineers actually do something about it. From designing wastewater treatment plants to mopping up hazmat spills, they're paid (rather handsomely) to clean up other people's messes. And we live in a messy world.

Lisa Denmark oversees cleanup of federal Superfund (polluted) sites throughout the mid-Atlantic region, work that includes taking water samples from nearby homes, informing residents about contaminants, and overseeing contractors completing the physical cleanup. In previous positions, she's handled spills ranging from mercury to milk (yes, milk; it was in a river) and gathered soil, water, and air samples from chemical tanks to wastewater ponds.

"You name it, I've probably been up to my knees in it," Denmark says. Sexy? No. Though her work often takes place outdoors, it isn't usually in unspoiled or even very pretty places. But Denmark finds satisfaction in leaving the land better than she found it.

"I have something to do with people having safe air to breathe and water to drink, and ensuring their kids are playing in clean dirt," she says.

PAY \$83,000 **PREREQUISITES** At least a bachelor's degree, ideally a master's **PERKS** Save the world **PROBLEMS** Bureaucracy **PROSPECTS** 61,400 jobs by 2022 (+15%)



WHY I LOVE MY JOB

Craig Cunningham, 32
Ruby Mountain Interagency
Hotshot Crew / Elko, NV

Craig Cunningham has been fighting wildfires since he was a teenager. Now he heads a Nevada-based hotshot crew that battles the country's most difficult fires, including north of the Arctic Circle, in every western state, and national parks.

And they do it hiker style, trekking their gear up to 15 miles each day, sleeping under the stars on space blankets, and hiking to the fire line in the morning.

Wildland Firefighter

→ Think of your current job title. Now consider this one: Hotshot. Heady stuff, right? So is the job description for hotshots, the elite group of wildland firefighters who deploy to fire zones around the country to defend wild spaces.

In recent years, fighting wildland fires has become more important than ever: More than 9 million acres burned in 2015, nearing the all-time record set in 2006. Though the goal is the same, the job description varies depending on the type of firefighting crew, including helitack crews and smokejumpers who attack from above, truck-based engine crews, and hand crews that construct fire lines.

On the frontlines, wildland firefighters battle the blazes during 16-hour days, two weeks at a time, lugging 50-pound packs into the backcountry, and cutting and removing vegetation. Wages start low, but overtime adds up quick.

Saving homes and wilderness under brutal working conditions builds camaraderie. Together, crews endure rigorous training and field deployments that leave them reeking so thoroughly of woods and smoke that animals sometimes walk right past them.

PAY \$11 per hour (starting) **PREREQUISITES** Superior physical fitness **PERKS** Bragging rights **PROBLEMS** Time away from home **PROSPECTS** no stats available

PUBLIC SERVANTS

Safety, service, and a helping hand are your trademarks.

Park Ranger

→ If income were measured in views per hour rather than dollars, NPS rangers would be wealthier than Warren Buffet. They clock in at our country's most sanctified natural spaces, working in the shadow of Half Dome, the rainforests of Olympic, the depths of the Grand Canyon.

Most rangers are in it for the love: Permanent positions start at around \$28,000 (for interpretive rangers) to \$35,000 (law enforcement). And while prospects for all recreation workers—a broad category that also includes gigs like camp directors, city park employees, and rec center staff—should grow 14 percent through 2022 (adding 49,000 jobs), competition for NPS ranger positions will remain stiff and subject to federal budgetary whims.

But don't let that discourage the Junior Ranger inside of you. Grown-ups with a dream and determination can make a career as a park ranger; you'll also need a bachelor's degree (ideally environmental science or criminal justice, but many other majors can work) and a willingness to accept volunteer or seasonal positions enroute to permanent employment.

PAY \$28,000 to \$35,000 **PREREQUISITES** Bachelor's degree **PERKS** Best office ever **PROBLEMS** Budget cuts **PROSPECTS** Competitive; no BLS data



WHY I LOVE MY JOB

Michelle Schonzeit, 34
Independence National Historical Park / Philadelphia, PA

In her 13 years with the Park Service, Michelle Schonzeit has rescued a climber from Yosemite's El Capitan, nabbed elk poachers in Crater Lake, saved a young boy from a waterfall at Delaware Water Gap, and been stalked step-for-step by a mountain lion while on solo patrol deep in the Olympic backcountry. "Every day is a little bit different," she says.

A ranger's job is by definition unpredictable—and so is the weather they withstand. "There are no snow days for park rangers," Schonzeit says.

Her advice to wannabes? Keep an open mind, because you likely won't start at your dream park. "Be willing to go anywhere."

REALITY CHECK: PAY UP

The most iconic outdoor jobs have one thing in common: To get one, you'll have to pay your dues. Though no two paths are identical, here's a sample of the hoop-jumping associated with a few of the faves.

Mountain Guide

1. Climb. Ski. Repeat as needed until second nature. 2. Take an 80-hour Wilderness First Responder/CPR course (\$595 and up). 3. Go to guide college (optional), like the Mountain Training School (4.5 years; \$146,000). 4. Get a part-time job at a gear shop. 5. Move in with your parents, or five of your closest pals. 6. Go global: Become a certified American Mountain Guide (90+ days of rock, alpine, and ski guide training; about \$27,000) to guide legally in more than 20 countries worldwide.

River Guide

1. Get a leg up with Wilderness First Responder/CPR certification. 2. Complete on-river training through a rafting outfitter (three weeks, \$450). 3. Work seasonally as a raft guide from May until Labor Day. Earn about \$60/day your first year, or \$4,000 per season including tips. 4. Get an off-season gig to make ends meet. Ideas: Teacher, ski instructor, Christmas tree salesperson (really). 5. Repeat. After five years, you'll earn about \$8,000 per season.

Park Ranger

1. Get some schooling (see left for details). 2. Volunteer at a national park during the summers. 3. Complete training through the NPS Seasonal Law Enforcement Training Program (650+ hours; \$4,500 and up) or Interpretive Development Program (time and costs vary). 4. Apply for seasonal park ranger gigs at usajobs.gov. 5. Go wherever the job dictates.



Arborist

Mark Chisholm, 45
Aspen Tree Expert Co. / Jackson, NJ

→ Good news for all childhood tree-climbing prodigies: Now's a great time to go pro. As cities plant more trees in an effort to green up urban spaces, demand for workers to prune and care for them (and keep them from falling on people or property) is expected to swell.

Despite a median wage of \$16 per hour (\$33,000 annually), the top tier of arborists earn around \$54,000 per year—and potentially much more for those who start their own tree-care business. And because most training occurs on the job, anyone with the desire and physical ability can become an arborist with no educational prereqs.

Downside: Climbing trees with chainsaws and lowering multiton limbs to the ground doesn't leave a lot of room for error. On average, nearly six arborists die each month in the U.S., usually the victims of falling or being struck by errant branches or equipment.

While much of the pruning, climbing, and disease-treating takes place in city and suburb, certain rarefied assignments sound mind-blowingly cool. Mark Chisholm, a third-generation arborist, speaks of pruning a 260-foot-tall California redwood with a reverence that would make the Lorax proud. Because to be an arborist, you have to be more than a tree climber—you've got to be a bit of a tree hugger, too.

"Without trees, we're not going to be able to survive," Chisholm says. "Arborists make it possible for people to coexist with trees."

PAY \$33,000 **PREREQUISITES** Strength, agility **PERKS** Birds'-eye views, power tools **PROBLEMS** Gravity, power tools **PROSPECTS** 63,000 jobs by 2022 (+18.5%)

Working Outside 101

The first rule of the wilderness: Be prepared. Same goes for getting a job in the great outdoors.

STUDY There's no one-size-fits-all degree for outdoor work, but a science background is a great start (good choices for major: wildlife biology, forestry, and environmental science).

Many community colleges and universities also offer outdoor recreation or education degrees; even certifications like wilderness first aid or Leave No Trace can give you a leg up on the competition. OutdoorEd.com is a good one-stop resource.

LEVERAGE Market the skills you already have—and not just your

backcountry abilities, though those will come in handy, too. Are you a people person? Have a head for numbers or words? Many of the same skills and talents you use at your job are important in the outdoors.

VOLUNTEER The best way to get paid to do what you love? Start by doing what you love for

free. Help out with an archaeological dig or marine research expedition, volunteer for the park service or a firefighting squad, do trail maintenance or join an unpaid ski patrol. You'll gain not only hands-on experience in your field of interest, but also contacts that can lead to real jobs down the road. Get started at volunteer.gov.



For an arborist, it's all saws, ropes, and safety.



A ranger patrols Great Sand Dunes National Park.

PHOTOS BY DANIEL GAMBINO / TANDEMSTOCK.COM; HERMANN ERBER / LOOK-FOTO / AURORA PHOTOS

DATA HUNTERS

The world is just so darn interesting.



Archaeologists unearthen ancient secrets.



Archaeologist

Corinne Springer, 59
Natural History Museum of Utah / Price, UT

→ If solitude tops your list of backcountry must-haves and your powers of perception rival a CSI sleuth's, consider becoming an archaeologist. You'll earn about \$59,000 a year and enjoy

a 19 percent boost in job opportunities in the next decade. Best of all, no annoying colleagues—most of the people you'll see at work have been dead for ages.

"Archaeologists are routinely in the middle of nowhere," says Corinne Springer, who manages a remote, off-the-grid field station in east-central Utah. "We're a strange bunch. There are a lot of loners."

Archaeologists work for a variety of employers, from federal agencies like the NPS to cultural resource management firms that assess impacts before construction. Springer spends half the year in a 20-mile-long canyon renowned for its more than 600 archaeological sites, located 2.5 hours from the nearest town. Though she regularly hosts research teams, for the most part Springer is alone among the arrowheads, pottery, and ruins left in the canyon by the Fremont people 1,000 years ago.

And that's just how she likes it. When she isn't tending to field station chores (gardening, roofing, horse wrangling), Springer combs the canyon looking for artifacts. To her, they're clues to understanding how the Fremont people lived—and why they vanished from the area. She spends the winter reviewing her findings and writing reports at her Salt Lake City office, then returns to the canyon as soon as weather permits to continue unraveling the mysteries of its ancient inhabitants.

"Who knows how long it will take to exhaust the potential of this place," says Springer, who didn't achieve her fourth-grade dream of becoming an archaeologist until her early 40s. "I'm going to stay until they kick me out of here."

PAY \$59,000 **PREREQUISITES** Master's degree **PERKS** Solitude, scenery **PROBLEMS** Paper pushing **PROSPECTS** 8,600 jobs by 2022 (+19%)

Biological Technician

→ Say you have a penchant for biology, but you don't have the Ph.D. necessary to score a research position at a university or government agency—or at this stage in your career, a spare decade to get one. As a biological technician, you can contribute to science without cashing in your 401(k) to spend on tuition. With a bachelor's degree in biology or a related field, you'll earn about \$41,000 a year doing hands-on work assisting scientists with lab experiments and field research.

PAY \$41,000 **PREREQUISITES** Bachelor's degree **PERKS** Contributing to science **PROBLEMS** Early mornings **PROSPECTS** 88,300 jobs by 2022 (+10%)



WHY I LOVE MY JOB

Rick McIntyre, 66
Yellowstone National Park / Silver Gate, MT

While many biological technicians work in laboratories, Rick McIntyre has spent his career in the most enchanting of settings: watching wolves in Yellowstone.

McIntyre rises each morning as early as 3:15 a.m. to be in the field a half hour before sunrise. He locates the wolves using radio telemetry, then reports everything they do—every howl, every kill, every mating act—into a tape recorder, which

he types into notes at home. He braves winter temperatures as low as -52°F, and heartbreak when hunters shoot his subjects, which is legal beyond park boundaries. He also shares his knowledge and love of the wolves with the public, giving impromptu lectures at roadside pullouts and programs for local and visiting schoolchildren.

"I have a job that I love so much, it would be punishment for me to take a day off," McIntyre says. "I don't want to miss anything."

He hasn't missed much: On his longest streak, McIntyre was in the field every day for more than 15 years and saw at least one wolf for 890 days straight.



Cartographer

Larry Garland, 64
Appalachian Mountain Club / Gorham, NH

→ Some are calling it the new golden age of cartography: Map-making hasn't been this relevant since Columbus landed in the New World 500 years ago. The advent of digital geographic data and our desire to pinpoint our precise location anytime, anywhere have made this old-school profession suddenly very modern. GPS units and computer software have replaced pencils and drawing compasses, and the smartphone has become an unabridged pocket atlas, while our daily reliance on maps has exploded.

Demand for new and updated mobile, web-based, and interactive maps will drive a 20 percent growth in the market for cartographers and photogrammetrists (who take measurements from photographs for maps) in the next decade. Mappers earn \$61,000 per year—with a bachelor's degree in geography or a related field required.

The downside: Cartographers spend plenty of time indoors. AMC cartographer Larry Garland spends hours behind his desk, sifting through data and creating

digital maps for the club's guidebooks. But on field days, he hikes throughout the Northeast, logging notes and data points with an ultraprecise 8-pound GPS system for up to a week at a time. He's trekked thousands of trail miles in nearly 20 years with the AMC. "You put your heart and soul into the map," Garland says.

PAY \$61,000 **PREREQUISITES** Bachelor's degree **PERKS** Never get lost again **PROBLEMS** Desk time **PROSPECTS** 14,500 jobs by 2022 (+20%)



A marine ecologist goes deep to study ocean wildlife.



Marine Ecologist

Mike Heithaus, 41
Florida International University / Miami, FL

→ Think: Floating among reef sharks in the crystalline waters of French Polynesia, tagging tiger sharks and sea turtles on a six-month research expedition in Australia, capturing alligators in the Everglades. "It is a real privilege to go to such amazing places and work with animals that a lot of people never even get to see," says Mike Heithaus, whose work aims to educate others about marine ecosystems and promote their conservation. As a professor, he's also shaping the next generation of ocean protectors.

The ocean is the ultimate wilderness, containing 50 to 80 percent of all life on Earth and covering 71 percent of the planet's surface. That means marine ecologists, who study interactions between the ocean and its inhabitants, have a huge office—and an equally important job to do, as climate change, pollution, and population growth continue to threaten the ocean and its creatures.

The government employs more than half of all wildlife biologists, the umbrella category for marine ecologists. Average salaries range from \$54,000 (for state employees) on up to \$80,000 (federal), with a master's degree.

Less exciting aspects of the job? Engine repair ("something's always breaking"), grant writing (to fund research), and seasickness. "If you haven't been seasick, you haven't spent enough days on the water," Heithaus says.

PAY \$58,000 **PREREQUISITES** most have a master's **PERKS** Swimming, sweet sunsets **PROBLEMS** The urgent intractability of climate change **PROSPECTS** 21,100 jobs by 2022 for all wildlife biologists (+5%)

PHOTOS BY TODD KAROL / AURORA PHOTOS; JEFF YONOVER / TANDEMSTOCK.COM