Sea Lamprey: A Great Lakes Menace

The sea lamprey is a non-native species and a lethal parasite of the larger fishes in the Great Lakes and has caused ecological and economic tragedy in terms of their impact on the Great Lakes fish communities. A lamprey has a mouth shaped like a suction cup, with 10 to 12 rows of teeth. It will attach to the body of other fish and suck the blood out of them. Over the course of its lifetime, a single lamprey can consume over 40 pounds of fish. By consuming large numbers of fish such as lake trout, salmon, and whitefish, lamprey are detrimental to commercial fishing businesses and can upset the balance of lake ecosystems. A female lamprey can carry up to 240,000 eggs.

Since discovering sea lamprey in the Great Lakes, natural resource managers have conducted yearly surveys of lamprey abundance to keep track of their populations. Over the last 30 years, how has the number of sea lampreys in Lake Michigan changed?

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| --- | --- | --- | --- |
| **Time (years)** | **Abundance (thousands)** | **Time (years)** | **Abundance (thousands)** |
| 1978 | 50 | 1994 | 50 |
| 1980 | 35 | 1996 | 60 |
| 1982 | 50 | 1998 | 95 |
| 1984 | 45 | 2000 | 100 |
| 1986 | 55 | 2002 | 105 |
| 1988 | 45 | 2004 | 160 |
| 1990 | 62 | 2006 | 125 |
| 1992 | 75 | 2008 | 105 |

Graph the above data to answer the scientific question



Answer the scientific question from above. Use evidence to support your answer.

Natural resource managers are interested in how sea lamprey affect lake trout in Lake Michigan. They do this by counting the number of fish wounded by lampreys. Compare and contrast the graph you completed and the wounds per 100 fish graph.



1. How does the data in the first graph explain the trend you see in the second graph?
2. Are there any other explanations you can think of to explain the trend in the second graph?
3. Summarize the two graphs, explaining how they are both alike and different. Use data to support your summary.
4. Come up with explanations for why there are fewer wounded fish in 2005 even though there were more lamprey in that year.
5. Given the trends on these two graphs, makes predictions about lamprey and trout abundance in the future.
6. Given these two graphs, come up with your own questions about lamprey and trout.
7. Would you want to be a commercial fisherman in the Great Lakes? Why or why not? Support your arguments with evidence.