



Discoveries

News and views from Discovery Southeast Fall 2011

Recording nature

Field journaling as Raven goes global

Richard Carstensen

I have a lousy memory; therefore I keep notes. It also pays to make maps, scribble diagrams, take photos, carefully file them, and return weekly to journals in pursuit of forgotten nuggets, pausing therein to relive and refresh old experience. Journaling* isn't discipline, in the sense of odious prerequisite to enlightenment. It's often the highlight of my day, the time when real learning happens.

In summer, 2010, with friends Clay Good and Kathy Hocker, I participated in the *Southeast Alaska Place-Based Education Institute*, offered by the Alaska Staff Development Network. The workshop, titled *Connection: Rooted in Place, School and Community*, was an opportunity for 60 Juneau teachers to explore ways to learn in and from nature. We brought different but complimentary skills and backgrounds to the workshop. Kathy, as longtime readers of *Discoveries* well know, uses annotated field sketchbooks as primary observational tools. I covered applications of rapidly morphing technologies that Aldo Leopold could never have foreseen—GPS, digital camera, computer—to field journaling. And Clay, a “retired” biology teacher, followed with ways to share our experiences,

epiphanies and journal creations on-line, through a class blog.

Simultaneously with the teacher workshop, Clay, Kathy and I “practised what we preached,” with 35 Tlingit high school students in a culture camp put on by the newly formed Goldbelt Heritage Foundation. Our assignment was to help these T'akdeintaan, Shangukeidí, Gaanaxteidí, Kaagwaantaan and Chookaneidí teens capture, analyse and share what they learned from nature and the elders. We called our component of their 10-day camp *What would Raven see?*

Every naturalist gradually evolves a recipe for retaining stuff too important to trust to fallible memory. But since the days of Thoreau and Muir, quality of those records has declined. In part, the decay of journaling tracks the shifting role of the naturalist. Once respected for our original observations, naturalists now usually serve as interpreters and synthesizers of the work of scientists. Perhaps, if you see yourself as conveyor of the work of others, a personal journal might seem dispensable. After all,

continued on page 4



GPS track from a bushwack with high school students on southernmost Kuiu Island. Photos (larger dots) link to the track in programs like *Robogeo*. These downloads and linkages are my first step in field journaling.

In this issue

Recording nature	1
Director's letter	2
Discovery news	3
Road kill	10
Tracking puzzlers	11
Book reviews	12
Discovery calendar	13
Kathy Hocker journal	14
Thanks to our supporters.....	15

Banner: Annotated sketch of a dead Lincoln's sparrow. Carstensen field notes, September 15, 1985.

* “Journaling” does not appear to be a recognized word. But just as “birders” go “birding,” it seems to me that “journalers” practise “journaling.”

From the Director

Beth Weigel, PhD

Dear Discovery Southeast members and friends,

When difficulties arise in my life, I go outside. I might go for a short walk on a favorite trail or undertake a larger adventure to the top of a mountain. By immersing myself in nature, I not only find solace, I also gain perspective. Regardless of whether I sit and contemplate a mossy stump or gaze out over the seemingly endless wilderness vista, problems seem less problematic and I feel myself open to change. After reading Richard Carstensen's article in this month's *Discoveries*, I'd like to think I am engaged in "Raven's way of studying the world."

Richard's notion of building a "communal sense of place" through the practice of journaling or other shared observations is truly at the heart of Discovery Southeast's mission of connecting people to nature. Discovery Southeast was founded on the notion that by connecting people, and especially children, to the nature found in their own backyards that an ethic of conservation and care for the environment would grow throughout the community. Now coming into our 23rd year, we have begun to see so many of our Discovery Southeast alumni return to fulfill that hope. This past summer Spencer Miller led our Outdoor Explorers camp and Kanaan Bausler just joined the DSE team to lead the Auke Bay Early Dismissal Monday program. Both these young men remember their DSE days and count them as significant in shaping their goals and pursuits as young adults. As we approach our 25th anniversary, I believe it is important to engage and foster strong ties with our alumni.

While many of the young people who grew up in the first generation of DSE programs remain connected to the natural world and may be working in outdoor and environmental jobs, our next generation of young people face new environmental and health challenges. One study asserts that, "*Today's children may be the first generation at risk of having a shorter lifespan than their parents*" (McCurdy, 2010, 102). Children today are more sedentary and connected to media and technology which may contribute to childhood chronic conditions like obesity, asthma, ADHD/ADD, Type II diabetes, and vitamin D deficiency. While all these problems are on the rise in the United States, a national campaign has emerged to reconnect children to the outdoors and Richard Louv, author of *Last Child in the Woods* and most recently *The Nature Principle*, suggests that "*in an age of rapid environmental, economic, and social transformation, the future will belong to the nature-smart—those individuals, families, businesses, and political leaders who develop a deeper understanding of nature, and who balance the virtual with the real.*" (Louv, 2011, 4).

At Discovery Southeast, we want to ensure that today's youth grow up both healthy and connected to nature. To learn more about the relationship between health and spending time in nature, please visit our website. I'd also like to extend an invitation to our readers to attend an upcoming membership event. See the calendar at the end of this issue of *Discoveries*.

Finally, on behalf of the board and staff, thank you to everyone who has made a financial contribution to Discovery Southeast. Your donations provide a sustainable path and help ensure that the next generation of DSE kids will be able to find not only solace and perspective, but also joy and curiosity in nature.

Beth Weigel



Board of Directors

President: Bonita Nelson
Vice President: Brock Tabor
Treasurer: Terry Schwarz
Jennifer Thompson
Heather Hardcastle
Tim Moore
Butch Carber
Zach Stenson
Kevin Maier
Shawn Eisele
Clay Good

Naturalists

Christine Amor (AmeriCorps), Cathleen Balantic, Kanaan Bausler, Rick Bellagh, Scott Burton, Rogelio Cardo, Richard Carstensen, Bob Christensen, Kathy Hocker, Steve Merli, Kevin O'Malley, Tom Schwartz.

Summer 2011 Outdoor Explorers Naturalists

Spencer Miller and Celeta Cook (ACF intern), with assistance from Harris Laughrey (Vanderbilt University Ingram Scholar) and Heidi Lueck (University College for Agrarian and Environmental Pedagogy, Vienna, Austria)

Administrative Staff

Executive Director: Beth Weigel, PhD
Bookkeeper: Tim Blust
Program Coordinator: Cathleen Balantic
SAGA Connections AmeriCorps Volunteer: Christine Amor
Special Projects: Scott Burton

Discoveries is published by *Discovery Southeast*. Founded in 1989 in Juneau and serving communities throughout Southeast Alaska, *Discovery* is a nonprofit organization promoting direct, hands-on learning from nature through natural science and outdoor education programs for youth, adults, and teachers. *Discovery Southeast* naturalists deepen the connections between the people and nature.

Editor: Richard Carstensen
Writers: Richard Carstensen, Beth Weigel, Kevin O'Malley, Cathleen Balantic, Kathy Hocker
Illustrations and photos: Richard Carstensen, Cathleen Balantic, Christine Amor, Kathy Hocker, David Job

Discovery Southeast
PO Box 21867, Juneau AK 99802
907/463-1500 phone
463-1587 fax
e-mail: info@discoverysoutheast.org
website: www.discoverysoutheast.org

Discovery news

Scholarships: The Early Dismissal Mondays program is growing strong at several of Juneau's elementary schools. We are thankful to be able to offer both full and partial scholarships to any child in need of support. Scholarships are made possible by grants and contributions from organizations like the Douglas Dornan Foundation, PEO Chapter D, and the North Face Explore Fund.

Upcoming member appreciation event: We invite all Discovery Southeast members to join us for another *Foggy First Friday* on December 2nd. Like last year, we'll be teaming up with Foggy Mountain Shop for the December First Friday gallery walk. DSE members can purchase anything in the store for 20% off. Stop by Foggy Mountain Shop at 134 N. Franklin St. during normal First Friday hours, ~4:30-7:00 pm.



Meet our new AmeriCorps member: Born and raised in Massachusetts, our new AmeriCorps Christine Amor seeks adventure in both the intertidal and the forest. Christine holds an Associates of Science in Early Childhood Education and a

Bachelor of Arts in environmental studies. Last summer, she helped spearhead a three-week summer science day camp at Joppa Flats Education Center in Newburyport, MA, and this year she puts those skills to work assisting Rick Bellagh with Nature Studies at Harborview Elementary School and leading the Early Dismissal Monday program there. When she isn't getting kids excited about nature, you can find her hiking, biking, practicing yoga, or walking around town singing and splashing in the rain.

Summer 2011: Summer 2011 was a whirlwind of Outdoor Explorers camp with lead naturalist Spencer Miller. He was assisted by Alaska Conservation Foundation intern Celeta Cook, summer intern Harris Laughrey who joined us through the Vanderbilt University Ingram Scholars program, and Heidi Lueck who visited from Austria through the University College for Agrarian and Environmental Pedagogy. Special thanks to the North Face Explore Fund for supporting the program and making Outdoor Explorers scholarships possible. Outdoor Explorers is also partially funded by the City and Borough of Juneau through sales tax revenues.

Pick.Click.Give Discovery Southeast will be participating in *Pick.Click.Give* again in 2012. Thank you for considering a donation to us when you file online for your PFD this winter.

Pick.
Click.
Give.

Fall Discovery field trips

Right: At the Discovery Southeast fall 2011 staff training, our naturalists were joined by lichenologist Chiska Derr for a crash course in the particulars of Southeast Alaskan lichens. Naturalist Kevin O'Malley shared some of this newfound lichen knowledge with his October 17th Discovery Day group at Amalga Meadows.

Below: On October 18th, naturalist Cathleen Balantic and AmeriCorps Christine Amor led a Discovery Day at on the trails and meadows of Eaglecrest, where the children searched for wild edibles and played a fall survival foraging game.





WAYS OF KNOWING

Explorations of the similarities and differences between Traditional Ecological Knowledge (TEK) and Western Science typically involve a simple dichotomy. I like to add a third world view—that of natural history. You could think of the 3 Ways as a branching tree. Although a progression over time is implied, position on the tree is doesn't signify superiority of one Way over the other. Our challenge is to secure the roots as branches proliferate. While new Tongass PhDs are minted

annually, TEK-Masters and proficient Ecoregional Naturalists are becoming blue-moon collector's items.

Comparing the 6 attributes for each of these 3 paths suggests that Natural History and TEK are closer to each other than either is to Science. Today's naturalist may use GPS and digital photography, but so does today's Tlingit hunter and spruce-root gatherer. All remain generalists, whereas scientists seeking professional ascendancy must specialize. Although the naturalist isn't bound to a life-encompassing moral or religious code, many individuals—such as Muir—are deeply spiritual.

With science, advancement of knowledge grew more formalized. In its strictest definition, science involves hypothesis generation, followed by rigorous, quantitative experimentation. Because skepticism permeates testing, science distances itself from the metaphysical (the untestable). Individual scientists may be religious, but most try to minimize the scale-tipping proclivity of untestable belief on scientific objectivity.

In science, except for professional ethics, there's no right or wrong—only incremental pursuit of truth, mostly through hypothesis falsification. Scientists don't seek ultimate Truth; preferring to chip away at truth with a small "t."

It's exciting to watch educators and culture bearers trying to bridge the sometimes yawning gulf between TEK and Western Science. This diagram suggests that Discovery Southeast—the home of rain-forest natural history—may have a role that reconciliation.

continued from page 1

those peer-reviewed findings are already archived, in the *Journal of Wildlife Management*, or the local Fish & Game weir records, or any of the increasing beautiful field guides to birds, flora, geology, or tracking that fill every naturalist's shelves. Also, whether or not journaling pays, naturalists, like everyone else, are busier than they were when I was born. Who has time for note taking?

Well, as it turned out, a whole bunch of Juneau teachers (maybe the busiest people I know) want to journal with their students. As someone who began doing "placed-based education" about a quarter century before it became a buzzword, I was thrilled by the turnout and momentum of the *Rooted in place* workshop. I was equally inspired by the enthusiasm of Tlingit students for learning, living and saving the stories of their clans, foods and geographies. Are we seeing a resurgence of commitment to this rain-forest home? A dawning appreciation for time-honed crafts of the hunter-naturalist?

Could be. Taking time to write, or draw, or reflect, resembles other growing movements some might label retro: slow food, yoga, value-added local timber products. All are "inefficient" by standards of the fast-lane, left in dust by economies-of-scale. All are, in fact, the

most efficient of tools for retrieving humanity, for re-locating our place on earth. In that spirit, here's some thought on why and how to keep a journal.

Perhaps our ecoregion's clearest published tribute to the field journal was a short talk by naturalist Greg Streveler at the 4th Glacier Bay Science Symposium, called *Peripheral vision as an adjunct to rigor* (sidebar). As a long-time park explorer who has worked intimately with scientists for almost 50 years, Greg laments the gradual decline of naturalist-style field observations, recorded in journals of visitors and park staff. In the park's early days, rangers and researchers kept and shared notes, which have since become priceless historic records. But few of today's back country travelers are creating such records for the managers, park aficionados and general public of the future.

Science grows increasingly specialized, an inevitable tendency as each scientific discipline delves ever deeper. We could spend our entire lives reading about Pacific-rim plate tectonics, for example, and still fail to keep up with all the advances in this fast-paced field. In blindered pursuit of geo-scientific "rigor," we could lose track of bird song, plant succession,



Greg Streveler, the quintessential geoicthyafluviaethnobotanical locavore, hunting inedible Miocene leaf fossils near Angoon, 1993.

and the pageantry of Northwest Coast art—the type of alertness Greg calls “peripheral vision,” and the Tlingit call *Adaa analgín*—Raven’s way of studying the world.*

Neither Greg nor I object to scientific specialization *per se*. As generalists, we reap the fruits of scientists’ painstaking work and astonishingly deep insights. Nor do I mean to imply you can’t be both scientist and naturalist. Some older scientists are superb naturalists, with broad understanding in many fields outside their specialties. The problem is what falls through cracks between specialties. The costs appear at several levels:

- **At the management level**, it’s difficult to even *understand* these extremely specialized studies—let alone base regulatory decisions upon them. An enveloping context is needed.

- **At the personal level**, it’s hard for a specialist to develop a sense of place. That takes, as Greg puts it, “*listening to one another*” and “*the investment of heart*.” Without at least attempting to understand our home biota, its ancient substrates, and its deep, slow changes, devotion to home is puppy love.

- **At the community level**, a collection of specialists is like the 3 blind men describing the elephant. Generalists take off those blinders, to free peripheral vision. A more hopeful model than the blind men is the community of hunters and fishers and gatherers who lived here 250 years ago. Imagine the collective lore and place-fidelity in a coastal village of 30 people, heirs of a 5-generation study *of that watershed!* Almost every woman over 50 knows as much about plants as Nancy Turner (sidebar). Almost every old man knows as much about fish and wildlife as Kagwaantaan elder Herman Kitka. Every child and young adult is apprenticed to those mentors. Listen to the fireside discussions, as master observer/participants trade stories of daily quests in woods and waters!

In today’s sound-bite culture, shared journaling is one way to recover that communal sense of place.

Thoreau said firewood heats you twice: once while sawing and splitting, and later, sitting by the stove. The same could be said about journaling: it first illuminates in the act of writing

PERIPHERAL VISION AS AN ADJUNCT TO RIGOR

Excerpt from an address to the 4th Glacier Bay Science Symposium

Greg Streveler

“Over recent decades at Glacier Bay, there has been increasing emphasis on rigor in the selection and implementation of studies. . . . Taken in sum, these characteristics result in deep but narrow views of the world. If we analogize the Glacier Bay ecosystem to a broad-band spectrogram, modern research brightly illuminates a small number of spectral bands at the cost of leaving large segments of the spectrogram in darkness. . . .

Happily, this problem can be at least partially mitigated with little or no loss to the core value of research. Here are some thoughts on a strategy for illuminating the gaps between studies. . . .

- Encourage investigators to report on phenomena outside their study objectives but within their expertise. . . .

- Create a conducive environment for interdisciplinary work and for linking complementary studies.

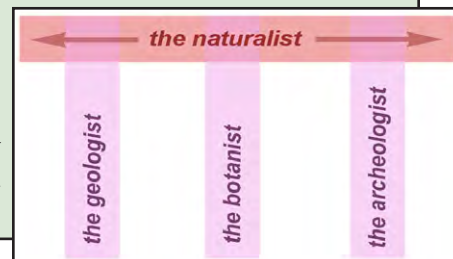
- Encourage long-term research. It generates seasoned observers capable of making many sorts of observations in a contextual fashion.

- Encourage the National Park Service and USGS field staff to keep personal journals of observations.

- ***Develop a system for guiding, accumulating and reporting ancillary observations. This need overarches all the above; without it, they will probably remain just notes buried in notebooks or files.***

These ideas in sum approach what I mean by peripheral vision, but there is a final, more elusive element that one senses in the joy we all feel when listening to one another’s results: the investment of heart—dare I say love of place—that always arises when any group I’ve ever been in talks about Glacier Bay. This feeling can unite Tlingit resident with Caucasian fisherman with researchers with park managers with tourists. This is the deep ecology of place, which allows us all to sense what we cannot measure, and which leads us to give back to Glacier Bay what it has so unstintingly given us. Anything that increases this is a good thing.”

The naturalist is typically broad and shallow; the scientist deep and narrow. (RC graphic)



* “*Adaa analgín*: to pay attention, to be still, to be quiet, almost to the extent of developing a relationship with the subject of our thought.” David Katzeek



After Pacific yew (note Nancy's pendant), Oregon crabapple is the hardest wood on the coast, used for bows, mallets, etc. She knows someone who carved an emergency outboard prop out of *Malus*.

JOURNAL EXCERPT, AUGUST, 2009

A field trip with an expert begs for journaling—preferably on that very same evening. Otherwise, 80% of the cool stuff you learned will be lost from memory. Two summers ago, the BC ethnobotanist Nancy Turner visited Juneau. Nancy probably knows more about cultural use of Pacific

Northwest plants than any living person. The following is from my journal—gleanings from memory-joggers scribbled on a notecard in the field.

Rice root fields were tended. Nancy knows elders in different tribes who as children were tasked with re-planting unused root bases (whiskers). There was more culturing of plants than we attribute to these presumably non-agricultural peoples.

For example, on Skeena River terraces in Tsimshian country there are relict, anthropogenic communities of crabapple and highbush cranberry with an understory of rice root. Upper branches of crabapples were partially broken to bend downward for easier picking. This sounds almost as intense a human signature as described by folks like Gary Nabhan (*Cultures of Habitat*) and Wade Davis (*One River*) for tropical and subtropical environments.

and compiling, then again years later, when you pull down that notebook, or peruse your digital files, to ratify a murky memory, or enlarge a fruitful idea.

I started my first journal shortly before moving to Alaska in 1977. Journaling is my work and play. It's how I taught myself to be a naturalist, and one of the ways I share observations and insights with others. When I realized I was on the path to becoming a naturalist, I took usually 5 to 20 numbered field notes per day, each about a different species or phenomenon. At that point, I wanted mainly to learn the names of things, the progression of seasons, how habitats changed through the years, and who ate whom. I focused for the first 12 years on one square mile at the mouth of Eagle River.

This tight geographic focus is probably typical of the early training of naturalists. Because we seek at least entry-level familiarity with such a breadth of disciplines, it's simplest to stick to one intimately-known landscape. Maybe, naturalists' *only specialties are their places*.

DEPTH VERSUS BREADTH IN EDUCATION

Placed-based educators increasingly favor deep-immersion projects over broad-but-shallow curricula stuffing students' heads with a gazillion facts that evaporate right after the test. More important in k-12 is to experience the collaborative thrill of addressing a few meaningful, local puzzles or problems.

Does that contradict my plea for Strevelerian peripheral vision? I should admit I can't think of any *really broad* naturalists less than 40 years old. When I started Nature Studies in 1989, (at age 39) I thought all students should know the names of every winter deer forage plant. Now, I just want kids to love the woods, embrace challenge, and think for themselves. Love and curiosity are best served by immersion; the choice of pools to immerse in scarcely matters.

In school, go deep. Breadth comes with grey hairs.

By the time I left Eagle River, my geographic interests had broadened to include the greater Juneau road system, as well as selected environments farther afield: Glacier Bay, Admiralty, outer Chichagof, Yakutat. My journals reflect these wider ramblings. I kept daily logs on kayak trips and consulting jobs, noting especially the unique characteristics of remote places I'd likely never see again. These notes were accompanied by quick sketch maps, crude drawings, and references to 35-mm slides taken in each location. Today, I consult these mid-career journals more frequently than my early-career notes. That's probably because most of what I learned early on—species names, diets, behaviors, etc—is still in my head, strengthened by annual re-acquaintance. In contrast, the things I saw on day 11 of a paddle around Etolin Island in 1995 now mostly survive only on paper.

I filed those 35-mm slides chronologically, in annual 3-ring binders, according to a numbering system developed by my mentor Professor Donald Lawrence. Don steered me well; today I can quickly relocate any slide I took



While Koren delineated, I poked around in the SE corner of the *Tricophorum* flat. In the lowest swale, currently dry, I found what I thought was *Fontinalis*, a moss normally submerged in flowing water. Later, when mapping, we noticed the valley-side yazoo stream probably exits through this area on high flows.

44

Top to bottom: 44 Panorama centered NW over the flat to granodiorite highlands. It probably originated as a shallow impoundment behind a combination wave-berm/beaver dam, at left of pano. • 45 Koren's soil pit in the *Tricophorum caespitosum* flat. This could probably be considered the next stage successional after the *Equisetum variegatum* turf we sampled in the morning. Slightly thicker organic layer over pale granitic sand. • 47 Mark of the "thoughtful" porky.

Studying the orthos on my Arcpad project, we planned a route through the alluvial spruce forest up onto the marginal wetlands we wanted to map. In this deltaic forest, we found the second—and last—**porcupine** sign of our surveys (47), again, on a small hemlock. Because **beaver**, like porky, frequently chew on hemlocks throughout the delta, I've been scrutinizing the incisor marks on debarked trunks. Skull comparisons show that porky incisor width is only half that of beaver. Also, porkies are more systematic and universal in their cambium-cleaning.

When I showed this oval-shaped scar to Koren, she perfectly captured the porcupine ethos: They're more "thoughtful" than beavers, she declared. Now I'm searching for the counterpart *Castorian* adjective. This is an important consideration for the philosophical naturalist.* If porkies are thoughtful, what are beavers? Adamant? Inouciant? Maybe the difference is hemispherical. Porkies are evolutionarily tropical, South American, while beavers are true northerners (*canadensis*, after all), who disdain siestas when there are dams to be built.

We left the flood plain and climbed onto the upland slope, toward a necklace of bogs and fens that arches for about 400 yards around the southeastern edge of Cottonwood Delta, following a contour that our altimeters indicated was roughly 100 feet above lake level.

* On our Soule River surveys in July, 2009, we had the pleasure of working with Tony Krzysik, senior ecologist with the Shipley Group, and lifelong naturalist (the 2 avocations don't always coincide). He told us that he once gave inconvenient testimony concerning a project, whose developer was understandably miffed. Searching for the most damaging thing he could say about Krzysik, the proponent shot back: "You, sir, are no scientist. You're a philosophical naturalist!"

Take that, you bet-wetting, tree-hugging, Thoreau-quoting commie! I envy Tony; to be called a philosophical naturalist would be for me the height of honor.



45



47

between 1988 and 2000. But Don couldn't have anticipated the more powerful organizing systems that had to await digital photography and IPCT data.*

In 2001 I bought my first digital camera and first laptop. Secure in a waterproof pelican case, the computer became a field tool. Even in back-country camps, I worked deep into the night, to muffled purring of a little Honda generator at the end of a 100-foot

extension cord. I didn't pioneer the computerized field camp, but merely followed in the footsteps of the inimitable Bob Christensen, as adept in the digital world as on bear trails. I'd been making maps with pen and ink for 20 years. When Bob introduced me to GIS (Geographic Information Systems), it was like handing a caveman a scoped rifle.

My journal took a quantum leap in sophistication.

* IPTC data are indelibly stamped on all tifs, jpgs, etc, supporting elaborate databases. In addition to auto-recorded data such as date and time, I add my name, location and subject matter for easy retrieval.

SYNTHESIS: WHEN AND WHERE?

Kathy Hocker's principle observation-&-recording tools are pencil & paper; mine are camera, GPS, and computer. (In many aspects of technology Kathy's way ahead of me). But our styles diverge in more ways than just tools. Kathy often sits outdoors with her sketch pad, and her field experience is usually more contemplative than mine. The pencil usually (although not inevitably) requires you to notice more than a camera does. My routine has evolved to maximize efficiency of information gathering, often in hard-to-reach locations that cost a great deal to get back to. For me, the synthesis part usually occurs in camp or at home, as I process all of the photos, GPS tracks, etc.

By focusing on evolving technology in this article, I'm not suggesting one method is better or worse than another. Your method should serve your goal. Kathy's *The art of noticing* was featured in the fall 1998 *Discoveries*, and many past issues have samples from her notebooks. Visit our archives at: <http://www.discoverysoutheast.org/newsletter>

Kathy also has a blog where you can find more of her recent work: www.alaskasketchbook.typepad.com

Beautiful maps blossomed in minutes that used to take all day. No longer were photos filed away in separate notebooks from the journals (after 2 forgetful weeks' round-trip through mails to developers). Now they were downloaded and inserted within hours into daily diaries. The resulting instantaneous proximity of text and illustration is more than mere convenience, because each informs the other in unforeseeable ways. For a visually oriented person, this is especially fulfilling.

There's room in the journal for your heart.

Typically, in the creation of a report or article, writing comes first, and illustrations are thrown in almost as afterthoughts, to pretty-up the page. I usually reverse the text-then-images sequence. Returning from the field, I deal first with visuals: pictures and tracks and maps. Opening the page layout program (InDesign), I first drop in the map of the day's route (example, page 1), then a selection from usually 100+ photos, chosen for clarity and relevance to the day's work. Only then do I start writing. With illustrations beckoning on the page from the get-go, my left and right brains make a better team. It's almost like I'm chasing down the cool ideas hidden in those pictures and maps, reviewing the day's adventures from Raven's epicurian orbit.

These illustrated digital journals, each converted to PDF, are of course easier to share with colleagues than

DOWNSIDE OF GADGETS

Sitka anthropologist Richard Nelson remembers that when young Inuit first began to use compasses, elders worried. The compass, they predicted, would weaken peoples' intimacy with their tundra home. No longer could hunters orient themselves by concordance of subtle signs, such as the way snow deposits in prevailing winds.

Today the compass—once "cutting edge"—is increasingly passé, left at home by outdoorspeople armed with more advanced tools. But does ever-advancing technology place even thicker buffers between navigator and terrain?

Few would suggest abandoning compasses or GPS units. But remember Aada analgéin—Raven's view from the tree above us. Is s/he chuckling at our techno-myopia?



the earlier handwritten ones. Recognizing how much more inviting and accessible they were, I decided to gradually convert my handwritten journals to digital format. A few winters ago, I narrated the 1992 to 1996 journals into a microphone using voice-recognition software, then merged those auto-transcriptions with scanned 35-mm slides. Kayak routes and bush-whacks—originally pencilled onto topographic maps and marine charts—were transferred to hillshade bases or aerial photos in GIS.

Ultimately, I'm anticipating 3 to 4 decades of illustrated, spatially-anchored Southeast Alaskan field notes in searchable PDF format. That should make a hefty gift to future Southeast Alaskans. In the year 2111, I hope it falls into the hands of a few eager naturalists with long attention spans.*

Certainly, there are more ways to teach yourself, *and share what you learn* than the traditional, (or souped-up) nature-journal. My friend Bob Armstrong is one of Alaska's broadest and most dedicated naturalist-photographers. He doesn't keep a journal, at least of the kind I've just described.

But more than anyone I know, Bob has made his life's work available to Alaskan naturalists and outdoorspeople, through his books for adults and children. The most recent have been self-published, a faster and leaner process than working through commercial publishing firms. Bob points out that on-line, on-demand publishing companies now make it possible to economically print very small runs of bound, full-color, richly illustrated books and reports.

Bob—and his frequent coauthors Marge Hermans and Mary Willson—tend to work on focused book

WHAT WOULD RAVEN BLOG?

Clay Good is turning the blog—potentially the soul of placelessness—to the task of *connecting* people to the land, at watershed and ecoregional scales. He teaches an on-line course for Alaskan teachers called *Indigenous and Western Science Observations on Climate Change*: <http://alaskastaffdevelopment.blogspot.com/>

To sample what Goldbelt Heritage students blogged about nature and culture with Clay and Kathy's mentoring, visit: <http://www.placebookblog.blogspot.com/>

Right: Sample of a word search through my journals, originally handwritten, later transcribed and "reunited" with associated 35-mm slide illustrations. This search on "otter" was launched from the 1996 PDF, but scanned the entire folder, yielding 158 hits in 5 separate annual journal collections.

1996 JOURNALS

1996 began with a flight from Mexico (December 95 trip) to southern Arizona, where Cathy came down to join me

Search

Looking For: **otter** in E:\FHS\annual.pdfs

Results: 5 documents with 158 instances

Results:

- otter and mink in the outlet channel. Pair of eagles sitting by a
- and otter to drag salmon out of the stream? Mammal carrier? Scott says he's
- or otter, but I'd expect weasel and marten. Dog exclusion? 19920316 Whitehorse via Quill
- see otter nursery groups. We surprised one female with pup who twisted her baby's
- astounded otter. I think she needed to show the baby what the threat was
- otter haulout with Cryptochiton and small fish bones. Scat with purple shore crab.
- see otter off our camp all three days. Only this one in Goulding. Outside
- otter came up only Syd's. behind, and panicked, giving me an adrenaline rush.

Sort by: Relevance Ranking

☒ Collapse file paths

[Refine Search Results](#)

[Use Basic Search Options](#)

[Find a word in the current document](#)

projects spanning roughly one year.* These are fascinating accounts, full of discovery and the excitement of learning. Bob's books are, in some ways, his journals—the way he meets nature. But unlike most journals, they're visually stunning, professionally presented, and available in bookstores throughout the Archipelago.

Bob's success in *sharing* his life's work brings me back to the concluding recommendation in Greg Strevler's symposium address (preceding sidebar):

"Develop a system for guiding, accumulating and reporting ancillary observations. This need over arches all the above; without it, they will probably remain just notes buried in notebooks or files."

Even the few field workers who still keep journals don't typically distribute them beyond close friends and colleagues. **What we need is some kind of community journal.** One name for that is the blog (sidebar; *What would Raven blog?*).

Enlarging slightly the geography of Greg's proposal, we could ask:

How might Southeast Alaskans use new and old technologies to build a communal relationship with the rain forest, growing it from that of deep-rooted cultures who shared such love and wisdom orally? How can we archive and protect this relationship, so that, instead of fading with time, it burns ever brighter?

Communications technology is evolving so rapidly even those most immersed in it can't predict, say, what books will look like in 2050, or whether there will be books (or print?) at all. In my last book collaboration, Richard Nelson, growing more interested in audio than writing, submitted his contribution in the form of a CD for the inside-back-cover (Amy Gulick, *Salmon in the Trees*. Mountaineers, 2010). Already, you have the option of creating a digital multimedia journal that opens audio files of interviews with elders, or video of forest exploration that plays within a PDF picture-frame. In the future, those linkages *could* become ever more seamless, so that we scarcely think of them as separate media.

Or maybe technology will tank tomorrow, as climate scientists and the trendy new genre of apocalypse movies remind us. Either way, while we scramble to upgrade our storage and communications media, or bone-up on wild edibles for the End Times, the wisdom of place-rooted cultures fades as each elder leaves us. The priority? *Make connections now.* Picture Raven in the tree, studying a photographer bent over a \$2000 DSLR. It's not the megapixels that count, but the places and people we see through the lens—the love and understanding we learn and pass on.



* Examples: Along the Mount Roberts Trail; Dragons in the ponds; Beavers by the Mendenhall Glacier; Life around Mendenhall Glacier; The Mendenhall Wetlands a—globally recognized Important Bird Area; Photographing Alaska's nature; Lichens around Mendenhall Glacier; Whistlers on the mountains; Southeast Alaska's natural world. Bob's website, with a generous sampling of his awesome photography, is: <http://www.naturebob.com/>

Road kill

Kevin O'Malley

Ten students stand over a dead porcupine but it is the blindfolded girl that everyone is watching. "What is your nose telling you," I ask the fourth-grade student from Auke Bay elementary school. She responds, "It smells like something is dead." The rest of the class is silent. The class's body language shows me they are both grossed out and intrigued by the rotting carcass. One student's stomach is uneasy and he walks away. It is a seminal moment for the whole group.

Taking away our vision is a way to develop and utilize our other senses. Humans rely on visual cues so much that using senses like touch, hearing and smell can help us make new connections with nature. When the blindfold comes off the student, the class expects an, "Oh that's gross!" Instead, the girl is curious and examines our find as her eyes adjust to the afternoon light. Following her example, the other students forget their squeamishness and focus. The once uncomfortable fourth-graders are now a group of naturalists that want to know more about the mystery in front of them.

I am as excited as the kids about our find, but I have to remember to ask questions about our ecosystems lesson. Where will the porcupine's nutrients go? What breaks this animal down? What will happen to the flesh of this animal when we come back here in the spring? A student whispers "bones". For a second I day-dream about the perfect skeleton and the lessons it will provide. Then I realize the porcupine will not make it until then.

For years, Discovery naturalists have harvested road-killed critters and relocated them to our outdoor

classrooms. A decomposing carcass exemplifies fourth-grade lesson objectives on the energy cycle and decomposers. It doesn't take long before the F.B.I., or fungus, bacteria and invertebrates, move in and begin to redistribute the food energy the porcupine once gleaned from a spruce tree. Recently however, the students and naturalists aren't the only ones benefiting from the practice. Over the past few years the coyotes behind Auke Bay have discovered

my late-fall tactics and have made me re-think my approach to this lesson.

In the fall of 2010, a different class heads out to look for the porcupine I placed the night before. As the class arrives at the fresh road kill we are amazed to see that the animal has been delicately chewed apart and its guts spread out in a 30-foot radius. What stands out on the porcupine carcass are the surgically precise cuts on the hind leg. Even for a coyote dissecting a porcupine is tricky business. This surprise provides a new ecological mystery and is the lesson for our young naturalists. I ask the students, "How did this porcupine die? Then what happened? Can you find any signs?" The kids scour the site, weaving around the trunks of the even-aged spruce and hemlock forest.

The coyotes teach this fourth-grade class that there is another piece to this puzzle. Now in the body of the carnivorous scavengers, we wonder where the energy will go next. Referencing our pre-hike classroom session, the students realize some of the critter's nutrients will return to the soil and fertilize the spruce the porcupine thrive on. Will another carnivore hunt the coyote? Will this coyote be scavenged someday too? Hopefully we'll find more clues on our next hike.

It's a 5-minute walk back to the school. A student tells me, "This is the best field trip I have ever done." I am thrilled, and reassured that scooping up stinky dead stuff on the side of the road is worth it. Back in the classroom I always reveal the porcupine's road-side origin. They usually stare at me incredulously for a moment but then seem thankful for the learning the relocation provided. On our next hike, the first place they'll want to visit is the porcupine site. It will likely be covered with snow, but I bet we'll find some coyote tracks to follow.

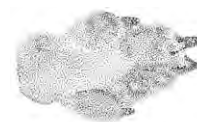


photo by David Job

Tracking puzzlers

Cathleen Balantic

With winter's snow on the way, conditions may soon be excellent for finding animal tracks. When it comes to tracking, we like to say that everything leaves a sign, and all signs tell a story. Can you come up with a story for this imaginary Southeast Alaskan tracking scene?

A few questions to consider:

What critter signs do you see? Did everything in this scene happen at the same time? What details are missing that would help you come up with an accurate explanation for these tracks? What else do you want to know about the surroundings? Decide when and in what order you think the tracks appeared. Draw in trees, shrubs, additional tracks, scat, signs, and anything you want that will help you complete your story. There is no single correct explanation for the scene.



For more thoughts on the puzzlers see page 13.

Two book reviews

Richard Carstensen

- *Faith of cranes: finding hope and family in Alaska.* Hank Lentfer (Mountaineers, 2011)
- *The Last American Man.* Elizabeth Gilbert (Viking, 2002)

Some thoughts on Eastern & Western American manhood

I've recently read 2 books about modern-day Daniel Boones—guys who turned their backs on the American Dream and headed into the woods, to take their spiritual and bodily sustenance more directly from nature. Both are characters you'd want to have been hanging out with if fears of Y2K had proven better grounded. Both are in prime manhood: feral, supremely skilled, with a charisma sometimes ironically bestowed upon those whose goals and lifestyles might seem in little need of it. One is Appalachian, salvaging ecological sanity in the land that Boone emasculated. The other is as Western as the continent gets, reveling in its last healthy old-growth.

Other divergences may stem partially from that geographic divide. Megalomania, and attraction to it, for example, seems more of an eastern preoccupation. A premise of Elizabeth Gilbert's *The Last American Man*, her biography of Eustace Conway, is that America's Daniel Boones, in whatever century, seek wilderness for solace and refuge from dysfunctional fathers. Their drive for perfection in every endeavor is hounded deep into adulthood by a warped parent who withheld love and praise throughout childhood. The result: talent so unique and newsworthy that a famous Manhattan author (*Eat, pray love*) writes your life story; flocks of idealistic disciples follow you into the woods; and—true to your patriarchal curse—your girlfriend cycle is more Hollywood than hillbilly.

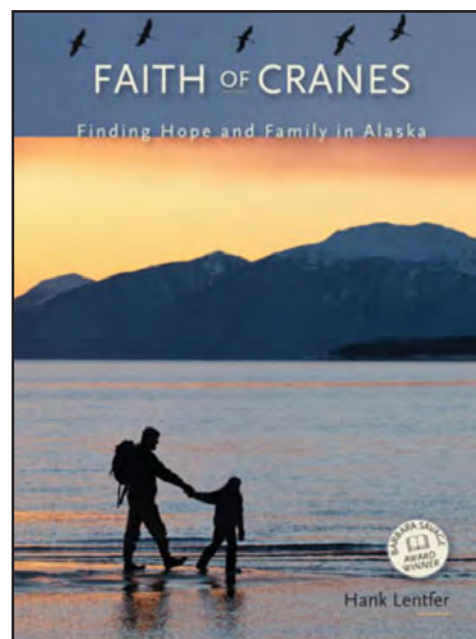
A fascinating hypothesis, and masterfully told tale—non-fiction, no doubt, as far as it goes. But I'd urge Elizabeth Gilbert to expand her sample size beyond Boone, Crockett and Conway, and consider alternate motives for a life in nature. She might especially enjoy an evening of belly laughs with Alaska's answer to Eustace, named Hank Lentfer, author of *Faith of cranes: finding hope and family in Alaska*.

Full disclosure: I'm a longtime friend of Hank's,* thus unqualified to fairly compare him with an eastern celebrity woodsman I never met. I'm additionally handicapped by aversion to gurus, preferring to take my nature in company of normal, relaxed people who go there just because it's so danged beautiful, so obviously, the place where we belong.

That said, it must be acknowledged that Hank Lentfer is not normal. His heart is probably too alpine for anything east of the Mississippi. He tracked that heart wherever it led, while others gradually grew up, letting the trail go cold. Hank is maybe the most un-warped person I've ever known. Unlike Eustace's, Hank's wolfskin-parka childhood was privileged and loving, and he fledged to cheers from Mary and Jack (parents to die for), "*expressing pride with every oddball, unconventional choice I have made.*" Hank's torment is not his personal past, but the wilderness-gobbling future his daughter will inherit.

How do you joyfully face that future? Most of us lack the grounding to graphically appreciate how diminished and tragic our future could (will) be. Still, mere intuition of our fate requires for many a denial that mutes pure joy. Hank has seen the best and worst the planet can offer. He knows the cost of a Leopoldian education: to live in a world of wounds. But this rain-forest woodsman, constitutionally incapable of denial, nevertheless made a promise to his unborn child—that the future would not break him; he'd be the rock for her that his father was to him. There'd be laughter—lots—in Linnea's childhood. And after that, cheers for every choice.

Hank Lentfer's offering to the freight-train future is alert, comic happiness.



Homegrown spuds, hospice work, practical jokes, communal saunas, land stewardship, cross-party friendships, size-14 high heels, and an annual rendezvous with Earth's loveliest mammal, Sitka black-tailed deer; all are elements of Hankster's robust survival plan. As for cranes, faith to Hank is more trajectory than doctrine, an anthem you just can't help singing, even over cornfields, because a windpipe longer than your body will not be silenced, and you're fat from Alaskan marshes, and it's time to fly.

Perhaps most remarkably, as his flight took on the sharing of ideas about wild hearts, community, and right-livelihood, Hank Lentfer swiftly emerged as one of Alaska's funniest and deepest writers. Maybe his can-do persona does resemble that of Eustace Conway—who belatedly mastered horsemanship to a degree life-long equiphiles must find exasperating.

Conway's biographer, the "bride-of-writing" Gilbert, says "*I built my entire life around writing.*" Hank Lentfer built his life around a woman, a girl, and the faith of cranes. The writing flows from that, sweet as water from a limestone spring.



Discovery calendar

November:

- 12 GeoFest at the Glacier Visitor's Center 1pm-4pm
- 14 Early Release Monday 1:30pm-3:30pm
- 21 Discovery Day 9am-3pm
- 28 Early Release Monday 1:30pm-3:30pm

December:

- 1 *Working in Antarctica: Glaciers, Penguins and Sea Kayaks*. An evening of photography with Keith Thompson and Hiram Henry, 7pm at the Silverbow back room.
- 2 Foggy First Friday Member Appreciation Event at Foggy Mountain Shop 4:30pm-7:00pm
- 12 Early Release Monday 1:30pm-3:30pm

January:

- 9 Early Release Monday 1:30pm-3:30pm
- 23 Early Release Monday 1:30pm-3:30pm
- 23 Backcountry Film Festival at the Goldtown Nickelodeon 7pm
- 24 Backcountry Film Festival at the Goldtown Nickelodeon 7pm

February

- 13 Early Release Monday 1:30pm-3:30pm
- 21 Discovery Day 9am-4pm
- 22 Discovery Day 9am-4pm
- 27 Early Release Monday 1:30pm-3:30pm

March

- 12 Early Release Monday 1:30pm-3:30pm
- 23 Discovery Day 9am-4pm
- 24 SAGA Eagle Valley Center Spring Equinox Jamboree 10am-4pm
- 26 Early Release Monday 1:30pm-3:30pm

April

- 7 Discovery Auction, Centennial Hall

Puzzler clues (from page 11)

My thinking as I drew the scene: A snowshoe hare hopped in from the bottom left and was pounced upon by an owl. At other points in time, a raven walked from the bottom right before scuffling around and eventually taking off. A mouse hopped near the raven wing tracks. Finally, on the right-hand side of the page, a deer picked its way across the snow. Later on, a hunter stopped and knelt down to notice the deer tracks before following them. *CB*

What the jays showed us

Kathy Hocker sketchbook page

9 October 2011. End of N Douglas Hwy. K. Hocker

On a walk with Jill, Maggie & Cassie - we were almost back to her house; noticed about six jays vigorously scolding something in a cluster of spruce and alder ahead. It was a marten - sleek and soft, perched on a branch stub. As we watched, it picked something up and carried it to a higher branch - then dropped it.

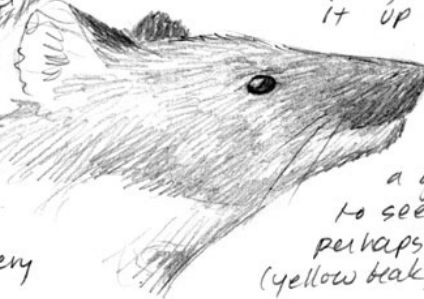
Ears very round!



Coat is reddish, with a very pale undercoat, dark red-brown on "points"

- Throat is creamy orange-white with a distinct pattern -

Face is much more pointed than I expected. Except for the round ears, it's very fox-like



It worked its way down the tree to the ground, picked something else up, and carried it up another tree - then settled and began to eat it. Eventually, we got a good enough view to see it was a bird - perhaps a thrush? (yellow beak)

It watched us come fully, alternating between peering our way and taking bites of food. At one point it scratched its head with hind foot, then curled up almost like a cat -



It's a good climber, but more awkward than a squirrel - it hitches its way up & down - descent is particularly slow.



A very agitated squirrel dared to get within a couple of feet and bark vigorously!

ALL SKETCHES FROM MEMORY -

For more samples from Kathy's journals, visit: www.alaskasketchbook.typepad.com

Thanks to our supporters!

Our thanks to all the great folk who are current members of Discovery Southeast. Your support is fundamental to our capacity to provide the finest nature education programs for Southeast Alaskans. Not represented here are anonymous gifts and the many additional gifts made above and beyond membership dues by so many of you. These extra contributions are essential and we greatly appreciate your commitment. We couldn't do it without you!

Grant and Foundation Support between January 2010 and present

City & Borough of Juneau Parks & Recreation Youth Activities Grant, Alaska Conservation Foundation, Leighty Foundation, Douglas Dornan Foundation, Simone Machamer Charitable Foundation, Great Blue Heron Fund, Hecla Charitable Foundation, SB Foundation, Leghorn Family Fund, PEO Sisterhood Chapter D, Studebaker Family Environmental Education Fund, The Ocean Foundation's Coastal CODE, The Outdoor Foundation North Face Explore Fund, Wildlife & Fisheries Law Institute, Juneau Community Foundation, The Wilderness Society.

Business Contributions between January 2010 and present

Admiralty Is. Wilderness Homestead, Alaska Democratic Party,* Alaska Discovery, Inc, Alaska Flyfishing Goods, Alaska Vision Center, Inc., Capital Office Park JV, Coeur Alaska, Foggy Mountain Shop, Glacier Pediatrics, Gustavus Inn, Inner Sea Discoveries/ American Safari Cruises, Juneau Real Estate (John & Sheri Williams),* Mark Kelley Books and Calendars, Princeton Hall LTD, Shattuck & Grummett, Sheinberg Associates, Sockeye Cycle Co., Sunshine Services, Super Bear, Wm. Spear Design, Wilson Engineering.

Individual Contributions between January 2010 and present

Shelly Abel, Tom Ainsworth, Alex Andrews, Aaron Angel, Bob Armstrong, David & Cindy Audet, Bruce & June Baker, Laura Baker, Katie Bausler, Sue Baxter & Dave Sturdevant, Jack & Margie Beedle, Rai & Susan Behnert, Rick Bellagh, Kristine Benson & Tom Brayton, Carol Biggs & Tiffany Hirst, Elizabeth M. Bishop, Amanda Blackgoat, Joyanne Bloom, Nathan Borson, Aaron Brakel, Lori Brotherton & Walt Majoros,* Tina M. Brown, Scott Brylinsky, Wade & Christine Bryson, Annie Calkins & Dave Hunsaker, Shirley Campbell, Colleen M. Campbell, Butch Carber, Bill & Jean Carlile, Dave & Jan Carlile, Shirley Carlson, Laura L. Carstensen, Richard Carstensen & Catherine Pohl, Andrea Cemuth, Walter & Beth Chapman, Natasha & Dennis Chester, Marlene Clarke, Judy & Nathaniel Cole, Cathy Connor & Rod Flynn,* Greg & Tamara Cook, Laurie Cooper & Gwen Dobbs, Julie Coppens, Tom Cosgrove, Carolyn & Bob Covington,* Teresa B. Cramer, Logan & Fran Dameron,* Alenita Danner, Brian, Helen & Ronan Davies, Roblin & Elizabeth Davis, Shirley Dean,* Semra Deaner, Julie DeLong & Jay Query, Kelda Denton, Dixie Denton & Terry Kullander, Toni DeSanto, Andrea Doll, Mary Dornbrier & Lee Hulbert, Margaret Dowling & Jim Thompson, Kirk Duncan, Shawn Eisele, John & Hizuko Eldridge, Wayne & Marry Ellefson-Carnes, Grace Elliot, Rebecca & Jay Epstein, Gregg Erickson, Kristie & Jim Erickson, Tami Erickson, Richard Farnell & Carolyn Hess, Bob & Mary Federoff,* Jean Findley & Leslie Wood,* Sharon Fisher, Susan Fitzgerald, Pamela & Brian Frenette, Clay Frick & Anissa Berry-Frick, Anne Fuller & Mike Sakarias, Ami Reifenstein, Stuart Gerger & Marna Schwartz, Joe Giefer & Karey Cooperrider, Jason Ginter, Jeremy Gleason, Keith Goering & Heidi Johnson, Larry Gogolick, Melissa & Mike Goldstein, Clay Good & Claire Fordyce, Richard Gordon, Janice Gray, Suzanne Greeley, Deb Gregoire & Bryon Hitchcock, Michael & Dee Ann Grummett,* Mary Guilani, Dave Haas & Mary Ellen Arvold, Nate & Nandi Haddock, Sara Hagen, Mary Hakala Ord,* Maureen Hall, Madeleine Handley, Kathy & Tom Hanna, Heather & Kirk Hardcastle, Mike Harmon & Peggy Berck,* Mary Claire Harris, Pat Harris, Karla Hart, Rebecca Hartwell, Beverly Haywood, Michael Hekkers & Adelaide Johnson, Stephanie Hoag & John Staub, Kim Homan, Frank & Jane Homan,* Sarah Hopkins, Jason Hort, John Hudson & Kim Frangos, Jenny Huntley, Mary Irvine & Jim Ustasiewski, Sarah A. Isto & Gordon Harrison, Aaron Jacobs, Scott & Connie Jeffers, Rhonda Jenkins-Gardinier, Aleria Jensen & Kevin Hood, Caroline Jezierski, Nate & Liz Johnson, Jeffrey Johnston,* Chuck & Alice Johnstone, Nancy Jones, Lindy Jones, Matt Jones & Jinny Eckert, Shannon Keegan, Connie Keithahn & Mike Rawson, Molly Kemp & Nick Olmsted, James & Mary Lou King, Lori & Dave Klein, Margot Knuth, Tina Kobayashi & Dick Monkman, Julie & Bart Koehler, Sue & Tom Koester,* Michael & Iris Korhonen-Penn, DJ Kyser, Miah Lager, Marta Lastufka, Wilda Laughlin, Theresa Lauterbach, Patrick & Edna Leamer, Lena Lee & Zach Wilkinson, Madeleine Lefebvre,* Ken Leghorn, Hank Lentfer & Anya Maier, Sante Lesh, Marshall & Lois Lind, Craig & Barbara Lindh, Bobbie Lowden, Aric Ludwig & Susan Hunt, Sean & Anastasia Lynch, Mary Lou Madden, Judith Maier, Kevin Maier, Byron & Antoinette Mallott,* Bridget Mansfield, Stephanie Marnon, Ronald & Susan Marvin, Jill Matheson, Kimbrough Mauney, Judy McAllister, Tom McKenna, Jay & Jenni McMasters, Missy & Chip McMillan, Molly McCormick, Alan McPherson, Janell & Chris Meade, Ke Mell, Paige Merriman, Mark & Esther Millea, Dirk Miller, Raandi Miller, Katharine & Scott Miller, Mary Miller, Jeff & Heather Miller, Scott Miller & Ann Boochever, Marilyn Miller Young, Jeannie Monk & Tim Blust, Tim Moore & Nancy Cooperrider, Gail Moorehead, Stephanie Jean Mosher, Roman J. Motyka, Ernie Mueller, Sonia Nagorski & Eran Hood, John & Judy Neary, Jim & Dotty Nelson, Bonita Nelson & Ron Heintz, Tony & Linda Newman, Joy & Mark Neyhart, Eric Norberg, Kathy Obersinner, Eric Olsen M.D & Vicki Bassett, G Ole Olson, Marjorie & Thomas Osborn, Peter Otsea & Margie Hamburger, Dana Owen & Joyce Thoresen, Kay Parker, Jess Parks, Shari Paul & Greg Beck, Leslie Peters, Cindy Watson Pottebaum, Kristin Price, James Protz, Julie Rae, Jill Ramiel, Catherine Reardon, Debbie Reifenstein, Kristen & Andy Romanoff, Linda Rosenthal, Frank & Sally Rue, Amanda Ryder, Jill Sandleben, Joyce Sarles, Miriha Scalf, Philip Schempf & Janet Hall Schempf, Meilani Schijvens, Heather Schmidt, Laura Scholes, Tom Schumacker & Bridget Mansfield, Mark Schwan & Debi Ballam, Brooke Schwarting, Tom Schwartz & Gretchen Harrinton, Tony & Pamela Schwarz, Terry Schwarz & Shannon Seifert, Barb Sheinberg & Norm CohenBea Shepard, Gail Seiberts, Julie & Edward Sinclair, John Sisk & Mary Pat Schilly, Jeff & Susan Sloss, Sally Smith, Wendy Smith, Deborah Spencer, Marsha & Steve Squires, Kirk Stagg & Sylvia Kreele, Mike Stanley & Natalee Rothaus, Zach Stensen, Dick & Jane Stokes, Reed Stoops & Betsy Brennenman, Micheael & Andi Story,* Greg Streveler & Judy Brakel, Douglas Sturm & Jean Pardes, Paul Suchanek, Savanah Suhr, Maura Sullivan, Saralyn Tabachnick, Brock Tabor, Tonia Takei-Kramp, David Tallmon, Mary-Claire Tarlow-Bernstein,* Rachel Templeton,* Jennifer Thompson, John & Barbara Thurston, Robert Vieth, Tom Wagner, Tom & Anitra Waldo, Sandra Warner, Patricia Watt & William Dillon, Beth Weigel, Alex & Peggy Wertheimer, Elisabeth Wertheimer, Larry West, Monique & Marc Wheeler, Steve Whitney & Family, Michael & Vicki Lynn Wilcox, Dick & Lynn Williams, Gordy Williams & Mary McDowell, Vickie Williams & John Kuterbach, Mary Willson, Jessie Wilson, Karen Wood & Darla Madden, Rick & Wanda Wright.

* These donors have given in memory of John Robert Pugh Jr. who died on October 24, 2011. Johnny believed that every week should be Sea Week.

Discovery Southeast

PO Box 21867

Juneau AK 99802

