



**ECO-DISASTERS**

# **TOXIC WATER**

**MINAMATA,  
JAPAN**



by Meish Goldish

[ Intentionally Left Blank ]





# TOXIC WATER

**MINAMATA, JAPAN**



**by Meish Goldish**

Consultant: September Williams, MD  
Writer and Bioethicist

**BEARPORT**  
PUBLISHING

New York, New York



## Credits

Cover and Title Page, © Jsunphoto/Shutterstock; 4T, © Charles Gorry/AP Photo; 4B, © JTB MEDIA CREATION, Inc./Alamy; 6, © Noko3/Shutterstock; 7L, © suatcan/Shutterstock; 7TR, © Akvdanil/Dreamstime; 7BR, © Chad Zuber/Shutterstock; 8T, © hikariphotofotolia; 8B, © Kamonchanok Changsomboon/Shutterstock; 9, © Kyodo via AP Images; 10, © Mint Images Limited/Alamy; 11T, © HUANSHENG XU/Shutterstock; 11B, © Science History Images/Alamy; 12, © JTB MEDIA CREATION, Inc./Alamy; 13, © Takeshi Ishikawa/Polaris; 14, © David Guttenfelder/AP Photo; 15, © jeremy sutton-hibbert/Alamy; 16, © David Guttenfelder/AP Photo; 17T, © Kyodo/Newscom; 17B, © Kyodo/Newscom; 18, © AP Photo; 19T, © Kyodo via AP Images; 19B, © David Guttenfelder/AP Photo; 20T, © Takeshi Ishikawa/Polaris; 20B, © Aprilflower7/Shutterstock; 21, © Geoff A. Howard/Alamy; 22, © Takeshi Ishikawa/Polaris; 23T, © Takeshi Ishikawa/Polaris; 23B, © Julie DeGuia/Shutterstock; 24, © David Guttenfelder/AP Photo; 25T, © Kyodo/Newscom; 25B, © Takeshi Ishikawa/Polaris; 26, © jeremy sutton-hibbert/Alamy; 27T, Wikimedia/Public Domain; 27B, © Pierre Boutier/Polaris/Newscom; 28, © Kyodo via AP Images; 29, © Toru Takahashi/AP Photo; 31, © suatcan/Shutterstock.

Publisher: Kenn Goin

Senior Editor: Joyce Tivolacci

Creative Director: Spencer Brinker

Photo Research: Editorial Directions, Inc.

## *Library of Congress Cataloging-in-Publication Data*

Names: Goldish, Meish, author.

Title: Toxic water : Minamata, Japan / by Meish Goldish.

Description: New York, New York : Bearport Publishing, [2018] | Series: Eco-disasters I

Audience: Age 5–8. | Includes bibliographical references and index.

Identifiers: LCCN 2017010896 (print) | LCCN 2017011720 (ebook) |

ISBN 9781684022786 (ebook) | ISBN 9781684022243 (library)

Subjects: LCSH: Mercury—Toxicology—Japan—Minamata-shi—Juvenile literature. | Water—Pollution—Japan—Minamata-shi—Juvenile literature.

Classification: LCC RA1231.M5 (ebook) | LCC RA1231.M5 G64 2018 (print) | DDC 615.9/25663095225—dc23

LC record available at <https://lccn.loc.gov/2017010896>

Copyright © 2018 Bearport Publishing Company, Inc. All rights reserved. No part of this publication may be reproduced in whole or in part, stored in any retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher.

For more information, write to Bearport Publishing Company, Inc., 45 West 21st Street, Suite 3B, New York, New York 10010. Printed in the United States of America.

# Contents

A Strange Disease.....	4
Clues to the Mystery.....	6
More Signs of Sickness .....	8
Finding a Killer.....	10
Toxic Wastewater .....	12
Keeping Silent .....	14
Angry Fishers.....	16
Fighting for Justice.....	18
More Pollution .....	20
Mother to Child.....	22
After 60 Years .....	24
Minamata Today .....	26
Fixing the Future .....	28
Glossary .....	30
Bibliography .....	31
Read More .....	31
Learn More Online .....	31
Index .....	32
About the Author .....	32



# A Strange Disease

In April 1956 in Minamata, Japan, five-year-old Shizuko Tanaka sat down to eat with her family. As she stuck her chopsticks into a bowl of food, her tiny fingers began to tremble. By the next morning, Shizuko was seriously ill. The little girl was unable to walk, speak, or see, and her whole body shook wildly. Shizuko's mother rushed her to the hospital, but the doctors had no idea what was wrong. Two days later, Shizuko's little sister, Jitsuko, came down with the same terrifying **symptoms**.

The city of Minamata is located along Japan's southwestern coast.



A Japanese family eating a meal together



Shizuko's mother told the doctors that her neighbor's child had a similar illness. The doctors **investigated**. They soon found eight more people with the same symptoms. The hospital director reported that "an unknown disease of the **central nervous system**" had spread in Minamata. Everyone was puzzled—what could be causing this horrible illness?



Minamata is a city on the Japanese island of Kyushu. Along the coast of the city is Minamata Bay, which connects with the Shiranui Sea.



# Clues to the Mystery

Doctors in Minamata hunted for clues to explain the disease. They soon made some startling discoveries.

**Residents** told them that before their loved ones became ill, cats in the area started behaving oddly. Some shrieked in pain, bumped into walls, or **convulsed** in the streets before dying. Others leapt into Minamata Bay, where they drowned. Residents called it “dancing cat disease.”

Cats in Japan





The people of Minamata had also seen crows **plummet** from the sky or crash into rocks. What was also strange were the hundreds of dead fish floating in Minamata Bay. Fish and **shellfish** were a big part of the residents' diet. Cats and birds ate the seafood, too. Doctors soon realized that the sick people and animals had one thing in common—they had all eaten seafood that came from the bay.



Small fish that have died



A dead crow on a beach



Japanese seaweed

Fish and shellfish weren't the only things that died in Minamata Bay. Investigators found that seaweed in the water had also stopped growing and died.