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Boundary Layer: Exploring the Genius Between Worlds by Kem Luther

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An Edge Can Be a Path

Boundary Layer: Exploring the Genius Between Worlds by **KEM LUTHER**
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We tend to think of boundaries as linear, delineating edges, rather than being the areas themselves. We have observed fences with the paths beside them created by creatures paralleling the fence, but we've also seen adjoining fields, one with grazing access and one without, and how the ungrazed vegetation is so much more lush. This book is about a "sheet" boundary where the smallest and most resourceful living things abide and combine, one that can be observed by lying on your face and looking closely, maybe with a lens, almost anywhere on an earth surface of the planet. This is where you will be in literal contact with the "stegnon," described as the land-equivalent of plankton in the ocean, the smallest units of life.

This author follows the worthy example of John McPhee by taking us through these environments with able interpreters, real human beings who have been devoted to one approach or another and are willing to share what they know. But the real message of this book, which starts out being about how lichen cooperates with algae so deeply that they amount to a merger, a new creature, is that they are still capable of disengagement and forming new independent strategies. It's convenient just to collapse the algae into lichen inclusion, but they are more than that. It's a metaphor.

In fact, by the end of the essays we are ready to accept the idea that boundaries are arbitrary, negotiable, and capable of dissolving themselves into something new. Our own bodies are as symbiotic as coral reefs, as variable as skin and bone, with limits that are negotiable. Like ideas.

When we have addressed the world, we have looked for what we can group into "things," give names, and learn about in a way that "stays put." But, in this paradigmatically shifting world, that can be quite misleading. In this time of metaphorical thinking, we must watch our calques, which are loan translations from other languages where things are parsed in handier ways.

"Boundary layer" is a calque from "grenzschicht," used by a man named Prandtl at a 1904 conference in Heidelberg. It was meant for use in regard to aerodynamics, the part of the air rushing along just above the surface of the earth, down where the little things grow and control their small ways. A boundary is an active transition with its own characteristics, like the edges between meadow and woods where small animals emerge at the boundary between day and night.

Kem Luther lives on Vancouver Island in British Columbia, so he is aware of the sea and its moving boundary along the ocean shore, the beach where sand moves according to the air currents, and the plant complexities which evolved to adapt and control. A ferry trip away, on the mainland, mosses are the focus. Their sex lives were hard to figure out, because in their particulate sporophytes the two nuclear helixes are united, but not in the larger "plantish" parts, which is opposite to what we expect. In human bodies, it is in the seeds that the helixes are single and in the new creature in which they are double.

Terry McIntosh keeps a roof garden collection of mosses and explains that in the

Arctic, moss is the "highest" form of vegetation there is. The extent of the places where low plants dominate (savannah, grasslands, and tundra) is as large as that covered by tall forests.

Next step is to the fungi, which some are beginning to argue are more like animals than like plants. Certainly, they are exemplars of symbiosis, only apparent when they erupt in mushrooms, but underground thickly woven among the sharing roots of trees through threads called mycellium. The two large systems of life, the plants and the fungi, create a boundary layer with new ways of intermeshing. They've been doing this for a billion years — a scientific estimate, not hyperbole.

For a much shorter interval, humans have been studying fungi, and scientists tend to work out systems of thought with various strategies and emphases. One contrast that Luther noticed early was between British and Continental systems. Now an alternative division introduces Czechs, Hans Roemer and Adolf and Oluna Ceska, forced to transplant when the USSR collapsed Czechoslovakia in 1969. There was enough difference in metaphors to reveal new understanding, though also sometimes misunderstanding.

So now the discussion is ready to step to the ecology of concepts, how there are splitters and joiners who create different maps from different purposes. Kem speaks of "biogeoclimatic zones" which live at the boundary between European and North American perspectives on natural systems. Andy MacKinnon is the guide.

"Phytosociologists" wanted to study large natural conglomerates, which Luther relates to 'idealism,' abstract forms as opposed to individual organisms, related to 'positivism.' These tensions and contrasts are everywhere in the ways we divvy up territories and the uses of their divisions, especially in land management.

Back to lichens with Trevor Goward for an inquiry into what happens if you try to forge on through what is accepted to new territory. Getting out of the normal boundaries of thought can make a person seem "dangerous, even deranged." A threat to the standing order, in this case, that of the "lichen community." What does it mean to live in an "extra-centric" relation to one's society? Trevor says, "Healthy human societies, like ecosystems, depend on the proportionate functioning of unlike parts" (112).

Really big paradigm shifts and startling insights are hard to grasp. We need to move step-by-step along the deer paths others have traced out until we learn to "see" more deeply into what life is about. The effect on us is an increase in knowledge, but also a kind of big-heartedness about the generosity of the surface of the planet from the stegnon to the mosses draping the trees.

When it's time to confront political quandaries in rending and callousing ways, there will be a stabilizing reassurance that everything can be worked out. Many small adaptations can shift the world. Under it all are the plate tectonics of shifting ideas about wilderness.

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