

Vytautas Gudelis, 1993. **A Glossary of Coastal Research Terms (Juros Krantotyros Terminu; Terminologisches Lexikon der Küstenkunde;** also in Russian). Vilnius: Academia, 408p. ISBN 9986-08-003-7.

This is an invaluable compilation for any student of international coastal research because it contains a comprehensive list of the appropriate terms separately indexed in English, German, Russian and Lithuanian.

For anyone interested in coastal spits, barriers, littoral lagoons, coastal dunes and postglacial emerged strandlines, Lithuania itself offers a rich selection. Early papers on that region were mostly written in German, and were thus available to American coastal geomorphologists like Douglas Johnson. The country became briefly independent in 1918–1940, when papers in the Lithuanian language began to appear, and these continued after it was incorporated in the Soviet Union after World War II. Although that regime was favorable for science education, the political repression and “closed house” attitude to foreign travel set an intolerable burden on the unfortunate scientists. One solution for boredom was to prepare a glossary. Gudelis was born in Kaunas in 1923, studied geology and archaeology at Vilnius University, eventually (1978) becoming head of the Institute of Geography, Lithuanian Academy of Sciences. (A brief history of geomorphology in Lithuania is contained in: Walker, H.J. and Grabau, W.E., 1993. *The Evolution of Geomorphology*. New York: Wiley. pp. 277–281.

For this reviewer, the Glossary arrived at a convenient moment, because the universally admired *AGI Glossary of Geology* is just now getting one of its periodic updates. Naturally, I was scanning the Gudelis Glossary for interesting or unusual terms. A few may be mentioned here, noted alphabetically:

*Aquatory*. How's that again? Ah, yes, aquatic, of course. And an *Aquatorium* is a “water surface of a certain size.” One could speculate that the Pacific Ocean would be a giant aquatorium, as a kettle pond would be an aquatorium of very limited dimensions. But do we need this? I was always taught that good English is simple English. In certain contexts it might be useful. Frankly, I don't know.

*Bathymeter*. My Webster says a bathometer is an instrument for measuring the depth of water, although on my own oceanographic adventures we generally called it a *fathometer* (even if it was graduated in meters), which Webster calls a “sonic depth finder.” Of course, we all know about *bathymetric charts*, and bathymeter sounds logical, if unusual.

*Coasts* provide a treasure-trove of interesting descriptions, e.g., a biogenic coast is one made of “organogenous matter, marl, peat or coral”; a *dalmatic coast* we would generally label “dalmatian-type” and clearly has nothing to do with dogs; a *dentalic coast* is a toothy one, an abrasional coast of capes and embayments; a *drumlin coast* is obviously one of partly drowned drumlins; a *phytogenic coast* is made of plants such as mangrove reeds or peat; a gravitational coast is one marked by debris and crumbings; an *ingressional coast* is (by implication) one of drowned lowlands and river mouths.

*Drift*. While some people still use this rather old-fashioned term for any undifferentiated glacial deposits (not mentioned

in this volume), its coastal connotation embraces a range from beach drift, bottom drift, rolling drift to wind (eolian) drift.

*Dy*. A peaty mud, this is a term widely used in the Baltic region and acceptable in English (sometimes unpleasantly rendered in the U.S. as “muck,” a term mostly associated with farmyard manure). In this volume its translation is a little unfortunate as “mud abounding in peat.” A related term *mud* (or ooze) is properly given as “an unconsolidated sediment of clay and silt with great admixture of organic matter, aleurite-pelite sediment”; the latter version is popular in eastern Europe, but little used in the West. “Ooze” is inappropriate in a coastal setting and traditionally reserved for deep-sea muds.

*Edged Stone* is a funny-sounding term; it is given as a synonym of ventifact (faceted pebble or boulder due to eolian abrasion). *Eolodynamics* sounds O.K., meaning “the sum of processes connected with wind's impact upon the surface, i.e., deflation, corrosion, transport and accumulation.”

*Fjerd, fjörd*. Spelling variants for the Danish low-relief, equivalents of the Norwegian *fjord*, here defined as “inlets penetrating into the land with glacial relief (e.g., in Jutland)”; a result of “ingression into dry valleys and river valleys.” *Gyttja* (alt. *gytija*) is another sediment term that sometimes gives trouble, here correctly defined as “a humic grey-brown to blackish deposit, rich in organic matter and found in lakes and lagoons”; “*sapropel*” is given as a synonym, which is unusual, this being generally marine.

*Holm* is given with German equivalents *Werder, Flusinsel*; here defined as “an isle in a river dividing the river flow into two streams” (as in the Swedish city name: Stockholm). It does not appear in the *AGI Glossary*.

*Littoral*, is given by Webster as (a) a noun meaning a coastal region, esp. the intertidal belt, and (b) as an adjective relating to or growing near the shore. Gudelis does not give the noun, but defines *littoral zone* (“zone of sea bottom and aquatory which approximately corresponds to the underwater shore slope”; he also applies it to lake shores, where the intertidal definition would be inappropriate).

*Littoral formations* is given as either (a) relief forms, or (b) sediments found in the coastal zone. *Littoral drift* is correctly given as “long-term sediment transport” or *longshore drift* (the term “alongshore,” not mentioned by Gudelis, is still used by some people in the United States, mostly by engineers, but generally abandoned as archaic).

*Luvside* is given in this Glossary as the windward side (of a dune or wave impact), a term absent from either the AGI list or Webster. It is the opposite of *Lee-side*. The word is Germanic (pron. “loof”), and the old-English is *luff*.

*Nilas*, a term for elastic ice, a layer up to 10cm thick (AGI Glossary notes it is of Russian origin).

*Nurshy*, an unfamiliar term for swamp, mire or marsh. *Orkan* is given as a variant of hurricane, also of Germanic or Dutch origin, apparently a phonetic version of the Caribbean term. One of the intriguing things about Lithuanian (p.165) is that they have no less than eight quite different terms for the wind directions at sea, and eight more for those in a lagoon.

*Palve*, a Lithuanian folk term for a blown-sand plain . . .

drifted from the beach or migrating dunes, often overgrown with grass, bushes or forest. No English synonym seems to exist. Several combinations are given: palve flat, plain, palve deflation plain.

*Season-of-impassable-roads* has a one-word Lithuanian equivalent Bjuratis but this is unlikely to replace *Mud-sea-son*, a familiar expression in New England when frozen ground or snow cover melts creating potential quagmires.

*Wetlands*. In view of their environmental and political interest in the United States, the Lithuanian definition is interesting: "a low coastal strip of land (on tidal coast too) with numerous water bodies, bogs and marshes, as well as water-sodden grounds."

Finally, let us rejoice in a one-word Lithuanian name for a coastal science expert: a *Krantotyryninkas*. It sounds terrific, but I doubt if it will ever catch on. Nevertheless we owe a lasting debt to Vytautas Gudelis and wish him well.

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McComb, A.J., 1995. **Eutrophic Shallow Estuaries and Lagoons**, Boca Raton, FL.: CRC Press, 240p. ISBN 0-8493-6830-1. \$149.95.

Where coastal populations expand, and where there is inappropriate development and intensified use continues, then problems arise from incompatible uses, ignorance, and incomplete management, as the readers of this journal know all too well. Eutrophication is one example of the resulting plethora of issues for the scientist, engineer, manager and citizen. The 'excess' nutrients causing this result may arise from nutrient sources far up in the watershed, from groundwater and atmosphere, or urban runoff. Rosenberg's prediction (1985) about "Eutrophication—the future marine coastal nuisance?" is now proven widespread and much more than a nuisance, as others have argued. There are compromises to fisheries (SHUMWAY, 1990), public health, and aesthetics, to name a few aspects.

The eutrophic conditions within shallow, broad estuarine basins found near or behind impediments to flow, and therefore exchange, are the subject of this volume. The seasonality of freshwater sources in these basins means there may be large fluctuations in salinity and strong dilution gradients. Their shallowness increases the relative importance of processes occurring in the benthos compared to the water column. The eight case studies included are of the Peel-Harvey estuary (western Australia), Tuggerah Lakes (eastern Australia), Shenzhen Bay (China), Tolo Harbour (Hong Kong), Venice lagoon (Italy), Ems estuary (Netherlands), Zandvlei (South Africa) and Dutch Wadden Sea. Each case history follows a similar format: Introduction, Physical Properties, Catchment Description, Water Movement and Exchange, Nutrients, Symptoms of Enrichment and Discussion. Five other chapters are on water exchange, plant ecology, a comparison

of fisheries in 3 nearby estuaries of differing eutrophic status, sediments, and sustainable economics. The book has 717 references, 102 figures and 39 tables. The figures are clear, but the type was smudged in a few places. I found the referencing system inconvenient (numeric, not alphabetized, and the publication year is at the end of the citation).

This book is another on the subject, and there is room for more. Noteworthy additions to the field are the comparison of fisheries in 3 closely located lagoons of different eutrophic status, its emphasis on lagoons, rather than all estuaries, per se, and some new case histories. A chapter on the sustainable economics of eutrophy is a unique and useful addition.

There are now plenty of case histories from all kinds of estuaries throughout the world. This volume contains individual pieces of the eutrophication story, and some have been prepared before. It is the science that is so under nourished. Now, rather than focus so much on all of the individual pieces, one must wonder if the underlying processes should not be better understood and compared. This volume is part of the evolution of science and management, in that the second half of the book attempts this. Needed are syntheses, predictions, integration to management and, in particular, successful management other than dilution (e.g., opening tidal inlets and diversion to other areas). This book, and no other book, has successfully done that. But, it is a worthwhile part of a library for the professionals who would appreciate that accomplishment. Particular chapters will be useful for teaching purposes, and the summary from outside the western hemisphere should prove useful for student research projects.

There is a note on the publication data page that should concern users interested in the widespread and efficient dissemination of their work and use by others. It says that there is a \$0.50/page charge for photocopying for "internal or personal use" and the fee "may change without notice". Two pages of this book can be easily accommodated on one photocopy page of most copy machines, so this is an effective charge of \$1/page. This implies a charge to record items on a reference list to look up later, or to use one figure as an overhead in a meeting, etc. I understand and accept that there is a fee charged for non-personal use by clients or for widespread classroom dissemination. But that statement goes far beyond anything that I understand is in most copyright claims. Future contributors and purchasers might wish to investigate this further for the chilling effect a strict interpretation of this fee claim might have on libraries and individuals. Potential authors might look around for a less expensive outlet for their work.

## REFERENCES

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