

THE BEACH!



Are all beaches on the
Vineyard the same?

Describe a typical
Vineyard Beach.

What are some
other types of
beaches from
places other than
Martha's
Vineyard?

What are ways that
beaches can vary?





There are several
different types of beaches
right here on the
Vineyard



HOW ARE BEACHES IMPORTANT?

- **ABSORB WAVE ENERGY**

Did you know? That 6 trillion watt-hours breaks on the world's coastlines every two hours. Capture it all and you could power 5 million American households for a year!!!!

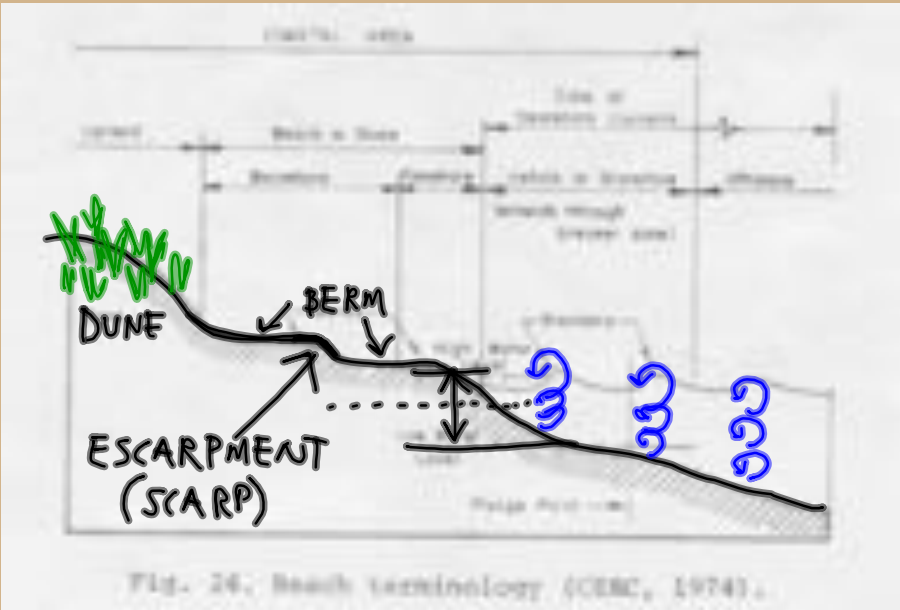
- **PROVIDE A VARIETY OF HABITAT**

- **RECREATION (SWIM, SUNBATH, FISH, WALK)**

- **BEAUTIFUL, TOO**



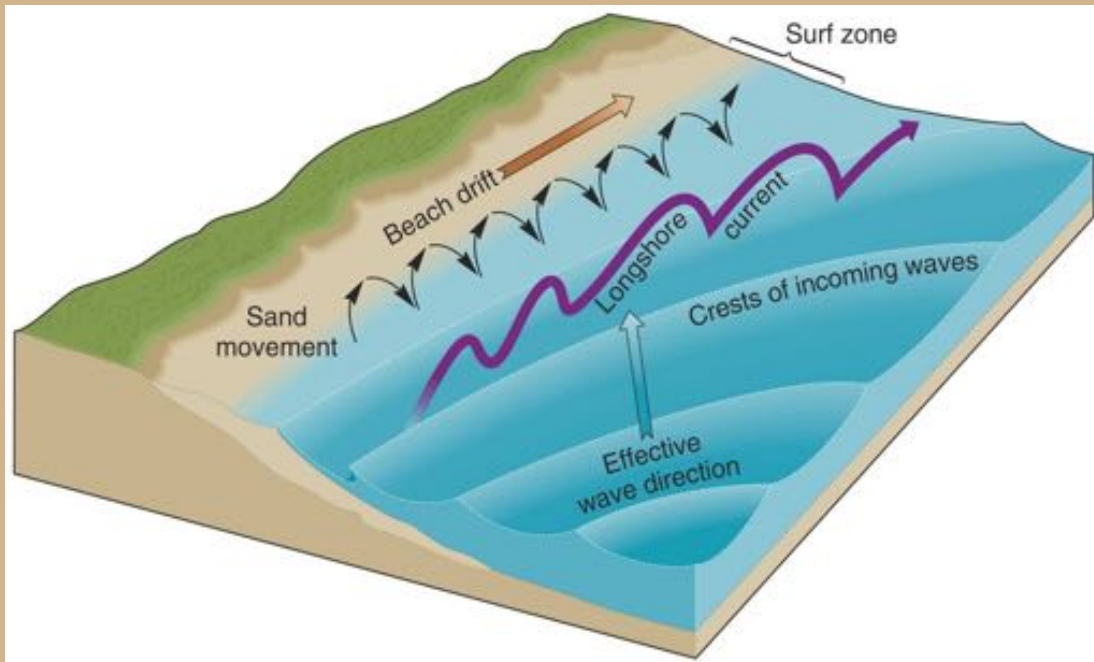
Typical Beach Profile





Have you ever noticed how waves usually strike the beach at "angles"?

LONGSHORE CURRENTS (aka LITTORAL CURRENTS)



See p. 21 of
your booklet.



**This is why we build jetties and groins to
stop the longshore drift**



**This is State Beach. Notice the jetties and groins.
Which way is the longshore drift?**

WINTER BEACH VS. SUMMER BEACH

Most sand beaches are very susceptible to weather changes over the seasons. During periods of calm weather, usually during the summer months, the gentle wave action causes a net sand movement onto the beach. This normally creates a high steep beach profile with a steep scarp at the water's edge and a small offshore sand bar.



In contrast to the calm conditions of summer, winter often brings numerous storms and powerful, erosive waves. The winter beach face is characterized by a low flat profile with the scarp much further back on the beach face and a large sand bar off shore. A resident to property begins, before buying beach front property be sure to inspect the property after stormy conditions when the beach is likely to be reduced in size.

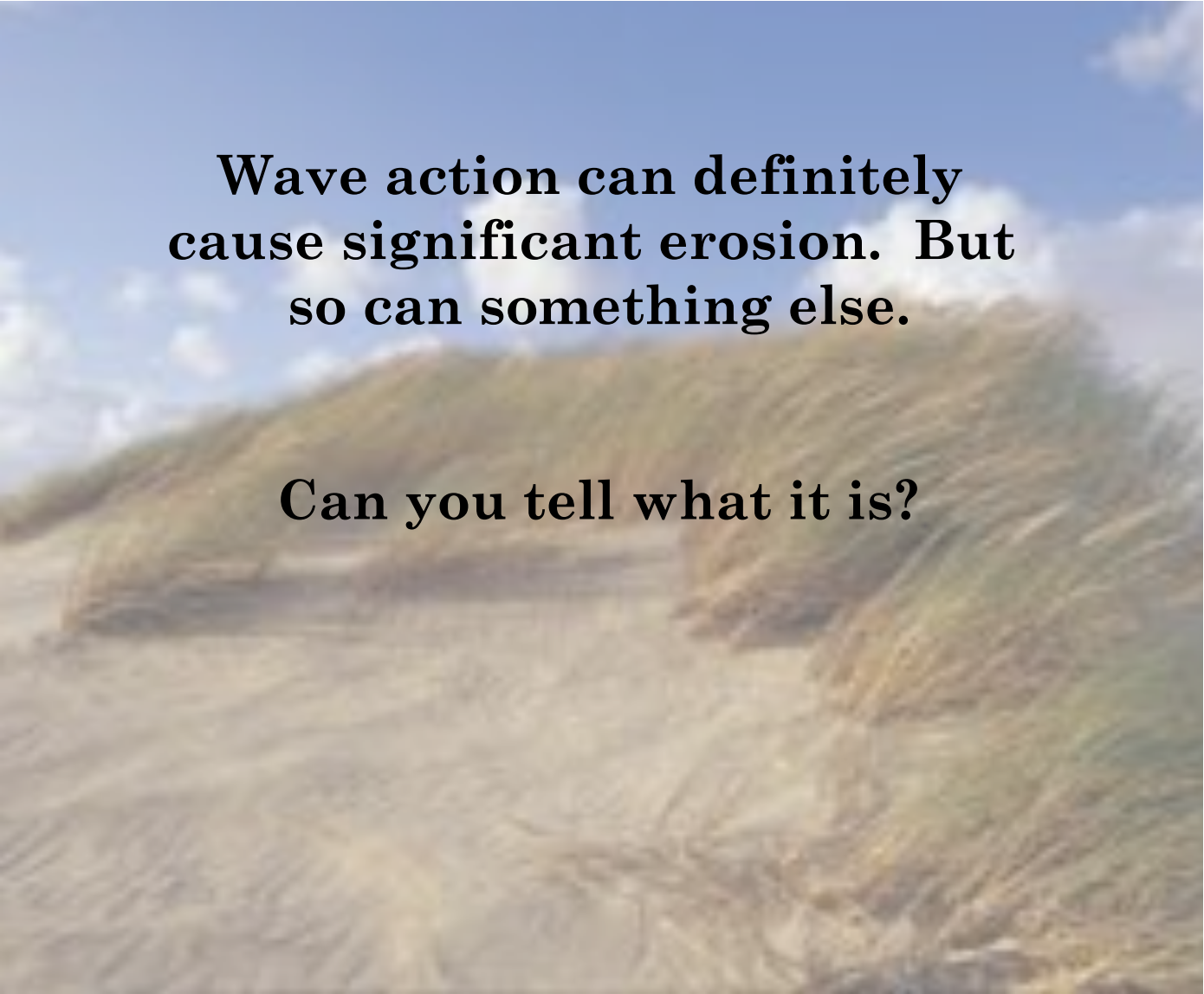


Beaches change with the seasons. Read the headings to these pictures and describe what is happening.

**DOES ALL OF THE SAND
THAT WAS REMOVED BY
WINTER STORMS GET
REPLACED IN THE SUMMER?**

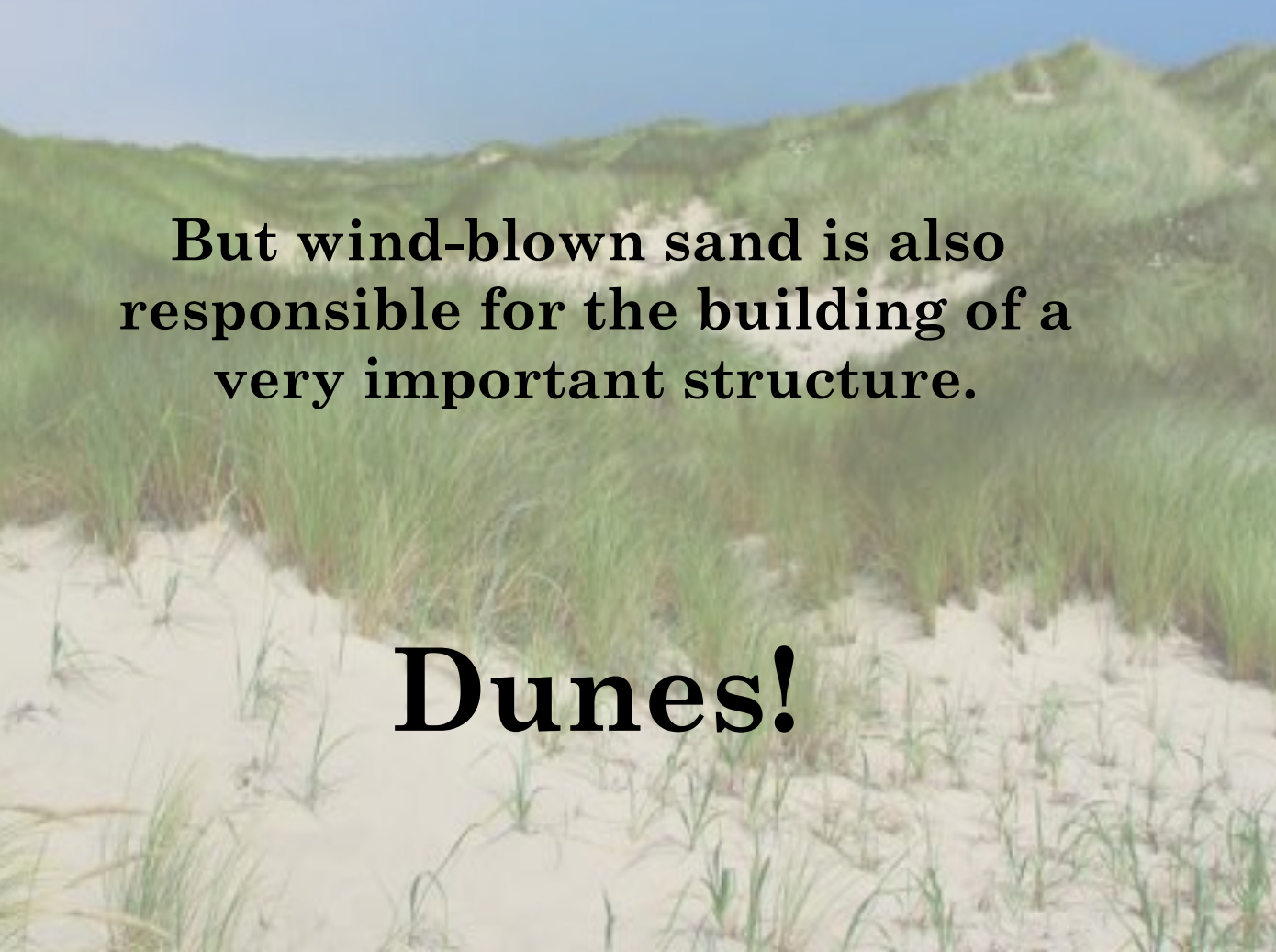
**(Look on p. 21 of your booklet
for an answer.)**





**Wave action can definitely
cause significant erosion. But
so can something else.**

Can you tell what it is?

A photograph of a sandy dune landscape. The foreground is filled with light-colored sand and patches of green grass. In the middle ground, there are more dunes covered in dense green grass. The background shows a clear blue sky. The text is overlaid on the image.

**But wind-blown sand is also
responsible for the building of a
very important structure.**

Dunes!

"roots"
rhizomes
(under ground
stems)

How a dune develops.

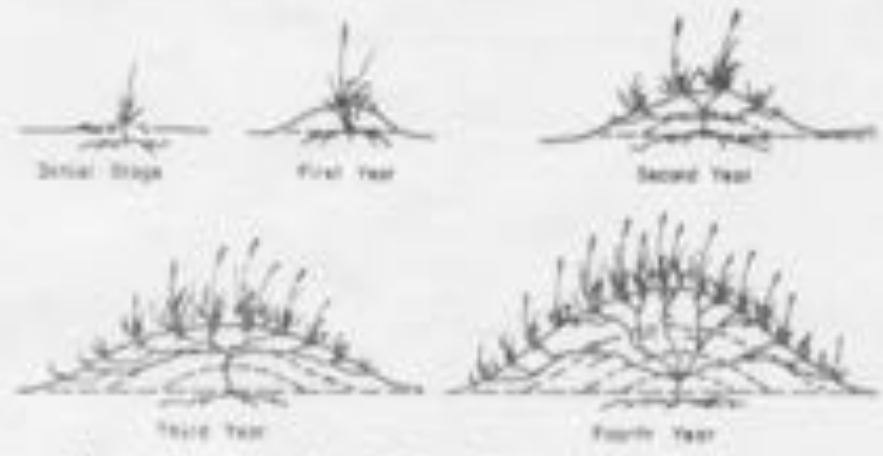


Fig. 37. Growth and development of a beachgrass dune from a drift line deposit.

THE HERO!



