

Longwings Return, Long May They Fly

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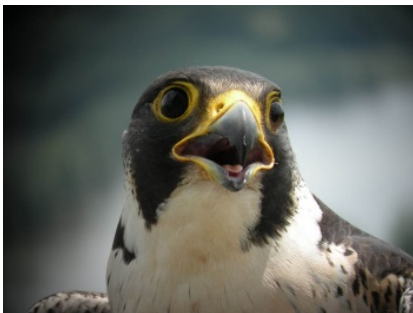
by Pat Schlarbaum

As a speck in the sky at two thousand feet, a Peregrine Falcon rolls over, folding its long wings. The speck becomes a bionic missile with anatomical attributes to do what it does, and how it does it, very well. See-through nictitating membranes arise from lower eyelids to protect its eyes from dust or windblown seeds. Cartilaginous baffles in its nasal cavities ensure the back of its skull is not blown out from its velocity. The falcon's descent exceeds 270mph during the dive or "stoop." Falconers have colorful, descriptive terms when it comes to raptors or birds of prey that eat other birds.



When diving at prey straight-ahead, from great distance at great speed, a peregrine has a conflict between vision and aerodynamics. With eyes on each side, it must turn its head approximately 40 degrees to see the prey. Doing this, maximum visual acuity at the deep fovea of one eye is achieved. However, the head in this position increases aerodynamic drag and slows the falcon down. The falcon could resolve this conflict by holding its head straight and flying along a logarithmic *spiral* path that keeps the line of sight of the deep fovea pointed sideways at the prey. A wild peregrine, observed with spotting scope and a tracking device, *indeed*, approached prey the size of a pigeon from distances of up to 4,500 feet by holding its head straight and flying along a curved path that resembles the logarithmic spiral.

As the diving falcon approaches its prey, its talons are clenched into a knuckle. The prey is dispatched into a poof of feathers with a knuckle to its noggin. In the case of larger birds, like a duck, the prey is stunned; then grabbed and ridden to the shore. The falcon's beak is specifically notched to separate the vertebrae of its quarry in a most efficient manner. The ensuing feeding



frenzy is unlike any spectacle of spearing flesh, tendons, and muscle with feathers flying in a spray of mortal being that anyone could ever imagine. It certainly sustains the peregrine's vitality until the next spectacle unfolds.

Whether referred to as the great-footed hawk, a long wing, duck hawk, rock hawk, or blue meanie, the Peregrine Falcon (*Falco peregrinus*) occupies a unique position in our psyche of bird lore. The art of falconry had its inception in Mongolia and the Middle East over four thousand years ago. The craft was introduced to Europeans during the medieval times of the Sixteenth Century. The feudal system created sprawling castles that dominated higher elevations of the landscape. These structures and associated forest tracts attracted falcons including kestrels, Merlin's, and peregrines. A person's status in the hierarchy determined what falcon could be mastered; the higher the status, the more powerful falcon that could be possessed. Peregrines were the highest order that falconers could accompany on hunting forays.

The species was extirpated or lost as a breeding bird from the eastern United States by 1965. It is widely believed the last nesting pair was at Capoli Bluff downstream from Lansing, Iowa. Early 20th century newspaper accounts tell of town-folks walking down the railroad tracks by the river for spring equinox to celebrate the return of their falcons to the cliffs.



In 1962 scientist and author of *Silent Spring*, Rachel Carson, sounded an alarm, foretelling bird extinctions from ravaging biocides of the post-World War II era. Although the chemical industry sullied, demeaned and criticized Carson's research, a basic law of nature was becoming obvious — whatever affects wildlife ultimately affects humans. Realization of a “Silent Spring” was resonating and legislation was needed to ban DDT and related culprits. The Endangered Species Act was implemented in 1972 and DDT was banned in the United States. However, it was too late for peregrines that no longer nested east of the Missouri River. These top-of-the-food-chain raptors and biological indicator species were wiped out in the wild.

True to the moniker: “Peregrines create great passion in citizens of the natural world.” Efforts were organized to rejuvenate falcons once DDT was eliminated in the US. Tom Cade, the founder of The Peregrine Fund, initiated a plan to breed captive peregrines in



1977. A facility located at Cornell University in New York began rearing falcons. Falconers from around the world donated their birds with their coveted genetics to the project. Their intent was to

breed young falcons in captivity, and release them into suitable habitat with the goal of returning this species to its previous range as a nesting species.

The upper Mississippi River was the major historic nesting area for peregrines in the Midwest, with an estimated historic population of 30 to 35 pairs. Most of Iowa's peregrine nesting occurred on the bluffs of northeastern Iowa in Allamakee, Clayton, Dubuque, and Clinton counties. Nesting also enhanced palisades along the Cedar River in Linn, Johnson and Black Hawk counties. A nest was also reported at the mouth of Beaver Creek in Polk County. Peregrines were a federal- and state-listed endangered species.

In an effort to guide recovery of Peregrine Falcons in the eastern United States, an Eastern Peregrine Recovery Plan was developed in 1979. The overall goal of this plan was to establish a viable peregrine population consisting of 175 breeding pairs in the US, which was half of the pre-pesticide population. For each region of the eastern United States, the plan set a goal of 20 to 25 breeding pairs. Iowa falls under the Midwestern and Great Lakes Regional Plan. Other states and territories are North Dakota, Minnesota, Wisconsin, Michigan, South Dakota, Nebraska, Illinois, Indiana, Ohio, Kansas, Missouri, Kentucky, Manitoba, and Ontario.



In 1982 the first young falcons from Cornell's Peregrine Fund were released at Weaver Dunes in SE Minnesota. The terrain was in old-field grass set back from the river valley. When all released birds were killed by Great-horned Owls the strategy was scrutinized. It was determined that urban areas provided a viable alternative to the historic cliffs. Cities had a stable prey base of birds. Tall buildings would contribute to early morning thermals that assimilate natural cliffs. Also ledges can be utilized like natural cliffs for perch and nest sites. And most importantly urban areas were nearly devoid of Great-horned Owls. It was hoped that falcons would spill over

from urban areas to wild cliffs eventually.

In 1989 Iowa set a goal of establishing five breeding pairs by the year 2000, with an ultimate goal of ten breeding pairs for a viable population. To achieve this effort, the Wildland University Program planned to release 50 peregrines in the first five years. Three sites were chosen, Cedar Rapids in '89-'90, Des Moines 1991, and Muscatine in 1992.



Release sites would be prepared to utilize falconry expertise. Dr. Pat Redig Co-chair with the Midwest Falcon Recovery Team told us in 1989, “Your fun is about to begin.”

Release or “hacking” structures were four ft. x five ft. x four ft. tall to hold up to six eyases or young falcons. There were bars on the front to exclude aerial predators like hawks or owls. The entire structure would need to be portable. It needed to be dismantled, placed into an elevator, and reconstructed on a building rooftop. The hack box needed to be sturdy enough to withstand 70 mph sustained winds. With any greater wind speed, there would be so much other material flying around, a disassembling hack box wouldn’t matter. It would just be included in the calamity. However, every measure was made to make the box extremely durable to ensure safety for the precious young falcons.

Urban releases went well around the Midwest and by 1993 there were two nesting pairs in Iowa at Cedar Rapids and Des Moines. There were 25 nesting pairs in urban centers of the Midwest. However, our goal of achieving five nesting pairs in Iowa by 2000 seemed remote. At most urban nest sites, prime buildings were fought over to the death of one of the combatants. Peregrine enthusiasts were beginning to wonder when the urban population would cross-over or return to the cliffs. Bob Anderson with Raptor Resource Project believed strongly that falcons needed to be released from cliffs to instill or imprint that habitat upon the birds. If we wanted falcons back on the cliffs, we needed to release falcons from the cliffs.



Here’s where the dialogue took on added meaning. During a lively discussion at Tim Mason’s shop, the topic of Sacred Paint Rock came up. It’s location on the River is steeped in history.

Occasionally in books and maps the special place was called Painted Rock as if it was past tense. Thinking it remained “current” to indigenous people, why would we continue to think its relevance was over? As an historic falcon eyrie, it was selected to be clear in our plans. We would remain vigilant until falcons once again soared over its heights. Whenever we required building access in cities, we had the courtesy to check with building managers. If it

was a church, we contacted the pastor. Work at Sacred Paint Rock would require contacting native elders.

It was during this era that Ray Young Bear and his Black Eagle Child dance troupe were performing at the Red Rock Bald Eagle Appreciation Days. Ray is a member of the Meskawki Nation. With tobacco in hand, he was approached. "We would like to include native people in falcon recovery work in sacred cliffs of north east Iowa. Whom would we ask for that blessing?" Ray responded, "Talk to the Winnebago, Northeastern Iowa is not in our territory. I do not know anyone to suggest, but good luck."

When Tim Mason was contacted to help an aspiring photographer, Barb Schoenherr from Wisconsin, he learned she was a native American "pipe carrier" with the Ho-Chunk Nation. It was thru Barb that we contacted Larry Johns with Wisconsin Geologic Society. Larry worked with the Ho-Chunk Nation and he suggested we contact tribal chairman, Kenneth Funmaker. Mr. Funmaker sent tribal elder Lyle Greendeer Sr. to meet with us. At HawkWatch 1994 Mr. Greendeer and family met at the base of Sacred Paint Rock.

Immediately upon arrival, Mr. Greendeer asked why was he invited to this place? Our response was to assist with welcoming the return of falcons to cliffs of NE Iowa and particularly Paint Rock. He responded, "Falcons are bad birds. We shoot them because they steal our meat." We were surprised at his incredulous remark, but undeterred. We transported the party to the top of the sacred peak. We laid in the grass and learned about Ho-Chunk ways. It was during this exchange that others from our party climbed down and around the cliff to place falcon white-wash on the rocks. Paint Rock received paint, a biologic calling card. Research had included this strategy in western areas to welcome prairie falcons to historic sites. It was also our up grading Painted Rock to a current status of Paint Rock. If our paint or white-wash attracted falcons to a ledge, all the better. Our odyssey to return falcons to the cliffs had begun.

Coming off the hill, we walked beside an uprooted tree that had grown atop an earthen mound. Mr. Greendeer paused to pray and sprinkled tobacco over the exposed mound. It was the first time to witness a tribal elder praying with tobacco. The tobacco was green. A fistful of the earth was unlike any I had expected. Its texture was soft and smooth, light brown, like silt from the riverbank 300 feet below us. When it was mushed together it formed a ball nicely. It was obvious the earth had been delivered there by humans eons ago.

Lyle was great with sharing his 82 years with the public at our event. He spoke of ancestors that thought so much of this land, they constructed mounds. The nine Greendeer

children liked their gifts, especially the wooden branch pencils and bubble wands. At Sunday breakfast his tone took a different affect. He noted there were no native people on staff at Effigy Mounds. He explained that he was ornery upon arrival because of our timing. It was inappropriate for him to talk about an area so sacred while spirits were listening. After winter solstice the spirits would be sleeping and that is when our questions could be discussed.

During February of 1995, he spoke of a violent battle between underwater dragons. Their blood was the first of the red ochre paint on the rocks of Sacred Paint Rock. When the paint had worn away, it would be Armageddon and the end of the earth as we know it. The red paint on the rocks would continue to erode. He said that it was prophesied that white Americans would come to the red people for advice during the end times.

Ihanktonwan elder, Maria Pearson, from Greenwood, South Dakota accepted an invitation to work with our falcon recovery, also. As Liaison to the Governor of Iowa for Native Cultural Affairs, she attended some of our Iowa Falcon Recovery meetings. It was during one meeting at National, Iowa in 1995 that we discussed the overgrown condition of some historic eyries. In the absence of fire, trees had grown tall obscuring some cliffs. A falconer with military, C4 explosive experience suggested we dynamite holes in the cliff faces to provide falcons suitable pockets for nesting away from the trees. Maria's link to sacred sites was spurred to remark, "Ain't no fricking way." These were the harshest words I'd ever heard her say. It was good to have her with us.

The following year, Maria requested our assistance for the Mankato Pow Wow. Several of us were subscribed to cook for the dancers. Maria's firekeeper for her vision quest, Bill Hall and his Ho-chunk wife Pam Snowball, were assisting also.

A year later, Bill and Pam invited us to the Mission community near Black River Falls, Wisconsin. He introduced Helen and Ely Thunder, tribal elders of the Ho-Chunk Nation. Very quickly, Ely asked why we were there. The goal to release falcons on the cliffs to trigger their instincts to nest on cliffs was laid out. Ho-Chunk approval for this work was woven throughout the narrative. Ely slipped into their bedroom and returned with a raptor wing fashioned as a sacred fan. He asked me if I knew what bird it was. With considerable concern that he expected me to say Bald Eagle, it was a Turkey Vulture's wing. Upon hearing *vulture*, he remarked, "They're no good, we shoot them." Perplexed I asked,

“Why would you want to do that? They perform a valuable service to our natural world.”

From there we chaired up at their kitchen table. After some discussion about the state of our environment, Ely motioned to pick up one of the baby food jars that lined his kitchen window sill. He asked if I knew what was in them. It was dark green and obviously a processed plant material. I responded it looked like tobacco. This initiated quite a discussion in Ho-Chunk language. Bill’s demeanor seemed incredulous but nodding with agreement to his grandfather’s words. Then our hosts shared fresh bread and coffee.

We had a spirited departure of handshakes and hugs and “See you next time.” I learned that native people only say “good by” when someone dies. We were driving away when Bill observed, “I can’t believe what just happened.” But first Pam was compelled to advise some protocol when in the company of elders. She said that in no uncertain terms to ever ask an elder of Ely’s status a question. She said that during the Turkey Vulture talk, I had put my hands on my hips and disgustedly asked Ely why anyone would shoot a turkey vulture? She said it was not to be taken literally, Ely did not shoot the vulture. His obtuse remark was a test. As with Lyle Greendeer’s remark about shooting falcons, laughter or a chuckle is appropriate at these times of native humor.

Bill would assist us with seeds to grow tobacco for our Peregrine Falcon recovery to the cliffs of NE Iowa. Native communities recognize tobacco as one of the four sacred plants that also include: sage, sweet grass and white cedar. Growing the tobacco (donee) is the most sacred blessing the Ho-Chunk could contribute for work to return the long wings to the rocks. We wanted to welcome their return, but to do it in such a way that future generations would not place them in jeopardy of extinction again. We could provide the biology and were hoping the Ho-Chunk would share spiritual assistance for seven generations and forever.



At a Mid-west Falcon Mini-Symposium in 1994, Bob Anderson, Director of non-profit Raptor Resource Project, introduced himself. He said “I want to be a part of anything that happens on the River.” As a falcon breeder, Bob had provided over 100 falcon young for releases into urban areas around the nation. He requested permission to release falcons from Mississippi cliffs near his home in

Hugo, Minnesota. He was told: no, permission denied to release falcons from cliffs in Minnesota. There were numerous justifications from raptor and agency professionals. Falcon releases at Weaver Dunes in SE Minnesota were unsuccessful in 1982. It was suspected that Great-horned Owls would kill any additional, defenseless falcon eyases or young at any wild release sites. Further speculation involved those emboldened owls would start viewing migrating Peregrine Falcons as potential prey. There was concern the urban falcon population might plummet from depredation of Great-horned Owls.

Bob felt differently. He proposed releasing falcons into Barred Owl terrain right on the River. Great-horned owls reside on the edges of the big timbers that makeup the riparian corridor of the Mississippi. This terrain described the Weaver Dunes experiment from 1982. Bob seemed anxious to work with the Iowa DNR about releasing falcons in Iowa. He was providing young eyases that his mated pairs created for release into a natural environment. Our question to Iowans was, “What is the advantage to saying no to Bob Anderson?” The Iowa DNR approved his plan.

Bob moved his entire Peregrine Falcon project with nesting pairs to Ridgeway, Iowa. He began looking for rock outcroppings that were right on the river in Barred Owl habitat. His project began producing young falcons for release in the cliffs of NE Iowa. When eyas or young falcons could feed themselves at 35 days old, the young were placed in a muse. The muse, or room where raptors are kept, was installed on the north side of his farm house kitchen. The young would only see rocks and great outdoors, nothing man-made. Their maturity would continue as their flight feathers gained length. A pilot effort to release four 42-day-old youngsters at Bluffton on the Upper Iowa River occurred in summer of 1997. Everything went well. Important details were noted in this marvelously maverick attempt. Each evening the juvenile “brown birds” would seemingly melt into the crevases of the rock

cliffs. It was a key innate behavior of the newly minted population. There was no mortality.

In 1998 the federal government removed Peregrine Falcons from the Endangered species list. However, there were no pairs nesting on their historic cliffs. Peregrine Falcons only nested in cities. To address this disparaging detail, Bob’s Raptor Resource Project ramped up efforts to release birds



on the cliffs. Hanging Rock at Effigy Mounds National Monument was selected for the release site in 1998. Surveys indicated that indeed only Barred Owls were calling at this stretch of the Mississippi River. No Great-horned Owls were heard. Rodney Rovang and Effigy National Monument Park staff provided an ideal overlook of the Mississippi River for hacking 19 peregrines. Visitors to the site marveled at the splendor of these magnificent birds adjusting and maturing into their natural role of raptor extraordinaire of the flyway. The young eyases were prospering. There was zero mortality in 1998 and zero mortality in 1999 due to Great-horned Owl predation or otherwise.

At the Dubuque Quarry adjoining Eagle Point Park, Tom Deckert, Rob Kirkman, and Lowell Washburn of Iowa Falconer's Association joined efforts with Dr. Larkin Powell of University of Dubuque to release additional peregrines. Their work complemented the work of Bob's Raptor Resource Project upstream. In a two-year span commencing in 1999, 40 peregrines tested their wings and successfully fledged from a 200-foot limestone bluff. It was at this site that resident Great-horned Owls nested in the same quarry. The owls stole fresh falcon food (*Coturnix* quail), but only one falcon mortality was attributed to owls.

In 2000, for the first time in at least three decades, wild peregrines were produced on Mississippi River cliffs. At Queen's Bluff, in southeastern Minnesota, one young fledged successfully from Iowa-released parents. A male from the 1998 Effigy release and female from Mason City release in 1998 by falconer Lowell Washburn, pioneered the return of peregrines to the cliffs at Queen's Bluff just upstream in Minnesota



Pioneering on the cliffs was not gradual, it went from zero to five nesting pairs in one year. They were all in the Upper Mississippi of Iowa, Minnesota, and Wisconsin. In Iowa, a pair had previously nested in an Alliant Energy smokestack-mounted nest box near Lansing. Bob Anderson installed a nest box at a nearby cliff, a historic peregrine nest site. They fledged four young, one female and three males. Bud Tordoff, Chairman of the Midwest Peregrine Falcon Recovery Team, said, "These were the first young peregrines known to fledge from a cliff nest in the Mississippi River valley since the extirpation of the original population by DDT in the 1950s and 1960s." Since that time there

are as many as a dozen pairs on the cliffs each year.

In summary, 164 peregrines were hacked from Iowa release sites from 1989–2002. Eighty-four birds were released along the Mississippi River, 62 from limestone bluffs. One mortality was attributed to Great horned Owl predation. Ho-Chunk spiritual assistance is noted in this success. In 2015 we know of 21 nesting pairs in Iowa – 17 on the River.

All along the Mississippi flyway, peregrine courtship calls offer testimony to untold thousands of hours and dollars invested in bringing back the great-footed hawks. The birds were upgraded from endangered status federally in 1998 and in Iowa 2009. As a standard-bearer of the Endangered Species Act, the falcons' return is a testament to the necessity and effectiveness of the Act. Most endangered species unfortunately lack the high profile efforts and funding that have returned peregrines from the brink of extinction.

Provisions of the Endangered Species Act, as a tool for wildlife conservation, are unequivocal as a commitment to future generations. The Act must be preserved and strengthened at any cost. A choice was made for the environment in 1972. This is a profound precedent that is relevant for today's environmental challenges. (As a side-bar: God help us if the Monarch Butterfly's demise becomes this generation's Passenger Pigeon.)

Now that Peregrine Falcons have resurrected from near extinction, maintaining the recovered population for future generations becomes our top priority. In many regards, the real work is just beginning. Complacency or taking the falcons for granted is our greatest enemy. The outreach to all citizens needs to be incorporated into the official upgrade from 'endangered species' status in Iowa. It now becomes our collective responsibility to ensure that Peregrine Falcons will never be placed in jeopardy of extinction again. A victim of DDT biocide contamination, nesting peregrines disappeared from skies over Iowa to the East Coast during the 1960s. Author, Rachel Carson, sounded the alarm in her treatise on environmental degradation in her book "Silent Spring" published in 1962.

Today, falcons have successfully returned to the Mississippi River cliffs where they prospered for centuries. Their role as a positive biological indicator species on the health of our environment has returned. Thanks go out to all volunteer conservationists and non-governmental organizations like: Raptor Resource Project with Director Bob Anderson, Midwest Peregrine Falcon Recovery Team co-chaired by Dr. Bud Tordoff and Dr. Pat Redig with The Raptor Center,

Iowa Peregrine Falcon Recovery Team chaired by Lowell Washburn; environmental groups like Iowa Audubon, National Audubon, Iowa Wildlife Federation, Iowa Natural Heritage Foundation, ADM, Mid-American, and Alliant Energy Companies; and natural resource agencies including US Fish and Wildlife Service, National Park Service and Minnesota, Wisconsin and Iowa Departments of Natural Resources.

In the 21st century, river cliffs annually reverberate with courtship calls of these dynamic raptors that have arisen from the ashes like the mythological Phoenix. Peregrine Falcons have become a success story and literal standard-bearer of the working Endangered Species Act.

In an effort to foster and culture an appreciation for Peregrine Falcons' return to the Mississippi cliffs, come see their flights and hear their calls. During spring, spectacular aerial displays and courtship calls of wild falcons can be viewed as they reclaim the cliff-ledge nest sites of their ancestors. It is during this time frame that falcons are most vocal as they defend their nesting territories from natural intruders. **We believe Rachel Carson would want us to hear their calls, particularly each spring; the cliffs are silent no longer. Her "silent spring" has been abated for now.** Join us the first weekend of May each spring: Friday Fish Fry at Harper's Ferry Community Center. Boat trips to falcon cliffs provided by Captain Robert Vavra with Maiden Voyage River Tours.



Once adult falcons on the River have everyone's attention, we will delve into learning how the falcons' demise came about, and what it means to have them with us again. Also, we explore the commitment and concerted efforts necessary to keep falcons with us forever. The importance of this critical aspect of longevity cannot be overstated. Our objective is that the Iowa Falcon RiverTrip will have resounding and profound, long-term, cultural and environmental influences on youngsters, families, and communities. Future generations will be required to respect falcons to keep them with us for those that follow. Presenters from the Ho-Chunk Nation, Raptor Resource Project, Hoos Woods Wildlife Rehabilitation Center, and DNR Wildlife Diversity Program facilitate the program.

From a vast array of falcon effigies associated with the Mississippi flyway, it is apparent that indigenous cultures highly revered Peregrine Falcons. Modern Ho-Chunk

elders and natural resource conservationists still retain that level of esteem. Sharing this uplifting message of rejuvenation is appropriate in culturing an environmental conscience for the benefit of all wildlife throughout the Mississippi Flyway. Falcons are back on the rocks providing glimmers of hope for the planet– *long may they fly!*



Jon Stravers, Hawkman, Falcon RiverTrip 2015

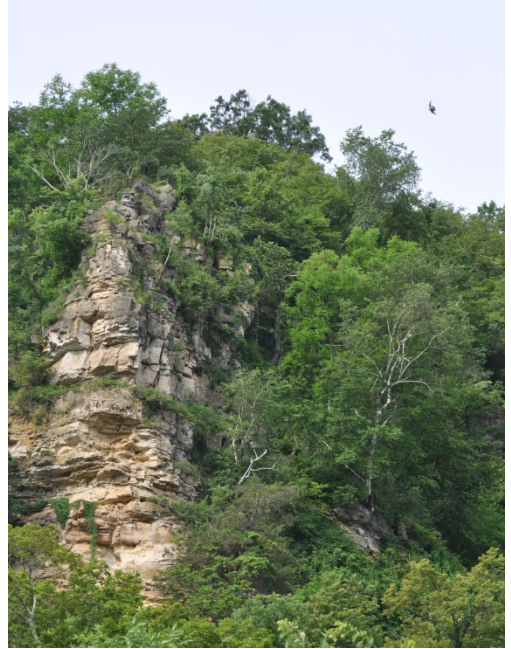


Four falcon young or eyases at Aggie's Bluff, Allamakee Co. 2012



Male or tiercel effigy on left (141 ft.) is 1/3 smaller than female on right (227 ft.) just as in real life

Agee's Bluff, Lansing, May 10, 2015: immature eagle strafed and escorted out of air space by tiercel. Thirteen minute visit provided lots of action. This bluff is two miles north of Lansing on hwy 26. There is a pulloff for easy viewing of cliff. Cliff is on public land. Falcon pair is unbanded and began nesting in 2012. Eyrie is inaccessible to humans or predators like raccoons. Bob Anderson refers to Agee's Bluff as "the real McCoy" for falcon nest sites. Adult falcons have not been touched by humans, only admired from afar. Peregrine Falcons are back on the rocks. Sometimes dreams do come true with hard work.



"Work with nature when you can."

"I'm a great believer in luck, and I find the harder I work the more I have of it."

Thomas Jefferson

Eagle Point Quarry, Dubuque, June 3, 2015. Fabulous falcon viewing at Lansing Agee's Bluff and Alliant Energy Cliffs, Leo's Bluff, MacGregor elevator, Eagle Point Quarry in crystalline rock pockets - real McCoy II with Bellevue State Park and three more in Clinton. As many pairs as there are river towns along that stretch, longwings on the rocks forever, national news of the flyway. Additional pairs on the River at I80, I74 bridges, Davenport, Muscatine, Louisa, Burlington, Keokuk



