

The Dust Bowl

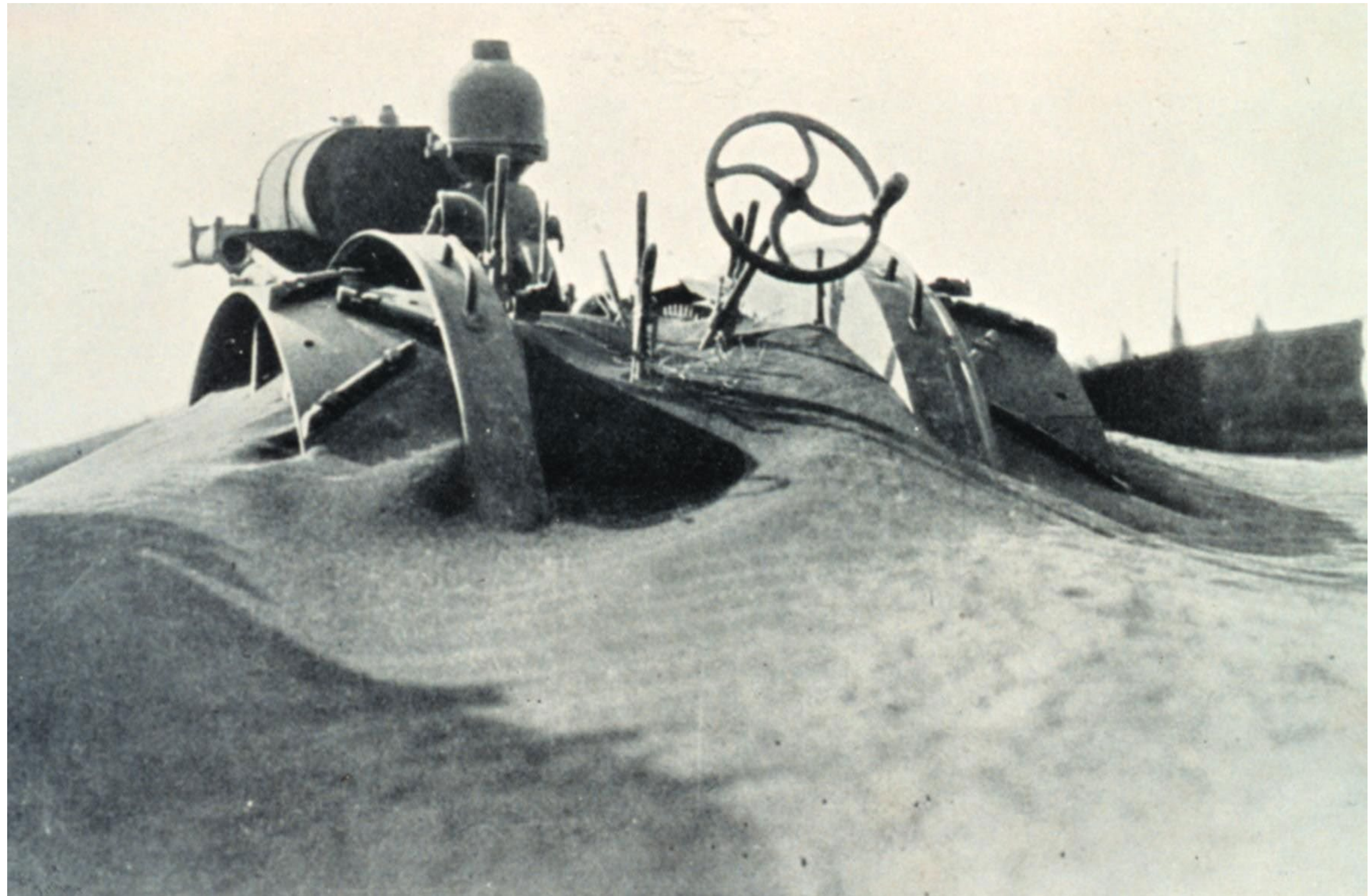
NOURISH THE FUTURE

Tomorrow's science is looking for leaders



https://commons.wikimedia.org/wiki/File:Dust_Storm_Texas_1935.jpg





BLACK SUNDAY

14 APRIL 1935, 6 PM

- * AFTERNOON TEMPERATURES IN 80s/90s, THEN...
- * STRONG COLD FRONT
- * MOVING SOUTH 50-60 MPH
- * "WALL" OF BLOWING DUST - DAY TURNED INTO NIGHT, ZERO VISIBILITY

NEXT DAY, THE TERM "DUST BOWL" WAS CREATED



Conditions leading to the Dust Bowl

- In the 1920s people were prosperous, using farming practices that were not sustainable.
- In the 1930s, drought conditions prevailed.
- Tillage/cultivation practices over time led to removal of much of the vegetative cover, so topsoil was blown away.
- “So long as worn-out farms could be abandoned for new, untouched lands to the west, there was little incentive for conservation of soil resources. As in the case of other natural resources, the land was subjected to reckless and wasteful exploitation.”

library.cqpress.com/cqresearcher/document.php?id=cqresrre1936012700

Other factors that affect what grows in soils

How might these factors have been changed due to these practices?

- pH
- Organic matter
- Microbes
- Nutrients

Are there truly any wild places where soil is still untouched?

- Worldwide, only 17 percent of land is still virtually untouched—mostly because it is inhospitable to humans.
- Only 2 percent of the total is in areas capable of growing basic crops.

How do humans affect soils?

Land uses

- Construction and development
- Mining
- Farming

What do humans do to make soil sustainable (reduce erosion, make it viable to grow crops, etc)?

- Create drainage ponds and landscapes to protect soil and waterways
- Reclaim mined areas by turning them into parklands, etc.
- Add nutrients (compost, manure, fertilizer) to maintain soil health
- Conserve soil by covering it; reducing tillage

Is it enough?

- Might there be another Dust Bowl event?
- Learn about soils... and what farmers are doing to conserve it.
- Make a prediction...