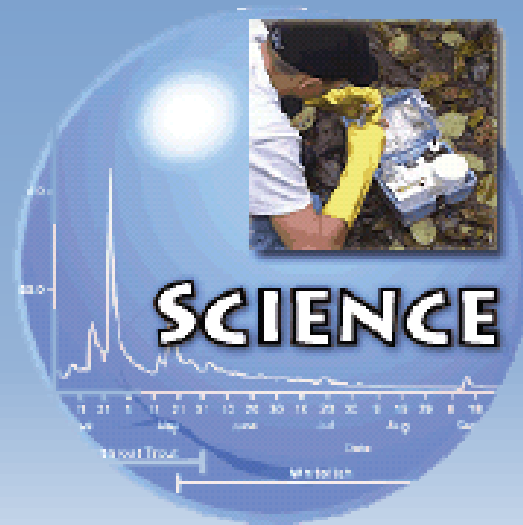


Salmon Nutrient Cycling

Accessing the Terrestrial Ecosystems





FREEING THE ELWHA

Movement of Marine-Derived Nutrients



Salmon Carcass



Scavengers feed on carcass



Scavenger feces deposited in forest

Scavenger hauls carcass into forest



Marine-derived nutrients enter soil



Nutrients taken up by vegetation through roots

Herbivores feed on vegetation





Using Markers to Determine Nutrient Origins

- The stable isotope N^{15} occurs at a higher rate in marine organisms than in freshwater.
- Salmon biomagnify N^{15} through the trophic levels
- Elevated N^{15} levels in freshwater environments is a sign of it originating in marine environments.



Using N^{15} to Trace the Past

By examining the N^{15} levels in lake sediments, scientists can even estimate the salmon densities of the ancient past



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