

# BEAUTY AND THE BOTANIST\*

STAN ROWE, Department of Plant Ecology, University of Saskatchewan, Saskatoon, Saskatchewan. S7N 0W0



*Athabasca sand dunes.*

*Stan Rowe*

The south shore of Lake Athabasca has been named one of four exceptional areas in Saskatchewan that ought to be preserved, yet action toward this end has been repeatedly deferred. Why so? Most of us have heard again and again the logical reasons for preserving at least some viable parts of the non-humanized natural landscape; reasons that tend to be economic and utilitarian, showing how the human race will benefit in the long run. Mostly the logic fails just because of its dependence on utility. Developers, business men, politicians,

people in general, perceive that the *comparative utility* of wilderness, of wild animals and plants, is small. Hence, as an example, dedication of the Grassland National Park in southern Saskatchewan awaits proof that the land is valueless for the production of such non-renewables as natural gas and oil.

It seems to me, therefore, that the battle for preservation will be won, if it can be won, in the arena of non-utilitarian values, to which no price-tag is attached.

This article is abstracted from a talk given by Dr. Rowe to a joint meeting of the Canadian Botanical Association and the Canadian Society of Plant Physiologists, held at Regina in June 1982.



It is time to state the case for the beauty of landscape as a real value, rather than accenting only the case for benchmark sites, gene pools, potentially useful crop plants, and pharmaceuticals. It is time to champion the aesthetic sense and put some trust in it, rather than relying on the economic sense that calculates only market profits and discounts the future.

What has the professional biologist to do with beauty? Not nearly enough! In the kind of science currently practiced, a conscious effort is made to exclude considerations of beauty and such emotive values from the subject matter and from personal attitudes for two reasons:

- 1) Because the scientist studies phenomena that can be quantified, searching for mechanisms within and not for aesthetic emanations without, and
- 2) because aesthetic feelings might distract from the necessary methodology; if the technique is dissection, then it is profitless to ask if the living whole might not be more beautiful than the dead parts.

The danger is that the methodology, and the world view that is consistent with it, erodes and may in time eradicate those non-utilitarian instincts that I believe we must trust and rely on if there is to be preservation of natural areas.

Let me emphasize the point. Reading the abstracts of the papers at this botanical conference I found no titles such as "The beauty of the flower," "The aesthetics of riparian vegetation," "Sensory delight in the study of organelles." Why? Because beauty is not a part of science's content. Science has naught to do with the qualitative aspects of emotions and feelings. This would not be a bad thing were scientists able to retain a lively sense of what is missing.

Unfortunately the rational mind has a failing: if it cannot cope with certain aspects of experience, it declares them

meaningless and unimportant; they are, says the intellect, unsubstantial epiphenomena. Thus there is a widespread distrust of emotions and their promptings because no white-coated savant has corked the incontrovertible evidence of them in a test tube. The better humanity becomes at science and the development of intellect, the less room there is for feelings and things of the spirit. Values still call the shots, but the value system is debased. Eventually it comprises only those precepts that can live with science and that science can live with. "Truth" is one such precept, but truth-in-science is a peculiarly denatured form of the real thing.

Galileo is one of the heroes of science, and the story of his persecution by the Church is legendary. Time has acquitted him of the Inquisition's charge that he blasphemed in rejecting the Ptolemaic of the Copernican system of planetary motions. But Galileo did commit a real crime; one for which he was never tried. That crime was the rejection of *total* human experience; for he divided experienced reality into an objective quantifiable sphere — the real world, the world of science — and a subjective qualitative sphere of feeling and meaning which he dismissed as unimportant. By so doing he discarded half the mind and set us on the road to becoming one-eyed monsters. Because from then to the present the world's heavy thinkers have insisted that nature speaks only the language of quantity, of mathematics which is to say that nature is mechanistic. Nature doesn't speak human, it speaks machine. In this century the philosopher and mathematician Alfred North Whitehead revolted against the mainstream, characterizing the domination of thought by scientific materialism as "One-eyed reason deficient in its vision of depth."

In our day scientific materialism has completely taken over western consciousness, despite formidable op-

position every step of the way. Is it because those who objected to the separation of intellect from sensitivity, of thought from feeling, were *merely* poets and philosophers, people like Blake and Wordsworth, Rousseau and Thoreau? Surely the pen is mighty, and good ideas ought to win out? Well, it seems that scientific materialism has won because at this time in history people value power and control over the material universe above all else. And it is power and control over material things that intellect, through science, delivers in spades.

Don't misunderstand me; this is not an attack on science. It *is* an attack on the belief that the pursuit of science is the only important human endeavour, or even *the most important* endeavour of intelligent people. Maybe those who don't take up science, sense in a deep way, that functional rationality leaves out too much of what is real and vital in their lives.

Each of us has to believe in something. Personal satisfaction requires a caring for something beyond ourselves. Organized religion used to fill the bill, but society has become more and more secular in the last few hundred years. What is there today for idealistic young people if they reject the hypocrisy of the commercial world? Often they turn to science that also promises selfless service to humanity: progress, freedom, a better world. Thus science has become a religion not lacking in dogma and replete with Latin maxims. "Quaecumque Vera", "Whatever things are True," is the motto of my Alma Mater. It sounds good; but now we know, thanks to such philosophers of science as Kuhn, that "truth" only means correspondence with the latest theory. Such truth has little relevance to making our society decent and our world livable. Surely this is not the truth to which the poet referred in the lines: "Beauty is truth, truth beauty, — that is

all ye know on earth and all ye need to know."

It is no accident that the older buildings on our campuses resemble cathedrals, gothic-arched and stone-pinnacled. They were erected as temples to knowledge, to the new religion: "Ye shall know the truth and the truth will make you free." As the dream faded, so the architecture declined. The latest buildings on many campuses are plain ugly, and these latter day monuments are telling us something about universities.

Remember Einstein's words honoring Max Planck in 1918, back in the golden age of universities:

"In the temple of science are many mansions, and various indeed are they that dwell therein and the motives that have led them thither. Many take to science out of a joyful sense of superior intellectual power; science is their own special sport to which they look for vivid experience and the satisfaction of ambition; many others are to be found in the temple who have offered the products of their brains on this altar for purely utilitarian purposes. Were an angel of the Lord to come and drive all the people belonging to these two categories out of the temple, the assemblage would be seriously depleted, but there would still be some men, of both present and past times, left inside. Our Planck is one of them, and that is why we love him."

Notice the imagery in the temple of science, and Einstein's idea of a dedicated, unselfish, priestly elite leading humanity forward. In 1941, 23 years later, a more pessimistic Einstein wrote of science:

"Whatever this tool in the hand of man will produce depends entirely on the nature of the goals alive in this mankind. Once these goals exist, the scientific method furnishes means to realize them. Yet *it* cannot furnish the very goals . . . Perfection of means and confusion of goals seem — in my opinion — to characterize our age."

So Einstein came to believe that



science is instrumental; science is a tool, a means. Science, he is saying, is great if you know where you want to go with it, if you know where you want it to take you. But left to itself, setting its own expedient goals, the odds are that it will do as much harm as good. Nevertheless, every scientist worth her/his salt will argue that scientists should be given a bundle of money by NSERC and then should be left alone to do her/his thing! Ah but, some may say, you are failing to distinguish between *our* curiosity-oriented, impersonal, clean science and *their* regrettable, mis-

used, applied technology. Let's stop kidding ourselves; the two are not separable.

Thus we are brought back to the question of guiding values; back to sensibilities such as beauty, and to faith that the feeling parts of consciousness, in addition to intellect, have worth to set leading goals. The temples of our campuses need to be rededicated, but to what?

Fortunately there is an attractive faith with ancient roots; a faith that makes ecological sense. Many peoples at



*Aspen leaves.*

Gary W. Seil



various times and places in history have thought of humanity and the world as one. Apparently the Greeks had this organic view of nature and of their place in it. A recent restatement is by James Lovelock; he calls it the *Gaia Hypothesis*. Gaia, you remember, was the goddess of the Earth, and Lovelock wants to put the earth, not humanity, at the vital center. Humanity is likened to Antaeus, son of Gaia, who retained his strength as long as he was in close touch with mother earth. Whatever separates humanity from its roots in the earth — present day Herculean technology, for example — saps health and wholeness. (In the myth, Hercules overcame Anateus by holding him aloft, so that he could not touch the earth.)

Acceptance of the Gaia Hypothesis requires another Copernican revolution. The world does not revolve around people, but we revolve (and evolve) around the earth which is the source of life and of creativity. Were this our human faith, we might look to the future with some optimism. For then science could be guided in a healthy direction. Humanity could harness its intellectual powers to rescue the earth; to rehabilitate and maintain its beauty, its permanence and productivity. A chief goal would be the reconciliation of mankind with the earth, giving up the death-wish science and technology that currently employs half the world's scientists.

This is the direction that beauty perceived in nature moves us. Beauty, I believe, is trying to tell us something of relatedness, of interconnectedness, of health and wholeness.

The currently popular divided brain hypothesis, the concept of the bicameral mind, provides a rationale based on neuropsychology that allows us — brainwashed as we all are by scientific materialism — to accept without discomfort what we have always

known by introspection; namely, that mind has an intuitive side, a feeling side, a holistic side, in addition to intellect. If half the brain is devoted to sensibilities such as beauty, perhaps we can accept the importance of this aspect of experience.

No one knows what beauty is. Artists and poets try to create it, and philosophers often say something about beauty which is instructive. Spinoza said that beauty is the perception of what is healthy (and the word "health" has its root in "whole", in wholeness). Kant thought that beauty had to do with unity of structure, with the completeness of design (note again the idea of wholeness), and he added that an interest in the beauty of nature for its own sake is always a sign of goodness. Schopenhauer thought beauty to be the ultimate good; the ultimate joy, he said, is in creating or cherishing the beautiful. A modern thinker, Gregory Bateson, says that the aesthetic sense responds to the *pattern that connects all things*. So there seems to be agreement that beauty has strong ties with wholeness, health, holism, holiness.

The poet Robinson Jeffers wrote these appropriate lines:

A severed hand is an ugly thing,  
And man dissevered from the earth and  
stars and his history . . . for con-  
templation or in fact . . . often appears  
atrociously ugly.

Integrity is wholeness,  
The greatest beauty is organic wholeness,  
The wholeness of life and things, the divine  
beauty of the universe.

Love that, not man apart from that,  
Or else you will share man's pitiful con-  
fusions,

Or drown in despair when his days darken.

These sensitive poets and philosophers have felt intuitively the transforming power of beauty. Remember the fairy tale "Beauty and the Beast?" In that allegory Beauty rescued and transformed the Beast, and not by the logic of science.