



BIOCULTURAL DIVERSITY AND INDIGENOUS WAYS OF KNOWING: HUMAN ECOLOGY IN THE ARCTIC

by Karim-Aly S. Kassam

ISBN 978-1-55238-566-1

THIS BOOK IS AN OPEN ACCESS E-BOOK. It is an electronic version of a book that can be purchased in physical form through any bookseller or on-line retailer, or from our distributors. Please support this open access publication by requesting that your university purchase a print copy of this book, or by purchasing a copy yourself. If you have any questions, please contact us at ucpress@ucalgary.ca

Cover Art: The artwork on the cover of this book is not open access and falls under traditional copyright provisions; it cannot be reproduced in any way without written permission of the artists and their agents. The cover can be displayed as a complete cover image for the purposes of publicizing this work, but the artwork cannot be extracted from the context of the cover of this specific work without breaching the artist's copyright.

COPYRIGHT NOTICE: This open-access work is published under a Creative Commons licence.

This means that you are free to copy, distribute, display or perform the work as long as you clearly attribute the work to its authors and publisher, that you do not use this work for any commercial gain in any form, and that you in no way alter, transform, or build on the work outside of its use in normal academic scholarship without our express permission. If you want to reuse or distribute the work, you must inform its new audience of the licence terms of this work. For more information, see details of the Creative Commons licence at: <http://creativecommons.org/licenses/by-nc-nd/3.0/>

UNDER THE CREATIVE COMMONS LICENCE YOU **MAY**:

- read and store this document free of charge;
- distribute it for personal use free of charge;
- print sections of the work for personal use;
- read or perform parts of the work in a context where no financial transactions take place.

UNDER THE CREATIVE COMMONS LICENCE YOU **MAY NOT**:

- gain financially from the work in any way;
- sell the work or seek monies in relation to the distribution of the work;
- use the work in any commercial activity of any kind;
- profit a third party indirectly via use or distribution of the work;
- distribute in or through a commercial body (with the exception of academic usage within educational institutions such as schools and universities);
- reproduce, distribute, or store the cover image outside of its function as a cover of this work;
- alter or build on the work outside of normal academic scholarship.

TABLE OF CONTENTS

List of Tables	viii
List of Figures	ix
Acknowledgments	xi
Chapter 1 Introduction	1
Chapter 2 Relations between Culture and Nature: A Critical Consideration	17
Chapter 3 Human Ecology Reconceptualized: A Lens for Relations between Biological and Cultural Diversity	63
Chapter 4 “Man and His Friends” – An Illustrative Case of Human Ecology in Ulukhaktok, Northwest Territories, Canada	93
Chapter 5 “The Weather Is Going Under” – Human Ecology, <i>Phronesis</i> , and Climate Change in Wainright, Alaska, USA	159
Chapter 6 Mapping Human Ecology: A Transformative Act	191
Chapter 7 Implications of a Human Ecological Outlook	221
Notes	231
References	237
Index	251

LIST OF TABLES

Table 3.1:	A Summary and Consolidation of the Models of Knowing	80
Table 4.1:	Profile of the Hamlet of Ulukhaktok	109
Table 4.2:	Age Characteristics for the Population of the Hamlet of Ulukhaktok	109
Table 4.3:	Population Characteristics: School Attendance, and Highest Level of Schooling	111
Table 4.4:	Preferred Foods of Students at Helen Kalvak School	115
Table 5.1:	Contrasting Characteristics of Iñupiat knowledge and SAR Images	182

LIST OF FIGURES

	Human Ecology of Holman Mapped (foldout, back pocket)	
Figure 1.1:	Subject Matter of Illustrations in Selected Narratives of Explorers	9
Figure 1.2:	Cultural Diversity in the Circumpolar North (CAFF 2001: 58)	10
Figure 1.3:	Ecological Diversity in the Circumpolar North (CAFF 2001: 18)	11
Figure 2.1:	Model for Link between Biological and Cultural Diversity	45
Figure 2.2:	Interplay of Cultural System, Social Structure, and Individual Action	49
Figure 2.3:	Standardization of Diversity	53
Figure 3.1:	The Binary of Nature and Culture	70
Figure 3.2:	The Concept of Human Ecology Illustrated	72
Figure 3.3:	<i>Phronesis</i> Illustrated	83
Figure 4.1:	Steps to Human Ecological Research	94
Figure 4.2:	Ulukhaktok (Holman) in the Canadian Western Arctic	97
Figure 4.3:	Seasonal Round Indication Intensity of Harvest	118
Figure 4.4:	Sealskin Sack Used for Aging	123
Figure 4.5:	Dissection of the Human Ecology of Holman	157

LIST OF FIGURES (cont'd)

Figure 5.1: Map of Wainwright	162
Figure 5.2: Marine Mammal Harvest Season	169
Figure 5.3: Seasonal Profile of Subsistence Harvesting in Wainwright, Alaska	172
Figure 5.4: Three Currents Present at Wainwright, Alaska	179
Figure 5.5: Dissection of Human Ecological Relations	185
Figure 5.6: Human Ecological Relations (Abiotic, biotic, cultural) and Climate Change	187
Figure 6.1: Human Ecological Mapping Process and Use	197
Figure 6.2: Icon Design, a Step in the Communicative Power of Human Ecological Maps	211
Figure 6.3: The Process of Mapping Human Ecology	213
Figure 7.1: Dissection of Human Ecological Relations	226