

Schriftenreihe zur
Rechtssoziologie und Rechtstatsachenforschung

Band 73

Biology, Culture, and Environmental Law

Edited by

Michael T. McGuire
Manfred Rehbinder



Duncker & Humblot · Berlin

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**Schriftenreihe zur
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**Begründet von Prof. Dr. Dr. h. c. Ernst E. Hirsch
Herausgegeben von Prof. Dr. Manfred Rehbinder**

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Contents

Preface by <i>Margaret Gruter</i>	7
I. Introduction	
<i>Michael T. McGuire and Manfred Rehbinder:</i>	9
Can Biology Inform Environmental Law?	
II. Theory and General Concepts	
1. <i>Zdenek Madar:</i>	17
Environmental Protection: The Necessity of an Interdisciplinary Approach	
2. <i>Margaret Gruter:</i>	27
Ethology and Environmental Law	
3. <i>Hans Rudolf Trüeb:</i>	43
Economics and the Environment: The Case For Tradeable Emission Permits	
4. <i>Michael T. McGuire:</i>	117
Environmental Protection, Improvement, and the Biology of Behavior	
III. Western European Issues	
1. <i>Ulf D. Lemor:</i>	135
Developments in the Field of Environmental Liability and Insurance Within the EEC and Especially in Germany	
2. <i>Michael Lehmann:</i>	151
The New German Act on Strict Liability for Environmental Damage. Some Internalization of Negative External Effects	
IV. Eastern European Issues	
1. <i>Andras Sajo:</i>	161
Property Rights and Environmental Prospects in Post-Communism	

2.	<i>Sergei Zalygin:</i> Ecological Problems in the USSR, as Seen by the State and the Public	189
3.	<i>A.S. Mishchenko:</i> Experience from an Independent Examination of the Design Flood-Control Works in Leningrad (The Leningrad Dike)	197
4.	<i>N.G. Minashina:</i> Ecological State of the Soils in the Aral Basin: Sources and Scope of the Crisis	203
5.	<i>M.I. Zelikin and A.S. Demidov:</i> The Aral Crisis and Departmental Interests	209
6.	<i>B.V. Vinogradov:</i> Ecological Crisis in the North-Western Caspian Area and an Agricultural and Ecological Alternative Program to Develop the Region	213
V.	US-American Issues	
1.	<i>William H. Rodgers, Jr.:</i> The Environmental Laws of the United States: Poison to be Shunned or Nourishment to be Embraced?	217
2.	<i>Susan Low Bloch:</i> The Evolution of American Environmental Regulation: The Impact of Political Structure and Culture on the Substance of the Law	231
VI.	Final Remarks	
	<i>Michael T. McGuire:</i> Modeling Legal Compliance for Environmental Law Using Concepts from Biology	261

P r e f a c e

by Dr. Margaret Gruter, President of the Gruter Institute for Law and Behavioral Research

The primary aim of the Gruter Institute for Law and Behavioral Research is to develop and refine theoretical frameworks for understanding relationships between biology, law, and economics. This book presents the proceedings of our conference in Tauberbischofsheim 1991, a very special meeting of the Gruter Institute. It was the first time we had participants from Eastern Europe, and we found an extremely important topic to all of us by focusing on law, biology, and environment. The tradition of the Gruter Institute to find international perspectives has been established over many years. The existing dialogue of ideas between the American colleagues and the German group has now been enriched by widening our concerns to include participants from Eastern Europe. This book, the sixth to be written by associates of the Institute, is especially important because it is the first Institute book to focus entirely on the environment.

Almost everybody agrees that the deteriorating state of the environment threatens present and future generations. The general principles of how to stop this deterioration and how to proceed on a program of environmental improvement are also fairly well known. The difficulty is to initiate new environmental policies while remaining sensitive to constraining features of change, such as political realignments, or the financial costs of toxic waste disposal. Overcoming constraints is far from simple. Old legal concepts and new laws need to be conceived and, what is most difficult, need to be changed and enforced. The costs of change, the economics of environmental improvement, must be understood and financial planning must be realistic, improving the environment will be at least a centurylong project and one requiring an intense effort. The benefits of a preserved and enhanced environment must be made known, each of us has much to learn about the consequences of our behavior and the ways in which we contribute.

Key to any program for improving the environment is a knowledge of human behavior. It is this knowledge that has been central to Gruter Institute activities since the Institute's inception in 1981. A decade of work

on two continents, contributions by lawyers, politicians, policy makers, businessmen, professors, and interested individuals have focused on such issues as: relationships between law, biology, and culture; social ostracism; family law; justice, transitions from centrally planned to rule-of-law democracies; brain chemistry and behavior; and the interaction of mind and law. The common theme that unites this diverse set of undertakings is modern biology which, over the last four decades, has made giant strides in enhancing our understanding of the origins and the details of our behavior. It is the view of the Institute and its members that this knowledge must be incorporated into our thinking about economics, law, and social policy if such thinking is to be effective and have a reasonable chance of successfully addressing problems which all of us face.

Biology, Culture, and Environmental Law is the most recent example of the Institute's efforts to identify and disseminate information about the relationships between law, economics, and biology. It is perhaps the Institute's most important effort because environmental deterioration effects all of us equally. My special thanks to Michael McGuire and Manfred Rehbinder for their efforts in conducting the conference from which this book has emerged and for providing their editorial skills.

Portola Valley, CA, July 1992

Margaret Gruter

Can Biology inform Environmental Law?

by Michael T. McGuire and Manfred Reh binder

Some readers may have wondered why biology is included in the title of this book. Biology is a broad field of inquiry, ranging from detailed descriptions and explanations of physiological events at the genetic and cellular levels to descriptions and explanations of fundamental human behavior. It is the latter area, particularly as it informs our understanding of environmental law, that is the focus of this book and the reason that biology is included in the title.

Since the 1950's there has been a major explosion in biological knowledge. Advances in genetics, neurochemistry, neurophysiology, anatomy, pharmacology, and molecular biology have significantly altered our understanding of the biological nature of both our own and other species. Hand-in-hand with this explosion have come equally impressive advances in our understanding of the causes of many human behaviors, as well as, the conditions under which these behaviors result, for example, in conflict and cooperation. Evolutionary theory has been the theoretical system most responsible for these insights.

Before the 1950's it was generally accepted that much of the behavior, anatomy, and physiology of both living and extinct nonhuman species could be explained as products of evolution particularly natural selection. Doubts remained, however, regarding the relevance of evolutionary explanations for *Homo sapiens*. As often as not those who suggested that human behavior might be shaped by the same processes that shaped the behavior of other species, found themselves labeled as «misinformed». Compared to even our closest evolutionary relatives, there was «something special» about humans, something not easily explained by the findings and theories initially developed by Darwin.

By the mid-1960's the intellectual climate began to change. Studies of fossil remains provided findings difficult to refute which implied that, over the last half-million years, changes in the anatomical makeup of our ancestors could be most compellingly explained from an evolutionary perspective. Detailed field reports of chimpanzee behavior began to appear, and in many instances, it was difficult to distinguish the behavior of chimpanzees from