

*rhynchos*), Clark nutcracker (*Nucifraga columbiana*), western gray squirrel (*Sciurus griseus*), red squirrel (*Tamiasciurus douglasii*), California ground squirrel (*Citellus beecheyi fisheri*), chipmunks (*Eutamias amoenus*, *E. minimus*, *E. quadrivittatus*, *E. speciosus*, *E. townsendii*), kangaroo rat (*Dipodomys heermanni*), white-footed mouse (*Peromyscus maniculatus*).

Species reported to have eaten seed of the sugar pine (*Pinus lambertiana*): Clark nutcracker (*Nucifraga columbiana*), western gray squirrel (*Sciurus griseus*), red squirrel (*Tamiasciurus douglasii*), chipmunks (*Eutamias quadrivittatus*, *E. speciosus*, *E. quadrimaculatus*), white-footed mice (*Peromyscus maniculatus*).—CLARENCE F. SMITH, *U. S. Fish and Wildlife Service, Mount Shasta, Calif.*

## OBITUARY

P. S. LOVEJOY<sup>1</sup>

The parentage of ideas about egg-openers, iceboxes, and cigarette-lighters is recorded in the United States Patent Office. Inventors are lauded in every schoolroom, and encouraged to levy tribute on all who use their intellectual progeny. The parentage of ideas about men and land is seldom recorded at all. By the time they appear in books they are usually step-children whose parentage has been forgotten.

I believe that P. S. Lovejoy sired more ideas about men and land than any contemporary in the conservation field. I here attempt to sketch some recent and unpublished chips from the Lovejoy block. Only a fraction of his output ever reached print. Much of it is recorded only in letters, and these are couched in a vernacular peculiar to him. In my office, and I fancy in many others, the arrival of a letter in Lovejoyese was always heralded by titters from the mail

room. My file of Lovejoyiana shows that this vernacular grew in extravagance and in wit as its contents deepened with advancing age. Why did he, a master of the Queen's English, insist on expressing even the most profound ideas in this jargon? It represents, I think, reaction against pretense, and a contempt for all pious solemnities.

No greater error could be made than to regard the Lovejoy vernacular as mere slang; it often carried figures of speech of poetical beauty. Two years ago, after he had recovered from an almost fatal illness, I remarked, in reply to a brilliant satirical letter (9/14/40), that I was glad he had resumed his mental probings into the nature of things. He replied: "I've been living on borrowed time. It's fun now to work up wedge-stuff, and find season-checks to set 'em in, and keep splitting more and more slabs of savvy off the bug chunk." Slang, yes, but also a pro-

<sup>1</sup> Parish Storrs Lovejoy was born at Princeton, Illinois, January 23, 1884 and died at Ann Arbor, Michigan, January 20, 1942. His ancestors on both sides were ministers and educators.

In 1903 he enrolled as one of the first students in Filibert Roth's School of Forestry at the University of Michigan. Before obtaining a degree, he entered the U. S. Forest Service in 1905, and became Supervisor of the Medicine Bow National Forest in Wyoming. In 1910 he was transferred to the Olympic National Forest in Washington and in 1912 returned to become Assistant Professor of Forestry under Dr. Roth at Ann Arbor. In 1920 Lovejoy became a staff writer for the Curtis publications, and had frequent articles on land-use, mainly in "The Country Gentleman." He helped to organize the

Michigan Land Economic Survey in 1922, and took charge of it the following year for the Michigan Conservation Department. This led to the establishment of the Michigan refuge system, which Lovejoy undertook in 1925. He became chief of the Department's Game and Fur Division in 1927. After 1930 failing health forced him to relinquish active field work, but he continued to serve as advisor to the Department on land policy and program.

He married Ruth Harrison of Detroit in 1909, and is survived by his wife, a son, and three daughters. On June 7, 1942 a bronze tablet commemorating his services to conservation was dedicated on Pigeon River State Forest, one of his favorite areas, and a monument in itself to his labors.—P. S. Hoffmaster.

found and dramatic definition of scholarship, rendered in the mental imagery of the lumberjack.

I once upbraided "P. S." for not publishing more papers. I told him he was like a squirrel who buried his mental garnerings in letters, instead of planting them in print where they could grow in many minds. He replied: "I've been watching those squirrels. They don't even try to remember where they put acorns. They just cache them all over the neighborhood, and then go and smell 'em up again, as wanted. The squirrel that plants an acorn is not always the one to smell it up. Meanwhile quite a lot of them have sprouted and grown into trees. Caching things in print is not always the best way to get things *growing*" (letter 9/14/40). In this homely parable is compressed his own picture of his service to society.

Lovejoy's early writings dealt with physical resource problems, and with land policy. The deflation of the lake states land boom, the recognition of forestry by the agricultural profession, and the realization that forest lands as well as farm lands may be submarginal are in no small degree Lovejoy's personal handiwork. He also contributed largely to the recognition of wildlife as a land crop, and to the initiation of wildlife research.

In his later years, his thinking focused not on policy, but on people. He saw that the average citizen had given nothing but lip-service to either forestry or wildlife management, and he wanted to know why. Unlike most publicly employed conservationists, he did not mistake the growth of appropriations and the proliferation of bureaus for the accomplishment of the ends for which they were created. He became engrossed in analyzing the reasons for the failure of "conservation education."

His findings are expressed in "Ecological Engineering." I consider this one of the most important papers on conservation published during the current decade, but like other Lovejoy "acorns," it was cached at random in an obscure spot.

#### ECOLOGICAL ENGINEERING

Conservation, Lovejoy says, is reason applied to environment. Reason, to the mass mind, is like oxygen to the animal body: a

little is essential, but too much is toxic, and induces pain followed by defensive reactions. Tolerance for reason may be increased by education, but only by slow degrees. Agricultural extension has developed techniques which recognize the limits of public tolerance; it administers small doses of "science" heavily diluted with economic and social persuasion. Conservation must do the same.

Lovejoy's distinction between educator and extensionist is elaborated in a recent letter (3/8/39):

"Educators smear all behaviors which are not dominantly rational. The standard campus illusion is that *Homo* can and should be educated so that he will not much, if any, (or anyway not in public) behave like a mammal. All the while everybody knows he will.

Skillful advertisers, politicians, and evangelists know in advance that most of the time people will react to stimuli and inhibitions which have little or nothing to do with the campus formula.

The extensioner splits the difference. He does not expect his customers to be much or often rational. He uses fact-logic only when it seems to work. When it doesn't work, he contrives bait and drift-fences and banana-peel arrangements which do. His job is to bridge the gap between the latest Experiment Station dope and the specific action-program. When the educator has done his stuff, the customer is due to be intelligent, but the extensioner is content if he thereafter acts as if he were."

I add from "Ecological Engineering":

"It is an almost universal assumption that there is something pathological in politicians. This, assuredly, is a misconception. The politician has always been associated with civilization, and has a function corresponding to that of leucocytes in the blood. The splitting of differences of interest among the governed is a perennial job. Our ecological engineer may be glad to have someone tending the minor chores while he himself is computing another social modulus, or triangulating to place another banana-peel where it will do the most good. Our engineer will bear in mind that *Homo sapiens* is still considerably sap. The normal function of the politician is to take the public where he thinks it wants to go; the function of our engineer is to take the public where it will be glad to be when it gets there.

Testing his materials in advance of construction, a proper engineer will discover that a very small quantity of clay impairs the strength of his concrete. He will therefore proceed to wash his gravel. He will not merely curse the clay. He will not try to educate it

out of the gravel. So our ecological engineer will recognize the ubiquity of *Homo's* rationalizations, and that these are protective devices used to dilute facts to non-toxic concentrations."

IDEA SUCCESSION

During his last two years Lovejoy focused his mind on a single problem: the succession in ideas about land-use. Just as there are predictable sequences in the development of plant and animal communities, knowledge of which is essential to agriculture and forestry, so, he argued, there may be predictable sequences in human thought about land-use, knowledge of which may be important to good administration, extension, and research.

Lovejoy postulated that ideas are conceived, born, grow up, have offspring, become senescent, and die, and that these developmental phases may have identifiable characteristics useful in forecasting the future or in interpreting the past. The successive phases may also have characteristic durations, possibly amenable to partial control. In a letter (3/19/41) he cites the following history of the deer problem in Michigan as a sample of the raw material from which a theory of idea-succession might be deduced:

- 1. From first talk of starvation in deer yards to first hay hauled..... 25-50 years
- 2. From this to first technical investigation of yards and the first post-mortems on dead deer..... 5 years
- 3. From this to competent surveys of all yards (via ineffective digressions such as hauling hay, or removing excess by trapping or by stunning with "mercy bullets")..... 3 years
- 4. From this to competent censuses of deer populations with tallies showing sex and age composition..... 3 years
- 5. From this to official recognition that there must be more legal kill or else wholesale starvation; that populations have outstripped their winter food and must go down..... 2 years
- 6. From this to start of systematic education to modify the buck law, which inhibits increasing the legal kill..... 2 years
- 7. From this to first sportsman-support in asking

the legislature to "git modern in re deer"..... 2 years

Total elapsed time in idea succession, items 2 to 7, to date..... 17 years

Lovejoy then projects the possible future sequence:

- 8. From asking to getting legislative repeal of buck law and authority for "local regulation"..... 4- 6 years
- 9. From getting authority to learning how to use it... 5-10 years (?)
- 10. Recognition of fire as a tool for increasing deer food on areas submarginal for forestry..... 10-25 years (?)
- 11. Evolution of techniques combining local deer regulation, forestry, and fire as a tool..... ? years

I think Lovejoy regarded this sequence of events as comprising a single stage in the intellectual succession. Through it runs one idea: too many deer. It grew up under the dominance of a preceding idea (too few deer), just as the forb stage grows up under the dominance of weeds, or the grass stage grows up under the dominance of forbs. It will be succeeded by another idea: regulated deer, locally adjusted to the needs and tolerances of forestry and other land-uses. Too few deer, too many deer, and an adjusted deer herd are three overlapping stages in a succession.

Within the present stage, Lovejoy considered hay-hauling, trapping, and mercy-bullets as digressions and evasions arising from public abhorrence of factual truth, i.e., as criteria of "youth" in the idea of too many deer. Items 4-7 represent education of the public, by slow degrees, to accept the factual truth already evident in item 2. Ecological engineering (i.e., "placing another banana-peel where it will do the most good") might, he thought, have hastened ultimate public acceptance.

Research on excess deer, Lovejoy points out, began in item 2 and reached print in item 6. But research, he says, has only begun when published:

"It's certainly urgent to get the infant-project born right, washed up, and crying good, but that's just a stage in raising a

family. Field work is gestation, publication is parturition, but getting into action is growing up. Research is grown when it has reached self-tending status, along with other kids of that generation."

LOVEJOYIANA

For those unfamiliar with Lovejoyese, I present a few selected idioms and a few characteristic quotations:

*pack-rattling*: collecting reprints "in the standard campus manner"

*terra-tinker*: a land-use expert

*barber shop biologist*: a sportsman

*mirabile dictu*: telling tall tales

*rat-hole project*: an ill-conceived official undertaking

*sacred sawloggers*: forestry propagandists

*section 28*: lower right abdomen

*Novos, Demos, and Buros*: researchers, politicians, and bureaucrats; novos nest in litters of old papers, from which, at irregular intervals, they hatch out monographic young.

"*Sic 'em summa cum laude*": citation granted to able critics

*words with high muzzle-velocity*: good writing

*clubs*: "There are three kinds of clubs. One kind peels all its birches, another only a few, another puts white paint on the scars of the old peelings." (letter 7/24/38)

*research*: "Hire a dozen techs. Turn 'em loose and they'll smell out, trail, and flush facts, fetch 'em home, and lay 'em on the hearth all-same cat and field-mouse. When they lay another separate on the Altar of Research, they have done their stuff. It's up to somebody else to carry on from there." (letter 9/22/40)

*appetite*: "As a kid I often ate all the apples I could, but never as many as I wanted to."

*theses*: "Theses for higher degrees in Ecological Engineering should weigh at least three pounds."

*critics*: "If they do it vicious-like, with teeth showing, they are surprised and amused to find that (the sacred cows) are easy scared, and run away with even a little roughing. So a few of us have quite a little fun yapping and nipping and shagging (them) around, letting on we're after hot blood right outa the neck." (letter 9/22/40)

*carrying capacity*: "The ultimate question is not how to step up human carrying capacities per habitat but what sort of humans we want to have around at all." (letter 9/22/40)

RECENT PUBLICATIONS BY P. S. LOVEJOY

1926. The worst-first theory. *Journ. Forestry*, 24: 351-7.

1933. Concepts and contours. *Journ. Forestry*, 31: 381-91.

1933. Fericulture. *Univ. of Mich. Forest School Annual*, pp. 12-13, 33.

1935. Ecological engineering. *Mich. Acad. Sci. Arts and Letters, Ann Arbor, Ann. Repts.*, pp. 76-86.

1936. Harmonizing conflicting interests in land management. *Proc. First N. Amer. Wildlife Conference*, pp. 260-7.

1938. [Letter to Silcox.] *Journ. Forestry*, 36: 623-34.

In conclusion, I venture the personal opinion that the professions of forestry and wildlife management, as now constituted, will one day be adjudged to have been deficient in critics. If I am right in this, then P. S. Lovejoy, as one of our best critics, will grow in stature with the years.

In any case he did his valiant best to find new wedges, and season-checks to set them in, and to split new slabs of savvy off the big chunk.—ALDO LEOPOLD, *Madison, Wis.*