



Dive Fatalities in Fresh Water Environment in the Great Lakes

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INTRODUCTION:

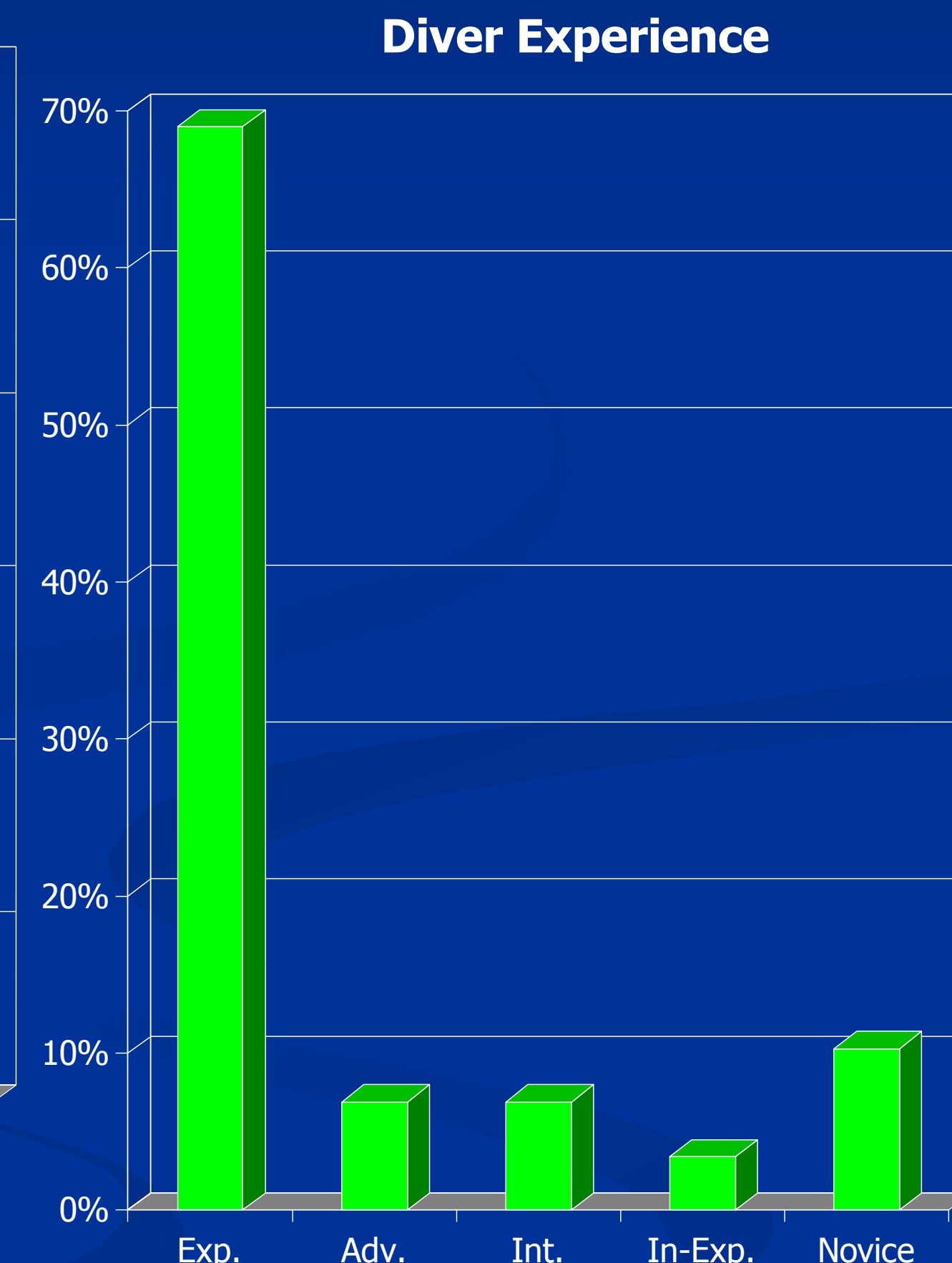
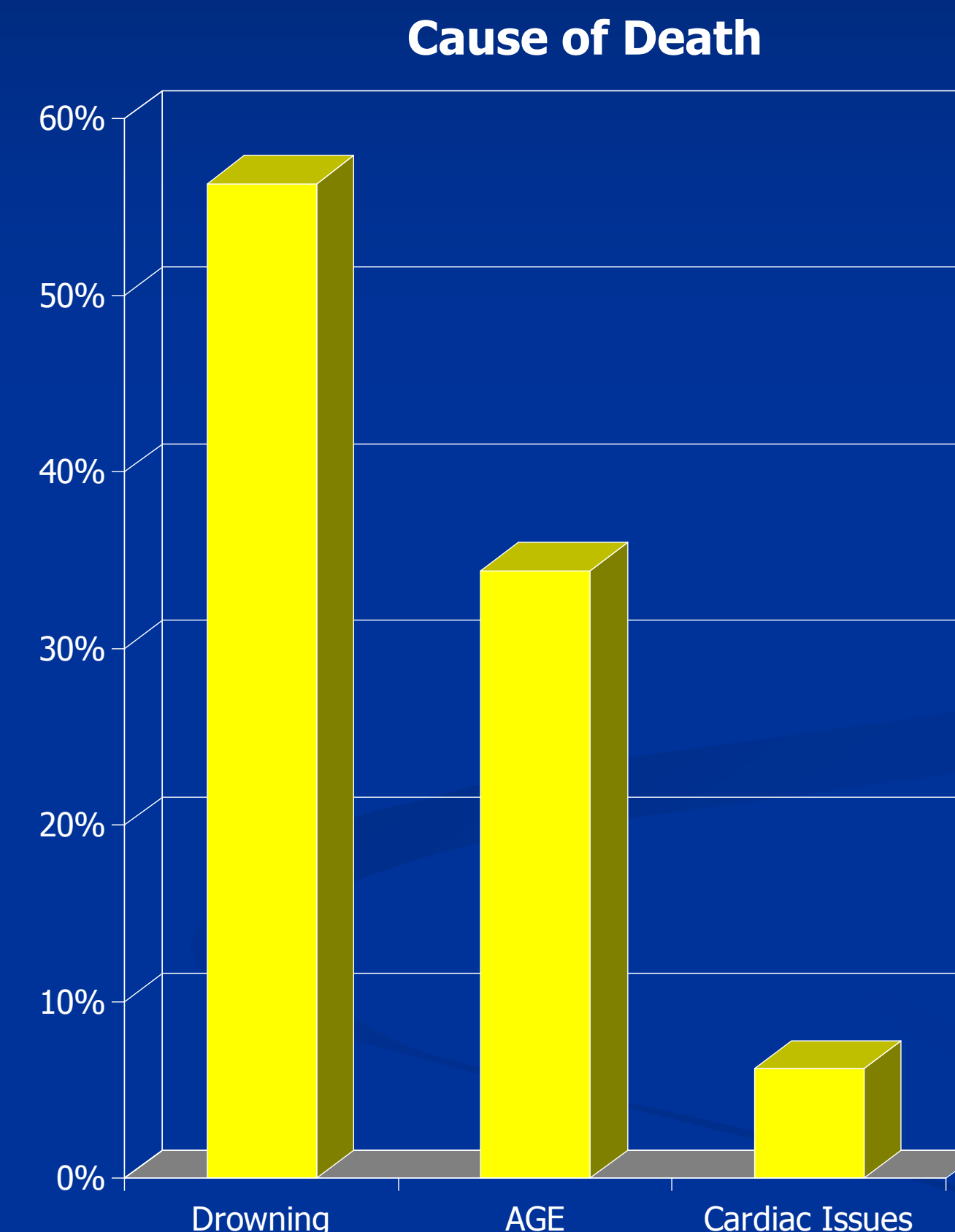
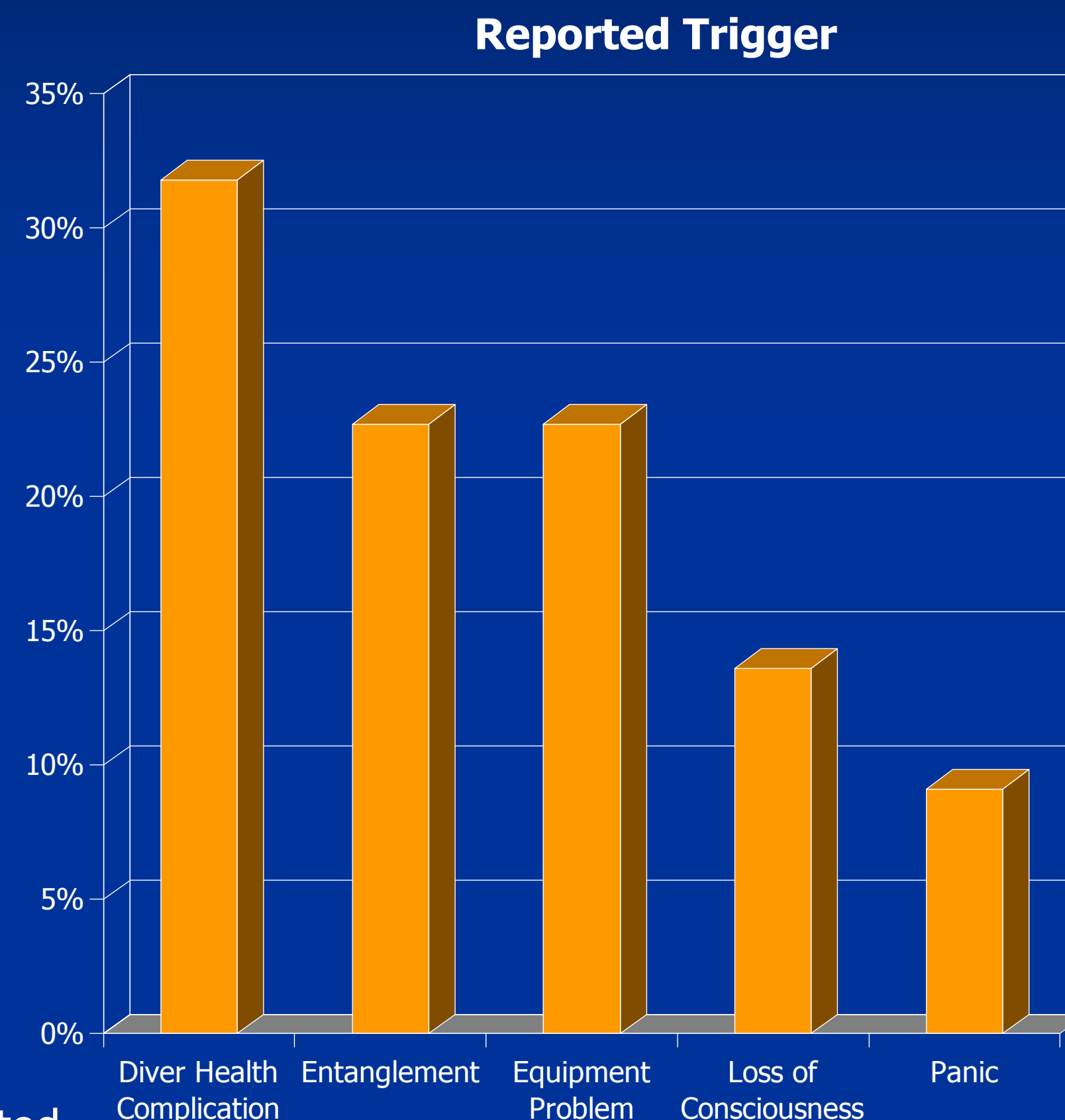
Salt-water dive fatalities are commonly reported across the globe. However little is known regarding dive fatalities in fresh water environments. The purpose of this study was to characterize fresh water dive fatalities in the Great Lakes region of the United States.

METHODS:

We reviewed dive data from Divers Alert Network (DAN) during the years of 2004-2012 involving dive fatalities in fresh water in the Great Lakes (New York, Michigan, Ohio, Wisconsin, Illinois, Minnesota, and Indiana).

RESULTS:

A total of 53 dive fatality cases were reported during the selected years. The largest number of cases came from Michigan (28.3%) and Upstate New York (17%). Reported trigger events included diver health complication (31.8%), entanglement (22.7%), equipment problem (22.7%), loss of consciousness (13.6%). and panic (9.1%). 90.6% of deaths were determined to be accidental. The cause of death was mainly attributed to drowning (56.3%) followed by air gas embolism (34.4%) and cardiac issues (6.2%).



In reviewing the diver experience, 94.9% were certified. Experience level of the divers that were involved in these fatalities had surprising results with 69% experienced (61+ dives), 6.9% advanced (41 – 60 dives), 6.9% intermediate (21 – 40 Dives), 3.4% in-experienced (6 – 20 dives), and 10.3% novice (0 – 5 dives). These dive fatalities occurred in various water environments including lakes (89.4%), rivers (5.3%), and pools (5.3%). 94.9 % of these fatalities occurred during the day and divers were considered familiar with the area (97.1%).

SUMMARY / CONCLUSIONS:

Dive fatalities in the fresh water environment in the Great Lakes region were primarily accidental and preventable causes of death. A large percent of these were a result of air gas embolism (AGE). Surprisingly these fatalities occurred in more experienced divers.