Animal Crossing New Horizons Fish Ontology

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This ontology details some of the aquatic species in the game Animal Crossing: New Horizons (2020) available on the Nintendo Switch. The examples used are all varieties of fishes, but the game counts any animal catchable by a fishing rod as a fish. This includes turtles, frogs, and crabs. The specific samples were chosen to represent a wide range of attributes including habitat, price, size, and availability.

Fish are defined in game by three qualities. One, they are catchable with a fishing rod. Two, they appear under the “Fish” section of the Critterpedia in the game. Three, they can be donated to the museum and will appear in the aquarium section. This eliminates a few objects from the scope of the ontology. Other creatures, referred to as “bugs” in the game, are also catchable. However, these do not fit the criteria as they are caught with a net instead of a fishing rod, appear under the “Insects” category of the Critterpedia, and go into the insect section of the museum. Fish and insects are not separated based on their real world classifications. Interestingly, there are some overlaps between the two categories. For example, mitten crabs are listed under fish, while hermit crabs are listed as insects. Sea snails are listed as fish, while regular snails are insects. Garbage is another in-game object that fits some, but not all, criteria. Garbage can be caught by fishing rods, but are not listed in the Critterpedia and cannot be donated to the museum.

Fish types is a category that only contains one example, “Freshwater fish”. This class does not represent a specific object in the game, but is instead there to show an example of an inferred class. Only one example was created as a proof-of-concept, but with a larger scope it would have been nice to create more. Other examples I

considered were seasonal fish, alpine fish, and fish available for a small section during the day.

For prices I decided to use the amount of bells acquired from selling to the island shop. There are a few other ways to classify the number of bells acquired that were excluded. Player trades were excluded from consideration as players can choose to offer any price for an item. It would be useless to classify price as a value that can be anything for anyone. Another opportunity arises by selling items to villagers, but again this follows some of the issues of player selling. A final option is to sell to a non-player character named C.J. that specifically buys fish for a higher price. I decided to leave C.J. out of scope as well as he is not always available to sell to. I wanted a standardized, consistent price and the permanent island shop offered the best fit for that requirement.

Although I created classes for the main fish sizes, there were a few elements that were left out in the ontology. The six sizes (grouped into three categories in the ontology) refer to the normal-shaped fish shadows. One exception to this are the eels. Eels do not have the standard fish shape, but are elongated instead. Another out of scope condition was fins on shadows. Certain fish have a standard fish size and shape, but also show their dorsal fin above water. These individuals include the catchable sharks in the game. As these fish still have a classifiable shadow size I did not include the extra information, but it may have been useful for identification purposes.

The only out-of-scope fishing condition was the in-game weather. Although many conditions on the island affect the fish you can catch, only one fish out of the eighty available in game is catchable through unique weather conditions (the coelacanth can

only be caught in the rain). I decided to leave it out in this ontology, but would include it if I did a full ontology.

If this assignment required a greater scope I would be interested in filling out the rest of the in-game fish. I would also be interested in creating more fish types for the reasoner. As it stands, I did not want to bloat the pool so I limited the number of samples.