TAXONOMY OF FISHES OF GONZAGA, CAGAYAN, PHILIPPINES

Joyce C. Alinan, MAEd Biology
Graduate School

ABSTRACT

This study was conducted to determine the fish species found in the municipality of Gonzaga, Cagayan as to its taxonomy. Descriptive method of research supplemented by unstructured interview, field inspection, and documentary analysis were used as the main tools in the study. Two hundred seventy five respondents were taken from the fisher folks of Gonzaga, Cagayan. The results reveal that the taxonomy of fish species found in the locality in general have two classes of superclass Gnasthostoma namely class chondrichthyes with only one species and class osteichthyes with 68 families.

Keywords: *taxonomy, fishes, Gonzaga, Cagayan, fisher folks*

INTRODUCTION

Coastal ecosystems are some of the most biologically productive in the world, occupying 8% of the earth's surface, but accounting to 26% of all biological productivity (UNEP, 2002). The diversity of fish species exploded during the Devonian period (410 million to 360 million years ago) known as the Age of Fish as cited by Orr (2003). Also, he stated that hagfish and lampreys originated about 400 million years ago followed by the evolution of cartilaginous fish became diverse. True bony fish arose about 400 million years ago as well, forming three major lineages of modern fish: the lungfish, coelacanths, and ray-finned fish that include all the remaining living fish. The ancestral lungfish eventually gave rise to all vertebrates.

With this vast and confusing array of diversity, one can easily understand and follow these organisms through taxonomy. Fenner (2003) maintains that taxonomy reflects the evolutionary or phylogenic relationships of every organism since it categorizes organisms into natural units and traces the lines of evolution that have led to the diverse life forms of the present and identifies and describes similarities among existing organisms. Through taxonomy, individuals of the present generation are able to name, identify, and classify into specific groups the different kind of organisms.

The United Nations Food and Agriculture Organization (UNFAO) said that about one-third of fishes used for food come from aquaculture – another term for fish farming and believed that at this present time, fish farming is the fastest method of growing the food production industry. The recent advances in fish farming have alleviated hunger in many parts of the world. Today, the issue about fish farming has become global that even in the developing countries they resort to fish farming. Farming raised fish in industrialized countries provide relief for over fished stocks of wild fishes.

Fishes are important for several reasons. Firstly, fishes give profit to people especially those in coastal communities. Secondly, as a source of nourishment, fish is an important source of protein, which is necessary for tissue repair and can lower the risk of developing Alzheimer's disease (form of dementia), heart disease, and stroke. Furthermore, fishes are also rich in Vitamins A and B complex and minerals such as iodine, fluoride selenium and zinc. The oil of fishes contains a unique type of polysaturated fatty acids (PUFA), often called as the omega – 3

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type that is not found in significant quantities in other common foods (BFAR, 2003). The third important role of fishes to humanity is that it can be farmed resulting into large quantities making it a way to meet the world's demand for food.

Moreover, fish also serves as a source of recreational pleasure and of relaxation. People also love nature in the sense that they are fond of exploring the underwater to energize them away from the society. Aquariums also provide an intimate acquaintance with the aquatic world.

It is interesting to note; however, that while many fishes are useful, there are some fishes that may be harmful to people and should be avoided. The World Health Organization in Geneva and the Food and Agricultural Organization in Rome warned expectant mothers that fishes such as swordfish and some variety of sharks, although they are known for attacking humans, contains methyl mercury, the most toxic form of mercury. This mercury is reported to be harmful to the developing fetus; though all fishes have low level of methyl mercury but predators they are eating contain high level of methyl mercury. A stonefish, which has the most venomous toxin among vertebrate can kill human when stepped upon them. Another is the toxin of putterfish, or fugu is deadly when eaten and moray eels can bite humans when they are provoked. In the Philippines, biyang-dagat (*Gobius criniger)* has tetrodoxin, which may cause paralysis.

Philippine marine waters cover a total area of 1,666,300 sq. km. that is five time more than the total land area of the country wherein it consist of more than 2, 400 species of fish though only 65 varieties are presently considered of commercial value by the country's Bureau of Fisheries and Aquatic Resources (BFAR). Moreover, periodic flow in Philippine waters promotes diverse and rich fish production.

The Cagayan Province, particularly the municipality of Gonzaga has vast source of rice, corn, and other agricultural products, has rolling hills for pasture of livestock, has virgin forests where high quality logs and rattan are gathered and has coastal regions where abundant fish thrives. This is the reason why the major forms of livelihood are fishing and farming. While studies have been done on both livelihoods, there are more of the latter than of the former.

Moved by the fact that the researcher loves nature and her fisher folks, this study was conducted with the hope that, it will somehow influence the fisher folks to work with fishes and other aquatic resources not just as a source of income but also as a means to know them better and discover their other potentials. In so doing, fisher folks shall be offered new doors or opportunities in so far as fishing and fish production are concerned.

METHODS

Since the study is concerned with the classification and the behavioral characteristics of fishes in Gonzaga, Cagayan, the study made use of both qualitative and quantitative types of research. The municipality of Gonzaga has a total land area of 56, 743 hectares and a total coastal area of 480 square kilometers. It is composed of 25 barangays where 10 of these belong to the coastal region. The study was conducted in five selected coastal barangays of Gonzaga, namely: Casitan, Batangan, Ipil, Sta. Cruz, and San Jose.The respondents of the study were the fisher folks of Gonzaga, Cagayan particularly in the coastal barangays of Casitan, Batangan, Ipil, Sta. Cruz, and San Jose.

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Table 1. Distribution of the Respondents

Name of Barangay	Frequency	Percentage
Casitan	15	5.54
Batangan	206	75.06
Ipil	22	7.85
Sta. Cruz	7	2.54
San Jose	25	9.01
Grand Total	275	100.00

The questionnaire was the primary research instrument in gathering the needed data and information of the study. To provide a better understanding of the instrument, the Ilocano translation was made to adapt to the fisher folk's dialects.

Unstructured interview was also used to corroborate answers to questions that need additional support and also to get maximum information on the knowledge and ideas of the respondents about the subject of the study. It was conducted in a conversational approach to both respondents and experts in the field of Ichthyology.

Field inspection was likewise done for five times in Barangay Batangan and twice in the other four barangays to gather the practices of the fisher folks. And finally, documentary analysis substantiated data gathered regarding the taxonomy of fishes of Gonzaga, Cagayan.

RESULTS AND DISCUSSION

Table 1. Taxonomy of Fishes Found in Gonzaga, Cagayan
(Superclass Gnasthostoma)

Local Name	**Scientific Name**	**English Name**	**Class**	**Family**
Pating	Charcharainus sp.	Shark	Chondrichthyes	Charchariniformes
Labahita	Acanthurus dussumieri	Eyestripe Surgeonfish	Osteichthyes	Acanthuridae
Ched/Chud	Acanthurus linneatus	Lined Surgeonfish	Osteichthyes	Acanthuridae
Kibo	Anguilla australis	Shortfin Eel	Osteichthyes	Anguillidae
Igat	Anguilla Bicolor	Indonesian Shortfin Eel	Osteichthyes	Anguillidae
Kurilaw	Arius thalassinus	-	Osteichthyes	tidaeAriidae
Kurukur	Aulostimus chinensis	Chinese Trumpetfish	Osteichthyes	Aulostomidae
Ampapagot	Abalistes stellaris	Starry Triggerfish	Osteichthyes	Balistidae
Siriw	Strongylura strongylura	Spottail Needlefish	Osteichthyes	Belonidae
Babayu	Tylosurus crocodilus	Hound Needlefish	Osteichthyes	Belonidae
Kappal	Engrprosopon grandisquama	Largescale Flounder	Osteichthyes	Bothidae
Balaki	Caesio cuning	Redbelly Yellowtail Fusilier	Osteichthyes	Caesionidae
Langugan	Alectiis ciliaris	African	Osteichthyes	Carangidae

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		Pompano		
Ilaad	Alectis indicus	Indian Threadfish	Osteichthyes	Carangidae
Mangara-mang	Alepes djedaba	Shrimp Scad	Osteichthyes	Carangidae
Dalagang Bukid	Caesio cuning	Redbelly Yellowtail Fusilier	Osteichthyes	Carangidae
Layas	Alepes melanoptera	Blackfin Scad	Osteichthyes	Carangidae
Maria-maria	Alepes vari	Herring Scad	Osteichthyes	Carangidae
Ampapa-kul	Balistoides conspicillum	Clown Triggerfish	Osteichthyes	Carangidae
Papakul	Pseudobalistes Flavimarginus	Yellowface Triggerface	Osteichthyes	Carangidae
Tarakitok (Batirtir)	Carangoides malabaricus	Malabar Trevalley	Osteichthyes	Carangidae
Tarakito (Langugan)	Caranx lugubris	Black Jack	Osteichthyes	Carangidae
Bakulaw	Carnx sexfaciatus	Bigeye Trevalley	Osteichthyes	Carangidae
Mataan	Decapterus kurroides	Redtail Scad	Osteichthyes	Carangidae
Baraniti	Decapterus macarellus	Macherel Scad	Osteichthyes	Carangidae
Bumra	Decapterus macrosoma	Shortfin Scad	Osteichthyes	Carangidae
Salmon	Elagatis bipinnulata	Rainbow Runner	Osteichthyes	Carangidae
Pampano	Parastromateus niger	Black Pomfret	Osteichthyes	Carangidae
Saleng-saleng	Scomberoides lysan	Double Spotted Queenfish	Osteichthyes	Carangidae
Busangu	Seriolina nigrofaciata	Blackban-ded Trevally	Osteichthyes	Carangidae
Kulangi	Tranchinotus blochii	Snubnose Pompano	Osteichthyes	Carangidae
Sikkaran	Atule mate	Yellowtail Scad	Osteichthyes	Carangidae
Tarakitok (Katayan)	Carangoides chrysophyrs	Longnose Trevalley	Osteichthyes	Carangidae
Kapiged	Chaetodonc bennetti	Bluelashed Butterfly Fish	Osteichthyes	Chaetodontidae
Kulibabban	Chaetodon capistratus	Foureye Butterfly Fish	Osteichthyes	Chaetodontidae
Kulubang-bang	Chaetodon occelatus	Spotfin Butterfly Fish	Osteichthyes	Chaetodontidae
Kapiged	Chaetodon oxycephalus	Spot-nape Butterfly Fish	Osteichthyes	Chaetodontidae
Malaga	Chaetodon trifasciatus	Melon Butterfly Fish	Osteichthyes	Chaetodontidae
Bag-ga	Forcipiger longirostris	Longnose Butterfly Fish	Osteichthyes	Chaetodontidae
Bangus	Chanos chanos	Milkfish	Osteichthyes	Chanidae
Baliga	Chirocentrus dorab	Dorab Wolf Herring	Osteichthyes	Chirocentridae
Kabasi	Anodontosto-ma chacunda	Chcunda Gizzard Shad	Osteichthyes	Clupeidae
Aber	Clupeoides borneensis	Borneo River Sprat	Osteichthyes	Clupeidae

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Galong-gong	Decapterus muruadisi	Japanese Scad	Osteichthyes	Clupeidae
Tul-wan	Lates calcalifer	Giant Seaperch	Osteichthyes	Centropomidae
Kurapu	Psammoperca waigiensis	Waigue Perch	Osteichthyes	Centropomidae
Tamban	Sardinella fimbriata	Fringescale Sardinella	Osteichthyes	Centropomidae
Bilis	Sardinella gibbosa	Goldstripe Sardinella	Osteichthyes	Centropomidae
Tamban	Sardinella longiceps	Indian Oil Sardine	Osteichthyes	Centropomidae
Lao-lao	Sardinella melanura	Blacktip Sardinella	Osteichthyes	Centropomidae
Tur-nus	Spratelloides delicatulus	Delicate Round Herring	Osteichthyes	Centropomidae
Buwan-buwan	Spratelloudes gracilis	Silver-striped Round Herring	Osteichthyes	Centropomidae
Pan-tranco	Coryphaena equiselis	Pompano Dolphinfish	Osteichthyes	Coryphaenidae
Dorado	Coryphaena hippurus	Common Dolphinfish	Osteichthyes	Coryphaenidae
Dadali	Cynoglossus bilineatus	Fourlined Tonguesole	Osteichthyes	Cynoglossidae
Balid-bid	Dussumierta acuta	Rainbow Sardine	Osteichthyes	Cynoglossidae
Mamata	Pellona ditchela	Indian Pellona	Osteichthyes	Cynoglossidae
Lapad	Sardinella albella	White Sardinella	Osteichthyes	Cynoglossidae
Bid-bid	Elops saurus	Ladyfish	Osteichthyes	Elopidae
Bayong	Platax orbicularis	Batfish	Osteichthyes	Ephippidae
Vulador	Platax pinnatus	Dusky batfish	Osteichthyes	Ephippidae
Munamon	Encrasicholina Heteroloba	Shorthaed anchovy	Osteichthyes	Engraulide
Bumra	Stolephorus baganensis	Bagan anchovy	Osteichthyes	Engraulide
Biala	Thryssa kammalensis	Kammal thryssa	Osteichthyes	Engraulide
Kugaw	Thyrssa mystax	Moustached thryssa	Osteichthyes	Engraulide
Borador	Cheilopogon cynopterus	Margined flying fish	Osteichthyes	Exocoetidae
Ararali	Cynoglossus puncticeps	Speckled tongusole	Osteichthyes	Exocoetidae
Pagi	Dasyatis kuhlii	Blue-spotted stingray	Osteichthyes	Dasyatidae
Busisi	Diodon holocanthus	Long-spine porcupine fish	Osteichthyes	Diondontidae
Bayang-bayang	Depane Africana	African sicklefish	Osteichthyes	Drepanidae
Bibigan	Hapalogenys nitens	Javelin fish	Osteichthyes	Haemulidae
Taguk-guk	Pomadasys argenteus	Silver grunt	Osteichthyes	Haemulidae
Tabal-tabal	Pomadasys maculatus	Saddle grunt	Osteichthyes	Haemulidae
Siriw	Hemiramphus far	Black-barred halfbeak	Osteichthyes	Hemiramphidae

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Susay	Hyporamphus dussumieri	Dussumier's halfbeak	Osteichthyes	Hemiramphidae
Bagsang	Myripristis jacobus	Blackbar soldierfish	Osteichthyes	Holocentridae
Sugac	Myripristis melanosticta	Splendid squirrelfish	Osteichthyes	Holocentridae
Kurukur	Fistularia petimba	Red cornetfish	Osteichthyes	Fistulariidae
Makalapas	Gerres argyreus	Common mojarra	Osteichthyes	Gerreidae
Ekoran	Gerres abbreviates	Deep-bodied mojarra	Osteichthyes	Gerreidae
Batuan	Gerres oyena	Ommon silver-biddy	Osteichthyes	Gerreidae
Labayan	Anampses caeruleo-punctatus	Bluespotted tamarin	Osteichthyes	Labridae
Ipus-ipus	Cheilinus celebicus	Celebes wrasse	Osteichthyes	Labridae
Mul-mul	Coris aygula	Clown coris	Osteichthyes	Labridae
Barugudun	Halichoeres argus	Argus wrasse	Osteichthyes	Labridae
Lupet	Choerodnanchorago	Yellow-cheek tuskfish	Osteichthyes	Labridae
Damas	Lactarius lactarius	False trevalley	Osteichthyes	Lactariidae
Sapsap	Gazza achlamys	Oragefin ponyfish	Osteichthyes	Leiognathidae
Bagsang	Sargocentron diadema	Cown squirrelfish	Osteichthyes	Leiognathidae
Mantarompa	Istiphorus platypterus	Indo-pacific sailfish	Osteichthyes	Istiophoridae
Dol-lakak	Makaira indica	Black marlin	Osteichthyes	Istiophoridae
Dirpak	Khyphosus vaigiensis	Brassy chub	Osteichthyes	Kyphosidae
Sapingan	Lethrinus amboinensis	Ambon emperor	Osteichthyes	Lethrinidae
Gambayan	Lethrinus harak	Thumbprint emperor	Osteichthyes	Lethrinidae
Bagangan	Lethrinus microdon	Smalltooth emperor	Osteichthyes	Lethrinidae
Kaddiikuran	Gymmocranius elongates	Forktail large-eye bream	Osteichthyes	Lethrinidae
Babarat	Lethrinus lentjan	Pink ear emperor	Osteichthyes	Lethrinidae
During	Aprion virescens	Green jobfish	Osteichthyes	Lutjanidae
Margay	Lutjanus argentima-culatus	Mangrove red snapper	Osteichthyes	Lutjanidae
Labungan	Lutjanus biguttatus	Two-spot banded snapper	Osteichthyes	Lutjanidae
Sap-sap	Gazza minuta	Toothpony	Osteichthyes	Lutjanidae
Lawayan	Leiognathus bindus	Orangefin ponyfish	Osteichthyes	Lutjanidae
Talibukno	Leiognahus equulus	Common ponyfish	Osteichthyes	Lutjanidae
Lapu-lapu	Ltjanus sanguinues	Humphead snapper	Osteichthyes	Lutjanidae
Dayang-	Lutjanus vitta	Brownstripe	Osteichthyes	Lutjanidae

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dayang		red snapper		
Omi	Macolor niger	Black and white snapper	Osteichthyes	Lutjanidae
Manul	Pinjalo pinjalo	Pinjalo	Osteichthyes	Lutjanidae
Angrat	Lutjanus gibbus	Humpback snapper	Osteichthyes	Lutjanidae
Pantranco	Braciostegus argentatus	Tile fish	Osteichthyes	Malacanthidae
Bulan-bulan	Megalops cyprinoides	Indo-pacific tarpon	Osteichthyes	Megalopidae
Cadiz	Mene maculate	Moonfish	Osteichthyes	Menidae
Lul-luran	Liza ceremensis	Ceram mullet	Osteichthyes	Mugilidae
Bambangun	Lutjanus bohar	Two-spot red snapper	Osteichthyes	Mugilidae
Timbungan	Lutjanus decesatus	Checkered snapper	Osteichthyes	Mugilidae
Sidingan	Lutjanus fulviflamma	Blackspot snapper	Osteichthyes	Mugilidae
Paswan	Lutjanus johnii	John's snapper	Osteichthyes	Mugilidae
Maya-maya	Lutjanus malabaricus	Malabar blood snapper	Osteichthyes	Mugilidae
Siksik	Lutjanus monostigma	One-spot snapper	Osteichthyes	Mugilidae
Kuraratu	Congresox talabon	Yellow pike conger	Osteichthyes	Muraenesoci-dae
Bircaca	Echidna nebulosa	Snowflake moray	Osteichthyes	Muraenidae
Hagmang	Gymnothorax monocharus	Drab moray	Osteichthyes	Muraenidae
Kiwo na bevay	Gymnothorax zonipectis	Barredfin moray	Osteichthyes	Muraenidae
Bisugo	Nemipterus bathybius	Yellowbelly thread finbream	Osteichthyes	Nemipteridae
Bakag	Nemipterus japonicas	Japanese threadfin bream	Osteichthyes	Nemipteridae
Porong	Mugil cephalus	Flathead gray mullet	Osteichthyes	Nemipteridae
Ampapaquet	Aluterus monocerus	Unicorn leather jacket	Osteichthyes	Monacanthidae
Balaki	Mulloidchthys vanicolensis	Yellowfin goatfish	Osteichthyes	Mullidae
Tabarara	Eleutheronema tetradacylum	Fourfinger threadfin	Osteichthyes	Polynemidae
Kugaw	Polydactylus plebeius	Striped threadfin	Osteichthyes	Polynemidae
Malaga	Apolemichthys trimaculatus	Threspot angelfish	Osteichthyes	Pomacanthidae
Bagsang ti Kadillian	Priacanthus macracnthus	Red big eye	Osteichthyes	Priacanthidae
Bukaw	Priacanthus tayenus	Purple-spotted big eye	Osteichthyes	Priacanthidae
Dal-li	Psettodes belcheri	Spotatil spiny turbot	Osteichthyes	Psettododae
Dadali	Psettodes erumei	Indian spiny	Osteichthyes	Psettododae

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		turbot		
Lagaw	Nemipterus nematophorus	Doudlewhip threadfin bream	Osteichthyes	Psettododae
Buruba	Scolopsis auratus	Yellowstripe mono-clebream	Osteichthyes	Psettododae
Bimmaka	Ostracion cubucus	Yellow boxfish	Osteichthyes	Ostraciidae
Buya-buya	Platycephaus indicus	Indian flathead	Osteichthyes	Platycephalidae
Anito	Plotosus canius	Gray eel catfish	Osteichthyes	Plotosidae
Girgiran	Johnius belangerii	Belangers croaker	Osteichthyes	Sciaenidae
Tuel	Johnius carutta	Karut croaker	Osteichthyes	Sciaenidae
Simu	Johnius vogleri	Sharptooth hammer croaker	Osteichthyes	Sciaenidae
Tambur	Johnieops sina	Sin croaker	Osteichthyes	Sciaenidae
Magalaw	Otolithes ruber	Tiger-toothed croaker	Osteichthyes	Sciaenidae
Tuel	Jognius dussumieri	Bearded croaker	Osteichthyes	Sciaenidae
Tangi	Auxis rochei	Bullet tuna	Osteichthyes	Scombridae
Mul-mul	Colotmus spinidens	Spinytooth parrot fish	Osteichthyes	Scaridae
Kapiged	Scatophagus argus	Spotted scat	Osteichthyes	Scatophagidae
Kafigak	Scatophagus tetrachanthus	Scatty	Osteichthyes	Scatophagidae
Kurapu	Anyperodon leucogrammicus	Slender grouper	Osteichthyes	Serranidae
Lapu-lapu	Cephalopholis leopardus	Leopard hind	Osteichthyes	Serranidae
Pure lapu	Epinephelus tauvina	Greasy grouper	Osteichthyes	Serranidae
Red lapu	Plectropomus leopardus	Leopard coral grouper	Osteichthyes	Serranidae
Barangan	Siganus canaliculatus	White-spotted spinefoot	Osteichthyes	Siganidae
Malaga	Siganus corallinus	Rabbitfish	Osteichthyes	Siganidae
Malaga	Sianus corallines	Goldlined spinefoot	Osteichthyes	Siganidae
Usu-us	Sillago argentifasciata	Silver banded sillago	Osteichthyes	Sillaginidae
Tangi	Katsuwonus pelamis	Skipjack tuna	Osteichthyes	Sillaginidae
Kabalyas	Rastrelliger brachysoma	Short mackerel	Osteichthyes	Sillaginidae
Mataan	Scomber australasicus	Blue mackerel	Osteichthyes	Sillaginidae
Tambakul	Thunnus albacares	Yellowfin tuna	Osteichthyes	Sillaginidae
Tulingan	Auxis thazard	Frigate tuna	Osteichthyes	Sillaginidae
Bayokbokan	Acanthocybium solandri	Wahoo	Osteichthyes	Sillaginidae
Alumahan dakkel	Rastrelliger kanagurta	Indian mackerel	Osteichthyes	Sillaginidae
Tuna	Thunns obesus	Bigeye tuna	Osteichthyes	Sillaginidae
Dingas	Pelates quadrilineatus	Fourlined terapon	Osteichthyes	Teraponidae
Taruru	Pelates sexlineatus	-	Osteichthyes	Teraponidae

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Banlaongan	Terapon jarbua	Jarbua terapon	Osteichthyes	Teraponidae
Gonggong	Tarpon theraps	Largescaled terapon	Osteichthyes	Teraponidae
Bagaong	Terapon puta	Small scaled terapon	Osteichthyes	Teraponidae
Dadali	Solea ovata	Ovate sole	Osteichthyes	Soleidae
Bayatongan	Argyrops spinifier	King soldierbeam	Osteichthyes	Sparidae
Babayuti	Sphyraena barracuda	Great barracuda	Osteichthyes	Sphyraenidae
Pampano	Pampus argenteus	Silver pomfret	Osteichthyes	Stromateidae
Butiti	Canthigaster bennetti	Bennett's sharpnose puffer	Osteichthyes	Tertraodotidae
Papakul	Triacanthus biaculeatus	Shortnosed tripod fish	Osteichthyes	Triacanthidae
Bulong-unas	Trichiurus lepturus	Largehead hairtail	Osteichthyes	Trichiuridae
Al-alibut	Saurida elongate	Slender lizardfish	Osteichthyes	Synodontidae
Dalag baybay	Saurida gracilis	Gracile lizardfish	Osteichthyes	Synodontidae

The table presents the different species of fishes found in the locality of Gonzaga, Cagayan. It can be revealed in the result that there are 180 kinds of fishes in the municipality of Gonzaga. The taxonomy of fishes found in Gonzaga, Cagayan in general has two classes of Superclass Gnasthostoma which are (1) class chondrichthyes where it has only one fish species of the Family and Charchariniformes, and (2) class osteihthyes which has 68 families. Among the different fishes in the municipality, pating, mataan, balaki, Malaga, bilis, cadiz, tarakitok, biala, tangi, and kablyas are the most common available in the municipality.

Table 2. Fishing Practices which may Affect Fish Resources in the Locality

Fishing Practices	Frequency	Percentage
Use of cyanide	197	71.64
Use of dynamite	208	75.64
Electro-fishing	198	72.00
Danish seine(buli-buli)	228	82.91
Fine mesh net	176	64.00
Fishing of small fish	85	30.91
Use of trawls	77	28.00

The table reflects that majority of the fisher folks believe that using of Danis seine or "buli-buli" can greatly affect the fish resources of the locality. Danish seine or "buli-buli" is a large scale type of trawl effective for herding demrsal and semi-pelagic fishes that even the juvenile fishes are being caught. Moreover, it is also observed that illegal fishing such as the use of cyanide, use of dynamite and electrofishing will affect resources in the locality as perceived by the fisher folks. The results of the study support Garcia's (1997) explaination that the use pf cyanide may cause coastal degradation. Further, the minute amount of cyanide is easily metabolized by the fish that ingests it an it is no longer passed to humans.

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Table 3. Practices of the Fisher Folks that may contribute to the Conservation and Protection of Fish Resources

Practice	Frequency	Percentage
Prohibiting the use of any forms of illegal fishing	242	88.00
Prohibiting the operation of commercial trawls, Danish seine, and fine mesh net	190	69.09
Establishing fish refugees and sanctuaries	135	49.09
Establishing closed season	128	46.55
Conserving the coral reef	211	76.73
Training programs conducted by the BFAR/LGU on fish management	229	83.27

The table shows that majority of the fisher folks believe that prohibiting the use of any form of illegal fishing may contribute to the conservation and preservation of the gfish resources. Having said so, other conservation and preservation measures are likely to be welcomed by the fisher folks in the locality.

It is also noteworthy that most of the respondnets agree that conserving the coral reef is also a practice meant to conserve and preserve fish resources. Garcia (1997) maintains that coral reefs serve as physical buffers to waves and as habitat, feeding and spawning grounds of 3,000 species.

CONCLUSION

The municipality of Gonzaga, Cagayan is rich with different fish species.

The fish species found in Gonzaga, Cagayan have two classes of superclass Gnasthostoma namely class chondrichthyes with only one species and class osteichthyes with 68 families.

The use of Danis seine or “buli-buli,” cyanide, dynamite, and electrofishing greatly affect the fish resources in the municipality.

Prohibiting the use of any form of illegal fishing, joining training programs conducted by the BFAR/LGR on fish management, conserving the coral reefs, and establishing fish refugees and sanctuaries including implementing closed season may greatly help contribute to the conservation and preservation of fish resources.

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