

FIELDWORK IN A DIGITAL WORLD

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In 1993 *Weekly World News* created a sensation at checkout lanes everywhere with the alarming announcement that a strange creature—half-man, half-alligator—had been discovered in a Florida swamp. Geographically, it turns out, the report left something to be desired. Four months later an investigative report in *Outside* magazine improved the spatial accuracy and precision of the incredible discovery with a well-documented claim that the beast actually resided in Marsh's Free Museum in Long Beach, Washington (White 1994). Even after *Outside's* convincing report, a newspaper somewhere back East denied the existence of both the museum and the creature. It seems that a skeptical reporter had checked the telephone book for Long Beach, California, instead of Long Beach, Washington. Adding to the confusion, the museum's promotional postcard unequivocally states that "Jake the Alligator Man"—as he is affectionately called by those who know him best—actually came from "a famous California museum." But the eponymous Mr. Marsh himself knows a man who knows a man who saw a similar creature in a swamp somewhere in East Texas.

Now, with geographic information systems (GIS), the global positioning system (GPS), and field-station technology, field investigators need never again confuse Florida, Washington, California, and Texas. The precise geocoordinates of Jake, the display case he calls home, the museum, and the town of Long Beach can be reported to a latitude/longitude precision of .01". Of great interest to me, though perhaps not to you, is the additional, derived information that Jake's waypoint lies on an azimuth of 76° precisely 3,479.614 kilometers from my own waypoint at that time in Oak Ridge, Tennessee. Ed Bright, Don Field, and I discovered these amazing facts while conducting field verification of classified satellite imagery on the Washington coast.

I confess, however, that Jake has little to do with the rest of this essay. In the spirit of tabloid headlines at grocery stores near you, I shamelessly used him to get your attention. My real intention is to write about fieldwork and the remarkable improvements that GIS, GPS, and field-station technologies have brought. For what it's worth, however, we did detect stitch marks on Jake's torso that might suggest some sort of postmortem, batch-mode gene splicing.

DIGITAL DISCOVERY

Once, on a remote mountainside in upstate New York, I compared the landscape before me with a satellite image and suddenly realized that the forest was undergoing massive changes—changes affecting hundreds of square kilometers that, in theory,

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