

N.J. Berrill and B.C. Goodwin

The Life of Form

Emergent Patterns of Morphological Transformation

Abstract. The inherent logical difficulties of understanding biological form in terms of historical narratives and genetic programmes are considered. It is concluded that neither of these approaches can resolve the problems presented by the evidence of parallel and convergent evolution, and for intrinsic constraints on morphogenesis such as the occurrence of phylotypic stages in the developments of members of different phyla. An alternative approach which could resolve the conflicts of historical and structural analysis is described in terms of the complex dynamics of genetic networks acting within the context of morphogenetic fields, from which emergent biological forms arise. This is described as the life of form within the biological realm.