

VERETT SAPP WAS GOOFING OFF at his aunt's house near Tupper Lake last summer, doing what any teenager with a DJI Phantom 3 quadcopter drone does with some time on his hands. He flew the thing.

Sometimes, piloting a drone is real work for Sapp. Though just 17, the Beekmantown High School senior runs a company called Falcon Filming that produces slick, drone-enhanced

promotional videos of upscale homes for Realtors in the Lake Placid area. Posh Great Camps look even better with a cinematic

airborne shot. The cash comes in handy; Sapp is a national-class cross-country skier, and the drone helps finance his equipment and travel costs. The quadcopter also documents Sapp's Adirondack adventures with his buddies—hikes and ski excursions, mostly—available on his YouTube channel.

But this day, he was just playing, guiding the three-pound, four-limbed, vaguely arachnid-looking machine as it swooped, dipped, rose and hovered over the marshes where the Raquette River meanders into Tupper Lake. "I was just messing around with it and trying out some new settings," he says. In other words, he was minding his own business, as much as that is possible with technology originally developed for spying.

Sapp's remote-controlled reverie ended abruptly when an agitated neighbor confronted the teen. "Are you on a job or anything?" the man asked. When Sapp said no, he heard an ultimatum. "You need to take that down, or else I'm going to shoot it out of the sky." Sapp complied.

Because he's fresh-faced and flies a drone, Sapp seems like the future. In fact, he's the present, an early adopter of an immensely popular gadget that is already creating opportunities, and controversies, for lovers of the Adirondacks. Right now, drones mostly generate curiosity. The angry guy in Tupper who threatened to use the Phantom as a clay pigeon is "really the only confrontation I've had," Sapp says.

That peace won't last. Drone sales in 2016 topped 2.4 million units and are expected to grow to seven million by 2020. This past holiday season, you could pick one up for \$50 at





big-box stores just outside the Blue Line, and the Adiron-dacks' wide-open spaces will prove tempting for many of these new users. While the Federal Aviation Administration (FAA) introduced licensing and registration rules in 2016, drone use is still, practically speaking, unregulated. Drones are easy. They're fun. They're useful. They can also be disruptive, annoying and genuinely scary if you care about the right to be left alone.

"Who owns the air above your property? How much? How high?" asks Ron Rohrbaugh, a Cornell University ornithologist and bow-hunter whose group, Backcountry Hunters and Anglers, opposes any use of drones for hunting. "What privacy rights do you have? Drones have brought a number of questions to the fore."

Those questions don't lend themselves to easy answers. Expect some novel twists in the region's age-old conflicts between modernity and tradition, public use and individual rights; fresh angles from photographers and videographers of landmark landscapes; and, perhaps, full-on fights over how to protect wild places and rural ways of life from our increasingly clever, increasingly common, flying machines.

EYES IN THE SKIES

Johnathan Esper photographs timeless places all over the world, from Iceland to Patagonia to Hawaii, but he felt like

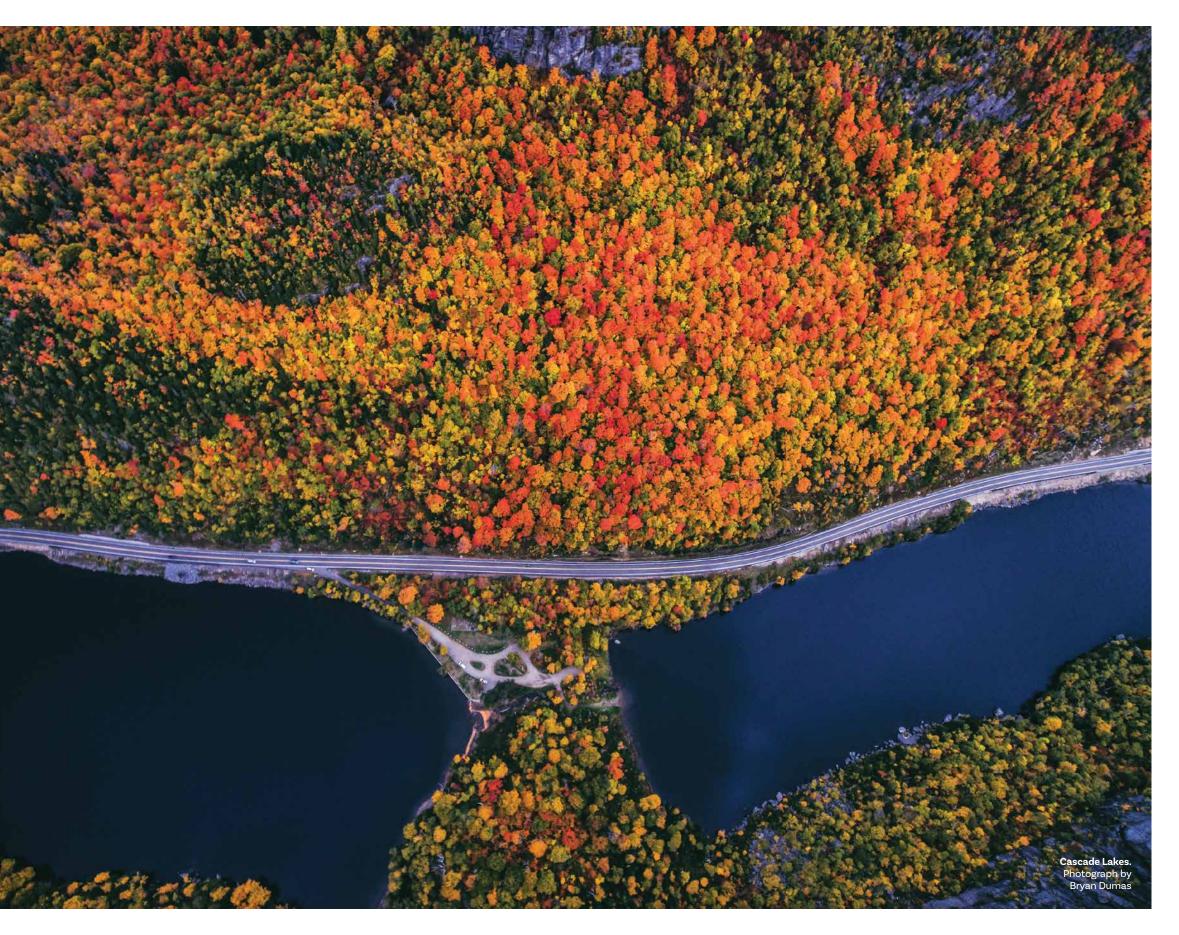
time was running out on his traditional approach to his craft. So a year and a half ago, the Long Lake native bought a drone. "I didn't want to get left behind," Esper says.

It was part of a career evolution. About five years earlier, frustrated by the paucity of perspectives from the ground, Esper donned climbing gear and started shooting from treetops and capturing panoramas. The drone was the next logical step.

He purchased a DJI Phantom 3, got a 20-minute lesson from a friend while shooting in Iceland, and he's been photographing with the robot ever since. His drone can swerve around obstacles, hover just over the tree line, and rotate the camera 360 degrees, catching spectacular vistas at all times of the day, any day of the year. One of his three-image panoramas is 60 inches long.

"Photographers are always seeking unique or compelling ways to capture the world around us," Esper says. "I like flying drones because you see so many unique perspectives." Operating in the zone between manned aerial photography and the unforgiving surface of the earth, drones offer views never seen before. "It's a whole other dimension."

Prior to drones, if Esper wanted an aerial shot, he'd need to book a small-airplane flight weeks in advance with a pilot reluctant to take off before dawn or near dusk, with no guarantees on the weather. Now, if he sees a storm brew-



Expect some novel twists in the region's age-old conflicts between modernity and tradition, public use and individual rights; fresh angles from photographers and videographers of landmark landscapes; and, perhaps, full-on fights over how to protect wild places and rural ways of life from our increasingly clever, increasingly common, flying machines.

ing, he can jump into his car, pull over near a scenic location, launch, and shoot the spectacular cloud formations at sunset. While the elevation required for manned aerial photos tends to flatten out the landscape, Esper says, "with drones, there's a huge distance you can look at, say, across a lake to the mountains, yet you can still see the terrain and the features"—the escarpments and ridges and clouds traipsing amid the peaks.

The drone's ability to hover also allows slower shutter speeds and more interesting light than shots from a speeding plane.

The proof is in the pictures. Esper is especially fond of an excursion this year to the Boreas Ponds. "Storm clouds at sunset, then the fog on the lake in the morning, and once you're out over the lake you can get the view of the water with the High Peaks," he says. "It was an amazing shoot."

Things don't always go so well. Once, Esper was buzzing the drone over his mother's canoe on Lake Lila, flying it backward, trying to get just the right shot of lake, mountains and human being, when he crashed the craft into some trees on an island. "You can't see behind you, and you forget," he says. Thankfully, the \$700 drone survived. "They're a lot tougher than you think."

And they're easy to operate. Esper's Phantom has built-in GPS, reaches speeds of 30 miles an hour, and handles like a Ferrari. So far, it's had the Adirondack skies pretty much to itself. "This is a special time to be flying," Esper says.

That's likely to change, and soon. Sapp, the videographer, is amazed by how cheap drones are becoming, and fears a flock of the noisy little gadgets cluttering up vistas, disturbing peaceful wilderness, and endangering public safety by



"I don't want to have to file flight plans with the FAA," says photographer Johnathan Esper, "but I don't want to see 100 drones buzzing around the summits of the High Peaks, either."

impeding firefighters and flying too close to airports. "A lot of people are just knuckleheads with them," he says.

"I don't want to have to file flight plans with the FAA," Esper says, "but I don't want to see 100 drones buzzing around the summits of the High Peaks, either."

AN END TO (LOOSE)STRIFE

U.S. military drone use in places like Afghanistan and Yemen poses ethical questions and foreign-policy battles. But this spring a program of the Adirondack Chapter of the Nature Conservancy will use drones for search-and-destroy missions, and nobody's complaining. That's because the targets will be invasive species.

The Adirondack Park Invasive Plant Program (APIPP) purchased a drone in 2016 and this year will start flying it to hunt for unwanted aliens such as phragmites, commonly referred to as "the world's worst wetland invasive species," says Zachary Simek, a project coordinator for APIPP.

The giant reed grass grows densely in wet soil in stands up to 20 feet tall, choking lakeshores and pushing out native plants, as well as the insects and animals that rely on them. It spreads from disturbed areas near roadsides, obscuring motorists' sight lines and signage.

The drone will help Simek and his colleagues identify infestations and potential invasion sites in hard-to-reach areas. "Rather than having to don my waders, walk through



this deep, muddy wetland," Simek says, "we can just put the drone in the air and send that out to survey a much larger area much more efficiently."

Another targeted invasive, Japanese knotweed, is the bane of anglers because its rampant growth blocks access to streams. Worse, Simek says, "Each little fragment, even one the size of your thumbnail, has the ability to form roots and start a whole new plant and start a whole new infestation." Minor floods can distribute that material for miles.

Enter the drone. Simek expects the machine will ferry its high-definition camera over infested streambeds after a big rain and see how much knotweed was disturbed, then periodically check downstream for signs of new colonies.

Other fairly easy-to-identify invaders, such as yellow iris and purple loosestrife, could quickly be added to the drone-survey list. As more and different drone sensors come online, such as infrared and thermal imaging, the opportuni-

ties for identifying and mapping problem areas will multiply.

Researchers can spend less time bushwhacking and more time using data to spot problem areas. "We're just starting to get our feet wet in the drone world," Simek says. Which will reduce the need to get his feet wet in the real world.

WHAT'S FAIR?

Drones make strange bedfellows. As much of the rest of the world rushes to embrace the machines, influential hunting and animal-rights groups agree (you read that correctly) that drones should be nowhere near wildlife, in the Adirondacks or anywhere else.

People for the Ethical Treatment of Animals (PETA) reached this conclusion in a roundabout way. Initially, PETA, known for its shaming of illegal hunters and celebrity fur-coat wearers, believed drones could help its cause. The group launched a campaign in 2013 called "Air Angels,"

selling customized surveillance drones from its catalogue in the hopes of exposing inhumane and illegal hunting practices. But then a University of Minnesota researcher revealed that drones create extreme stress for bears in the wild. Though the bears in the study didn't appear agitated on video, monitors revealed their heart rates spiked as much as 400 percent when the machines were near. PETA grounded the Air Angels program in 2015 and no longer sells the drones.

Meanwhile, Backcountry Hunters and Anglers, Ron Rohrbaugh's group, says drones violate the principles of "fair chase" hunting by using technology to undercut traditional craft and ethics. Between readying gear, scouting terrain, learning how to track, and mastering weapons to make clean kills, fair chase demands time and diligence. "There's a ton of energy and emotion already invested before anyone ever releases an arrow, or pulls the trigger on a rifle," says



Rohrbaugh, author of A Traditional Bowhunter's Path: Lessons and Adventures at Full Draw. "That's all leading up to the very difficult and emotional decision to take an animal's life."

After reports several years ago that hunters in the western U.S. allegedly tracked big game with drones to get within easy range for a kill, the hunting community began to push back. Backcountry Hunters and Anglers lobbied for legislation banning drone use for hunting in more than a dozen states. The practice is disallowed in New York State, too, according to the Department of Environmental Conservation (DEC), which in 2015 clarified that drones fall under existing laws banning aircraft from hunting, herding or harassing wildlife.

But laws haven't halted ethically challenged hunters from poaching, baiting, and spotlighting deer, and some will surely try to cheat with drones. One good thing, Rohrbaugh says, is that the Adirondacks' thick canopy protects animals better than the wide-open West, rendering drones less useful here.

But Rohrbaugh and his group want to make drones anathema. "Good hunters realize they have to prove themselves to the non-hunting, voting public," he says. "When we start flying drones around to arrogantly kill animals just because we can, that's not going to fly with the public."

ALL DRONES, GREAT AND SMALL

Larry Brinker wants an America that's safe for drones—or Unmanned Aerial Systems (UAS), as he prefers to call them—and thinks the Adirondacks will soon aid that effort.

The executive director and general counsel for the NUAIR Alliance, a not-for-profit coalition of public, private and academic entities based at Griffiss International Airport, in Rome, New York, Brinker and his colleagues research, test and promote drone use. "Griffiss is our forward operating base," he says, "but we have authority to do testing anywhere in the country."

The base is just 20 miles from the Blue Line, but none of those tests have taken place over the Adirondack Park. Yet. Beginning this year, though, Brinker predicts Griffiss will start launching UAS aircraft, some the size of large airplanes, and flying them over the park. Twitchy bears probably won't notice, because many of these flights will be at very high altitudes, up to 60,000 feet.

What's likely to be tested? Prototypes of search and rescue drones, firefighting drones, flying broadband servers and airborne cell-phone beacons are just a few possibilities. The tests won't just be for machines. Civilian pilots will be put through paces, too, in part to help the FAA figure out what qualifications a drone pilot needs as civilian drones grow larger and more sophisticated. "I'm pretty certain the FAA is going to add on to the experience requirements, the competency requirements, to do the more complex missions," Brinker says.

Those requirements, like much of the regulatory environment surrounding drones, are, well, up in the air. What makes rule-making a muddle is that off- (Continued on page 75)

Mt. Marcy Serving the Adirondacks and beyond

find it here.

com. (315) 387-2600.

[401] 737-2291

hotmail.com, [888] 870-5495.

ADIRONDACK GARNET GRANITE

OWN A PIECE OF THE ADIRONDACKS. Granite with garnet crystals exceptional for countertops, islands, fireplace surrounds and tabletops. (518) 321-1700.

ANTIQUES



ARBORIST

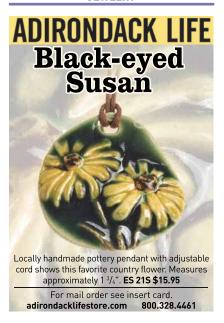
A CUTABOVE
TREE SERVICE - 518.524.4415

Just Look Up...

CUSTOM SEWING



JEWELRY







The most experienced rental Broker in the Adirondacks For Premier Properties

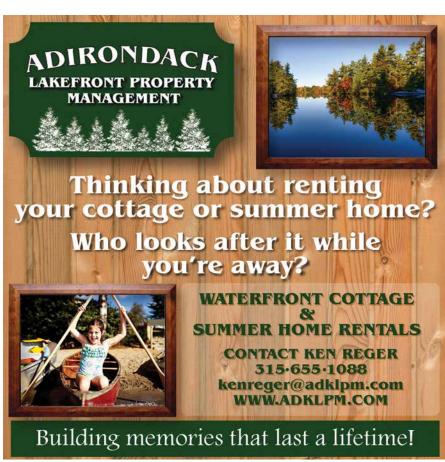
- **♦** Waterfront Homes & Camps
- ♦ Village Lodges & Cottages
- **♦** Condominiums & Townhouses

Adirondack Premier Properties Inc. 2429 Main Street, Lake Placid, NY 12946 Real Estate Sales ◆ Vacation Rentals

> 866-951-0033 518-523-3333

www.adkpp.com
Margie Papier Philo
Real Estate Broker/Owner





D

A

REAL ESTATE

AdkByOwner.com For a week ... or a lifetime ... you'll

10 ACRES, 655' of Salmon River Bank. \$129,900. Off

RENTALS

RAINBOW LAKE Vacation home rental. WATERFRONT!

GREAT CAMP HEMLOCK LEDGE. Prime lakefront,

private setting, modern amenities, available for weekly rental year-round. www.hemlockledge.com

AdkByOwner.com For a week ... or a lifetime ... you'll

COZY CABINS ON SERENE LAKE DESOLATION. 15

minutes from Saratoga Springs/NY Thruway, Dog

friendly. www.lakedesolation.com. email: ldcabins@

Escape the Adirondacks

igh Peaks/Whiteface Region wit

ate trails nearby. Salmon River thin steps of the cabin. Comfortably

ps 8. Come relax on the deck an

the beautiful Adirondack view

http://www.adkbyowner.com/listings/VR9271.html

UP IN THE AIRContinued from page 47

the-shelf technology keeps racing ahead of the regulators. FAA regulations say pilots can't lose visual contact with their drones without a special permit. Yet last year's Phantom 3 model has a range of three kilometers; that can go well beyond an unlicensed operator's line of sight, and thus outside the law. Meanwhile, evolving regulations are full of gaps and contradictions. For instance, the DEC can issue citations against nuisance drone users launching from state land in the Adirondacks, but not for drones taking off from private land and flying over public land. That's the FAA's iurisdiction.

And what about the DEC's ban on motorized vehicles in wilderness areas? Right now, current laws don't reference drones. The DEC says it's "evaluating the need for additional regulations to address drone use on state lands." Allowed uses will depend on the land designation (e.g., stricter rules for wilderness areas), and there's likely to be some kind of permit system for certain commercial uses. But the DEC is still figuring it out.

For his part, Brinker hopes local and state regulations don't become a "patchwork" that stifles UAS development. He gives the example of what would result if passenger jets had to obey the drinking laws of each individual county below the flight path. "The same thing applies to drone use," he contends. "It really needs to be regulated just like manned aircraft are regulated—by the federal government."

Makes sense. Could happen. Or not. In the fast-evolving drone world, "What I told you is accurate today," Brinker says, "but tomorrow it may change."

Luke Cyphers, based in Plattsburgh, has written for The Wall Street Journal, New York Daily News, ESPN The Magazine and Vice.com. He wrote about renowned comet-finder David Levy's Westport astronomy retreat in the August 2016 issue of Adirondack Life.

LAKE PLACID VACATIONS



Exceptional Adirondack Vacation Properties

Luxury homes & camps Lakefront & village locations Spacious condominiums

Best selection of waterfront! Over 50 years of experience!

MERRILL L. THOMAS, INC.

2469 Main Street, Lake Placid, NY 12946 • 800-244-7023 518-523-2519 www.lakeplacidvacations.com rentals@lakeplacidvacations.com

Mt. Marcy Market Place Text classisified order form

Reach more than 163,000 readers with a Mt. Marcy Marketplace classified ad.

Rates: 1x rate-\$2.90 per word, 3x rate-\$2.80 per word, 6x rate-\$2.65 per word, 8x rate-\$2.60 per word. 10-word minimum. Insertions must be consecutive. No agency discounts allowed. We accept checks, money orders, Mastercard, Visa.

Payment or credit card information must

accompany your order.

issue and run it times.

Name
Address
Zip Code Phone
Place this ad under the following heading:
Please start my ad in the

Annual Guide March 13 Mid-May July-August May 1 Mid-June

Number of Words:

Amount @ \$ per word \$

Total Payment for all ads \$

Pay by □ Visa □ Mastercard □ Discover □ Check

Card Number

Verification Number Expiration Date

Telephone numbers, zip codes, keys, and abbreviations are one word each. P.O. Box numbers count as two words.

Send to **ADIRONDACK LIFE, INC.** Mt. Marcy Marketplace, P.O. Box 410, Jay, NY 12941 Call (518) 946-2191 ext. 108 E-mail: jjohnson@adirondacklife.com

Signature

Publisher will not be liable for errors due to illegible handwriting.