

1 Do You Know Where Your Aquarium Fish Come From?

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3 Watching colored fish in a saltwater aquarium can be relaxing. **Figuring out** where they came from, and whether they were caught in
4 a **sustainable** way, can be frustrating. The aquarium trade is a global industry with no centralized database to **track** what gets bought
5 and sold, and with no central governing body to **enforce regulations**. Collectors and exporters in places as far as the Philippines, Sri
6 Lanka, and Florida pump tens of millions of marine animals into the multimillion-dollar business each year, often with little or no
7 **oversight**. About 1,800 tropical fish species are **involved** in the international trade, says Andrew Rhyne of the New England
8 Aquarium in Boston. Hundreds more species of invertebrates, **including** live corals, are also part of this pipeline. **Removing** animals
9 from the wild can have serious **consequences** - both for their survival as a species and for their **habitat**. But the effects **vary** from
10 species to species. Green chromide fish, for instance, are quite plentiful in the wild, says Rhyne, and their "population is under no
11 threat at all from [aquarium] collection." On the other hand, species like the royal blue tang—the fish that Dory from Disney/Pixar's
12 Finding Nemo was based on—have been overcollected and are in danger in the wild. Now a campaign to stop the collection of reef
13 fish in Hawaii, led by the group Sea Shepherd, is bringing some of these **issues** to light. The organization is hoping its Reef Defense
14 **campaign** will help push through stricter state laws and regulations in Hawaii dictating the collection of reef organisms for the
15 aquarium **trade** and a possible future **ban**.

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17 The **lack** of laws that **govern** the aquarium trade are part of the problem. Regulations and enforcement vary as **widely** as the
18 geographic locales where fish are collected, says Rhyne. "Some fisheries are really well managed," he says, "like Hawaii." Australia
19 and Fiji also manage their aquarium trade activities fairly well. But the Philippines and Indonesia—which together **account for** about
20 86 percent of the fish imported into the U.S.—have some of the more poorly managed fisheries. For instance, it is illegal to use
21 cyanide—a **poison** that can stun fish and make them easier to catch—in the Philippines, says Brian Tissot, director of the marine
22 laboratory at Humboldt State University in Arcata, California. "But almost half the fish coming out of the Philippines [are] **treated**
23 **with** cyanide." Enforcement in the Philippines is left up to local municipalities, which usually lack the resources **to police** their waters.

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25 On the **demand** side, tracking animals imported into the U.S. for the aquarium trade is a demanding **task**. It is mandatory to monitor
26 imported species listed by the Convention on International Trade in Endangered Species (CITES), and there are databases **dedicated**
27 **to** those species. But the only animals on that list that are also involved in the aquarium trade are stony corals, giant clams, and
28 seahorses. **According to** a 2012 study on the U.S. marine aquarium trade, the majority of fish are grouped into a single category—
29 marine tropical fish (MATF). If researchers want to look at the species and **volume** of fish coming into the U.S., they have to find
30 specific shipping **invoices**. A further problem is the lack of data on the life-history on many of the animals—including how fast they
31 grow, how often they reproduce, and what their development from larvae to adult looks like. Having this knowledge can be **helpful** in
32 an industry that can change quickly. The 2003 movie Finding Nemo caused a "30 to 40 percent surge in demand for Nemo [a
33 clownfish] overnight," says Rhyne. **Fortunately**, clownfish were already being **cultured in captivity**, so there were enough to **satisfy**
34 the increased interest. But the regal blue tang hasn't been so lucky. "This species is hard to **raise** in captivity," Rhyne says, so "it's
35 been overcollected in Indonesia and the Philippines." These fish feed on algae, an organism that could overgrow the coral if the fish
36 didn't keep it clear. Removing regal blue tangs from a reef could leave corals in danger of being smothered.

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38 So what should people do if they're thinking about starting an aquarium? The most important thing, says Rhyne, is for them to
39 **educate themselves**. Taking the time to find **captive-bred** animals, like clownfish, is a good way to start. "If they're not **willing** to
40 educate themselves, they shouldn't have an aquarium," Rhyne says. Because "the things we buy over here have a big **impact** on coral
41 reefs."