

THE PETROLEUM MANGA:
A PROJECT BY MARINA ZURKOW

© MARINA ZURKOW, 2014



<http://creativecommons.org/licenses/>

This work is Open Access, which means that you are free to copy, distribute, display, and perform the work as long as you clearly attribute the work to the authors, that you do not use this work for commercial gain in any form whatsoever, and that you in no way, alter, transform, or build upon the work outside of its normal use in academic scholarship without express permission of the author and the publisher of this volume. For any reuse or distribution, you must make clear to others the license terms of this work.

First published in 2014 by
Peanut Books
a literary offshoot of
punctum books
Brooklyn, NY
<http://punctumbooks.com>

**Peanut
Books**



ISBN: 978-0-615-96596-3

Library of Congress Cataloging Data is available from the
Library of Congress.

Editors:

Valerie Vogrin
Marina Zurkow

Images:

Marina Zurkow



The Plastisphere

If you've heard of the "Great Pacific Garbage Patch," or ocean plastics in general, you may have wondered why we don't just clean it up. You may have even seen inventions with long, floating arms and fine bristles like The Ocean Cleanup Array designed to do just that. Yet, you may have also heard counterargument from scientists and activists saying that clean-up is a fallacy that fundamentally misunderstands the materiality of ocean plastics.

The vast majority of ocean plastics are less than five millimeters in size, called microplastics, and they are inextricable from the larger oceanic ecosystem. Plastics are dispersed unevenly both in terms of where they are in the water column, and where they are in each of the world's five oceans, though they are in every ocean. In very few cases are they bunched up and scoop-able, even within concentration points in gyres. Instead, most microplastics are strewn within, and even constitute, ocean ecosystems. Animals as large as whales and as small as plankton ingest plastics as a matter of course. Miniscule plastic particles circulate in the blood of mussels. Microbes and marine life live on floating plastics. Reef fish, until recently confined to shorelines, have been found in the deep ocean thriving next to plastic flotillas. Scientists dub these unique ecosystems "The Plastisphere." (The Plastisphere is one of the many industrial-natural ecosystems that characterize the Anthropocene.) Cleaning ocean plastics, even if it were technologically possible on a scale that would make a difference, would disrupt and destroy the life we would be trying to save in the first place. Plastics are not inanimate objects separate from life; they are now full, permanent participants in all living systems.

The Plastisphere extends beyond oceans. All humans tested everywhere in the world, including Indigenous peoples in the far north and plastic-free American Mennonites, carry chemicals in their bodies that originate in plastics. Flame retardants, phthalate esters, and other chemicals migrate from plastic products and accumulate in human and animal tissue. The most recent Center for Disease Control count has more than 98% of Americans carrying a body burden of over 100 industrial chemicals. Water-soluble plastic chemicals like bisphenol A (BPA) circulate through the body in about six hours, yet even people who live largely plastic-free lives have constant levels of the chemical in their bodies. Most of these promiscuous chemicals are endocrine distributors, meaning they do not invade the body like a poison and break down cellular processes, but instead act just like a hormone, fully participating in endocrine systems that regulate puberty, fetal development, fertility, obesity, heart health, and countless other systems. It is difficult, and often impossible to scientifically differentiate between the body's natural hormone activity and the effects of plastic chemicals.

Plastics in the twenty-first century are ubiquitous, especially given their longevity, but they are also intimate.

