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Coastal Univalve Class: Gastropoda; Cuvier, 1795 of Ayoke Island, North Eastern Mindanao, Philippines

Ana Marie T. Acevedo

North Eastern Mindanao State University
Cantilan, Surigao del Sur, North Eastern Mindanao Philippines

Virginia B. Gruyal

North Eastern Mindanao State University
Cantilan, Surigao del Sur, North Eastern Mindanao Philippines

Abstract

Mollusks are a diverse and ecologically vital group of animals, often serving as indicators of ecosystem health. This study aimed to create a field guide for univalve mollusks on Ayoke Island in Cantilan, Surigao del Sur, Philippines. Sampling methods included opportunistic hand-picking and market sampling. Collected samples underwent preliminary identification on-site and were later confirmed in a biology laboratory at North Eastern University, using various resources and expert consultations. A total of 115 mollusk species from 57 genera, divided into 28 families, were identified. Notably, the Conidae family had the most species (20), followed by Cypraeidae (16) and Strombidae (10). The Conus genus within Conidae exhibited the highest diversity with 20 species. Of these species, 88 were uncommon, 26 rare, and only one, *Monetaria moneta*, fairly common. Ayoke Island demonstrated remarkable gastropod diversity, reflecting its rich marine life. The local community valued marine univalves for their ecosystem contributions. However, challenges in their management and preservation persisted due to non-compliance with regulations. Careful handling and harvesting, following guidelines, are essential for Ayoke Island's marine ecosystem's well-being.

Keywords: Field Guide, ecological indicators, environmental health, biodiversity

Introduction

The Philippines, being an archipelago, boasts rich aquatic resources, particularly mollusks, which have been a subject of ongoing biodiversity research (Galenzoga, 2016). Mollusks, characterized by their soft bodies, hold significance as a local food source (Barker, 2001). They are a highly diverse and abundant group, thriving in aquatic and terrestrial environments. Mollusks play a pivotal role in ecosystem engineering by shaping aquatic environments, serving as habitats, offering protection, and providing sustenance to various other species. Globally, they have gained economic importance and historical significance to human societies. Their calcareous nature and extensive fossil records also contribute valuable insights into past climate and oceanic changes, aiding our understanding of future predictions (Fortunato, 2015). Estimates of marine mollusk numbers vary widely due to incomplete surveys.

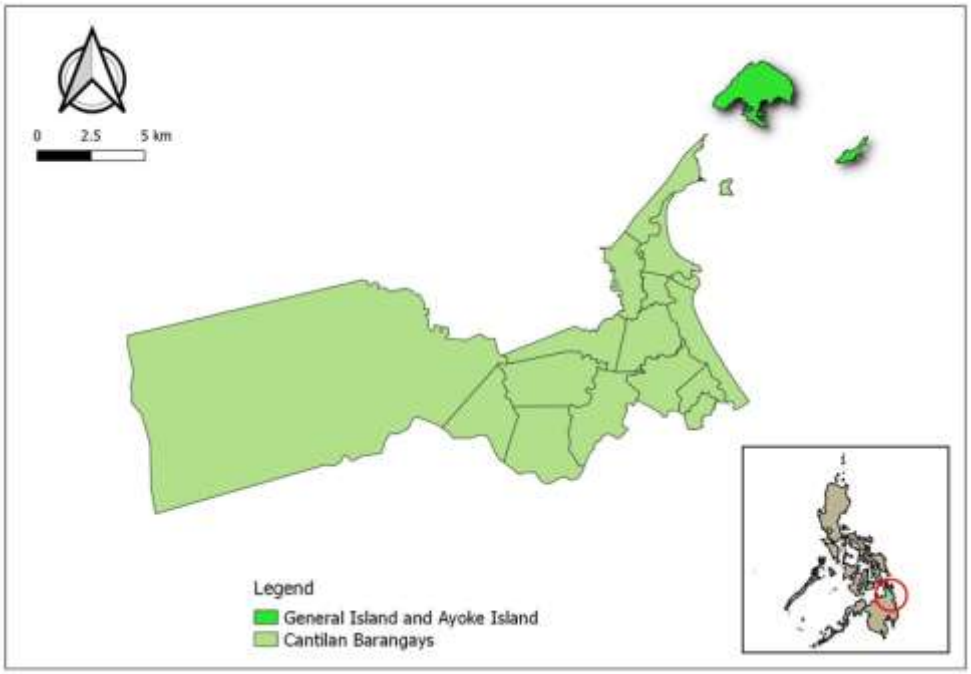
Vallejo (2001) noted in his study on the Biogeography of Molluscs in the Philippines that research on mollusk diversity primarily centered on regional scales based on ocean basins rather than local scales. Many studies of Philippine mollusk species relied on collections by foreign researchers, such as those by Hugh Cummings from 1836 to 1840 (Batomalaque et al., 2010). Manzo et al. (2014) delved into mollusk diversity and variations along the shorelines of Luzon and Visayas, specifically in Tubattaha Reef National Marine Park (Palawan) and on the shoreline of Grande Island, Subic Bay in Luzon (Batomalaque et al., 2010). However, the current status of mollusk diversity in the Philippines, particularly on Mindanao Island, remains understudied, with limited research on the biodiversity of mollusk species in southern Mindanao (Jumawan et al., 2015).

Ayoke Island, part of the Isla Heneral group of islands off the coast of Cantilan, Surigao del Sur, Mindanao, sits along the Pacific Ocean's edge. While marine univalves abound in this area, they face vulnerability due to climate change and other environmental stressors, including human activities. Documenting their presence and diversity necessitates the development of a field guide, serving as a vital tool to support their conservation efforts and record their existence in the face of these challenges. Consequently, this study was initiated to address this need.

Materials and Methods

The Study Site

The research was conducted on Ayoke Island in Cantilan, Surigao del Sur. It is situated on the Pacific Ocean's right coast (Figure 1).



Source: Google Map

Figure 1. Location of the study site.

Sampling Design

We employed purposive sampling in this study, establishing three designated sampling stations. Within these stations, we gathered specimens through gleaning and hand-picking. A selective approach was taken, focusing on the collection of three to five samples for each specific specimen. These samples, whether live or deceased, were then transported to the biology laboratory at North Eastern Mindanao State University for subsequent identification and verification. To facilitate preservation, the specimens were carefully placed in containers treated with 70% ethyl alcohol.

Collection and Identification of Samples

In this study, our focus was solely on univalve marine species. We sourced our samples through gleaning and hand-picking activities conducted within the three established sampling stations, as well as by obtaining specimens from the local residents' collections.

Upon collection, each specimen was meticulously photographed on-site using a Nikon DSLR camera. Preliminary identification efforts were undertaken on-site with the assistance of knowledgeable gleaners present in the area.

The collected mollusks were then identified to the highest possible taxonomic level, including genus and species, primarily relying on morphological

characteristics as described in the taxonomic reference by Abbott and Dance (2000).

Further, in-depth identification was carried out within the laboratory setting. This process involved a thorough examination of the specimens' morphological features, employing a variety of resources such as identification keys, monographs, compendiums, books, online references, and hard copy references.

Additionally, we engaged in personal communication with experts in the field to enhance our identification accuracy. Once identified, these specimens were meticulously processed and securely stored in a cabinet, ensuring their preservation for future reference and research purposes.

Table 1. Scale for relative abundance in relation to number of specimens found during sampling time.

Scale	Relative abundance	Number of Specimens found during the period
1	Rare	1 to 4
2	Uncommon	5 to 8
3	Occasional	9 to 20
4	Fairly common	21 to 30
5	Common	31 to 99
6	Abundant	100 or more

For the preparation of the field guide, we employed a systematic approach. Each specimen was meticulously photographed in its natural habitat using a Nikon DSLR camera. The field guide was then meticulously crafted to encompass comprehensive information, including taxonomic classification, going as far as the species level. Furthermore, a detailed description of each identified species was incorporated into the guide.

Results

We successfully identified a total of 115 species, which were distributed across fifty-seven genera. Among these genera, there were also twenty-eight families represented. Notably, the Family Conidae (Fleming, 1822) stood out with the highest species count, encompassing twenty (20) different species. Following closely, the Family Cypraeidae (Rafinesque, 1815) boasted sixteen (16) species, while the Family Strombidae (Rafinesque, 1815) comprised ten (10) species. Within the Conidae family, the genus Conus displayed the greatest diversity with a remarkable total of twenty (20) species, making it the most species-rich among the fifty-seven genera (Table 2).

Table 2. List and Distribution of Family, Genus and Species Composition of Class Gastropod: Cuvier, 1795 of Ayoke Island

No.	Family	No.	Genus	No.	Species
1	Bullidae	1	Bulla	1	*Bulla ampulla* Linnaeus, 1758
2	Bursidae	2	Tutufa	2	*Tutufa rubeta* (Linnaeus, 1758)
3	Cassidae	3	Casmaria	3	*Casmaria erinacea erinacea* forma vibex (Linnaeus, 1758)
				4	*Casmaria erinacea erinacea* forma vibex (Linnaeus, 1758)
		4	Phalium	5	*Phalium bandatum bandatum* Perry, 1811
		5	Cassis	6	*Cassis cornuta* (Linnaeus, 1758)
4	Cerithiidae	6	Cerithium	7	*Cerithium lutosum* Menke, 1828
				8	*Cerithium nodulosum* Bruguiere, 1792
				9	*Cerithium punctatum* Bruguiere, 1789
		7	Rhinoclavis	10	*Rhinoclavis sinensis* (Gmelin, 1791)
5	Columbellidae	8	Pictocolumbella	11	*Pictocolumbella ocellata* Link, 1807
				12	*Pictocolumbella ocellata* Link, 1807
6	Conidae	9	Conus	13	*Conus sanguinolentus* Quoy & Gaimard, 1834
				14	*Conus spectrum* Linnaeus, 1758
				15	*Conus lividus* Hwass, 1792
				16	*Conus striatus* Linnaeus, 1758
				17	*Conus imperialis imperialis* Linnaeus, 1758
				18	*Conus thalassiarchus* G. B. Sowerby I, 1834
				19	*Conus leopardus* (Roding, 1798)
				20	*Conus chaldaeus* (Röding, 1798)
				21	*Conus distans* Bruguiere,1792
				22	*Conus quercinus* Lightfoot, 1786
				23	*Conus litteratus* Linnaeus,1758
				24	*Conus lienardi* Biernardi et Crosse, 1861
				25	*Conus cumingii* Reeve, 1848
				26	*Conus cernicus* G.B. Sowerby I, 1883
				27	*Conus vitulinus* Hwass, 1792
				28	*Conus ebraeus* Linnaeus,1758
				29	*Conus coelinae* Croose, 1858
				30	*Conus generalis generalis* Linnaeus,1767
				31	*Conus marmoreus* Linnaeus, 1758
				32	*Conus miles* Linnaeus, 1758
7	Cymatiidae	10	Distorsio	33	*Distorsio anus* (Linnaeus,1758)
				34	*Distorsio anus* (Linnaeus,1758
		11	Lotoria	35	*Lotoria lotoria* (Linnaeus, 1758)
8	Cypraeidae	12	Cypraea	36	*Cypraea tigris Linnaeus, 1758*
		13	Chelycypraea	37	*Chelycypraea testudinaria* (Linnaeus, 1758)

		14	Talparia	38	*Talparia talpa* (Linnaeus, 1758)
				39	*Talparia exusta* (J. E. Gray in G. B. Sowerby I, 1832)
		15	Leporicypraea	40	*Leporicypraea mappa mappa* (Linnaeus, 1758)
		16	Arestorides	41	*Arestorides argus* (Linnaeus, 1758)
				42	*Arestorides argus* (Linnaeus, 1758)
		17	Erosaria	43	*Erosaria erosa* (Linnaeus, 1758)
		18	Lyncina	44	*Lyncina lynx* (Linnaeus, 1758)
				45	*Lyncina vitellus* (Linnaeus, 1758)
				46	*Lyncina aurantium* (Gmelin, 1791)
				47	*Lyncina carneola* (Linnaeus, 1758)
		19	Ovatipsa	48	*Ovatipsa chinensis* (Gmelin, 1791)
		20	Monetaria	49	*Monetaria moneta* (Linnaeus, 1758)
				50	*Monetaria caputserpentis* (Linnaeus, 1758)
		21	Mauritiana	51	*Mauritiana mauritiana* (Linnaeus, 1758)
9	Elloibidae	22	Melampus	52	*Melampus semisulcatus* Mousson, 1869
				53	*Melampus fasciatus* Deshayes, 1830
10	Fasciolariidae	23	Pleuroploca	54	*Pleuroploca trapezium* (Linnaeus, 1758)
11	Fissurellidae	24	Hemitoma	55	*Hemitoma octoradiata* Gmelin ,1791
12	Haliotidae	25	Haliotis	56	*Haliotis asinina* Linnaeus, 1758
13	Harpidae	26	Harpa	57	*Harpa cf. harpa*
14	Lottidae	27	Patelloida	58	*Patelloida striata Quoy & Gaimard, 1834*
				59	*Patelloida saccharina (Linnaeus, 1758)*
		28	Patella	60	*Patella saccharinoides Habe & Kosuge, 1996*
15	Mitridae	29	Nebularia	61	*Nebularia eremitarum* (Röding, 1798)
		30	Tiarella	62	*Tiarella stictica* (Link, 1807)
		31	Mitra	63	*Mitra mitra* (Linnaeus, 1758)
		32	Canarium	64	*Canarium urceus urceus* (Linnaeus, 1758)
16	Muricidae	33	Nucella	65	*Nucella lima* (Gmelin, 1791)
		34	Chicoreu	66	*Chicoreus ramosus* (Linnaeus, 1758)
		35	Murex	67	*Murex aduncospinosus* G. B. Sowerby II, 1841
17	Nassariidae	36	Nassarius	68	*Nassarius pullus* (Linnaeus, 1758)
				69	*Nassarius vibex* Say,1822
				70	*Nassarius olivaceus* (Bruguiere, 1789)
18	Naticidae	37	Natica	71	*Natica vitellus* (Linnaeus, 1758)
		38	Polinices	72	*Polinices hepaticus* (Roding, 1798)
				73	*Polinices mammilla* (Linnaeus, 1758)
19	Neritidae	39	Nerita	74	*Nerita polita* Linnaeus, 1978
				75	*Nerita undata* Linnaeus, 1758
		40	Septaria	76	*Septaria porcellana borbonica* (Bory de Saint-Vincent, 1804)
				77	*Nerita chameleon* Linnaeus, 1758
20	Olividae	41	Oliva	78	*Oliva miniacea miniacea* forma saturata Dautzenberg, 1927
				79	*Oliva irisans forma chrysoides* Dautzenberg, 1927

				80	*Oliva tigridella* Duclos, 1835
				81	*Oliva vidua vidua* forma albofasciata Dautzenberg, 1927
				82	*Oliva tigridella* Duclos, 1835
				83	*Oliva tricolor* Lamarck, 1811
21	Ovulidae	42	Ovula	84	*Ovula ovum* (Linnaeus, 1758)
		43	Atys	85	*Atys naucum* (Linnaeus, 1758)
22	Potamididae	44	Telescopium	86	*Telescopium telescopium* (Linnaeus, 1758)
23	Strombidae	45	Euprotomus	87	*Euprotomus aurisdianae* (Linnaeus, 1758)
				88	*Euprotomus bulla* (Roding, 1798)
		46	Harpago	89	*Harpago chiragra* (Linnaeus, 1758)
		47	Lambis	90	*Lambis scorpius scorpius* (Linnaeus, 1758)
				91	*cf. Harpago chiragra x Lambis lambis*
				92	*Lambis truncata* (Lightfoot, 1786)
				93	*Lambis lambis* (Linnaeus, 1758)
		48	Laevistrombus	94	*Laevistrombus canarium* (Linnaeus, 1758)
		49	Canarium	95	*Canarium mutabile* (Swainson, 1821
				96	*Canarium urceus urceus* (Linnaeus, 1758)
24	Terebridae	50	Acus	97	*Acus felina* (Dillwyn, 1817)
				99	*Acus dimidiata* (Linnaeus, 1758)
				100	*Acus maculata* (Linnaeus, 1758)
				101	*Acus crenulata* (Linnaeus, 1758)
		51	Terebra	102	*Terebra dislocate* Say,1822
		52	Impages	103	*Impages hectica* (Linnaeus, 1758)
25	Tonnidae	53	Tonna	104	*Tonna allium* (Dillwyn, 1817)
				105	*Tonna perdix* (Linnaeus, 1758)
26	Trochidae	54	Tectus	106	*Tectus fenestratus* (Gmelin, 1791)
				107	*Tectus fenestratus* (Gmelin, 1791)
		55	Trochus	108	*Trochus niloticus* Linnaeus, 1767
				109	*Trochus histrio* Reeve,1848
				110	*Trochus cf. rota* Dunker, 1860
				111	*Trochus maculatus* Linnaeus, 1758
27	Turbinidae	56	Turbo	112	*Turbo reevei* Philippi 1847
				113	*Turbo bruneus* (Roding, 1798)
				114	*Turbo chrysostomus* Linnaeus, 1758
28	Turritellidae	57	Turritella	115	*Turritella terebra* (Linnaeus, 1758)

Relative Abundance

Out of the 115 sampled Gastropoda species, the majority, precisely 88 species, are classified as uncommon in this locality. Additionally, there are 26 species that are considered rare, with only one species, Monetaria moneta

(Linnaeus, 1758) from the family Conidae (J. Fleming, 1822), being fairly common on the island. When assessing the number of individuals, Monetaria moneta takes the lead, being the most abundant among the species surveyed.

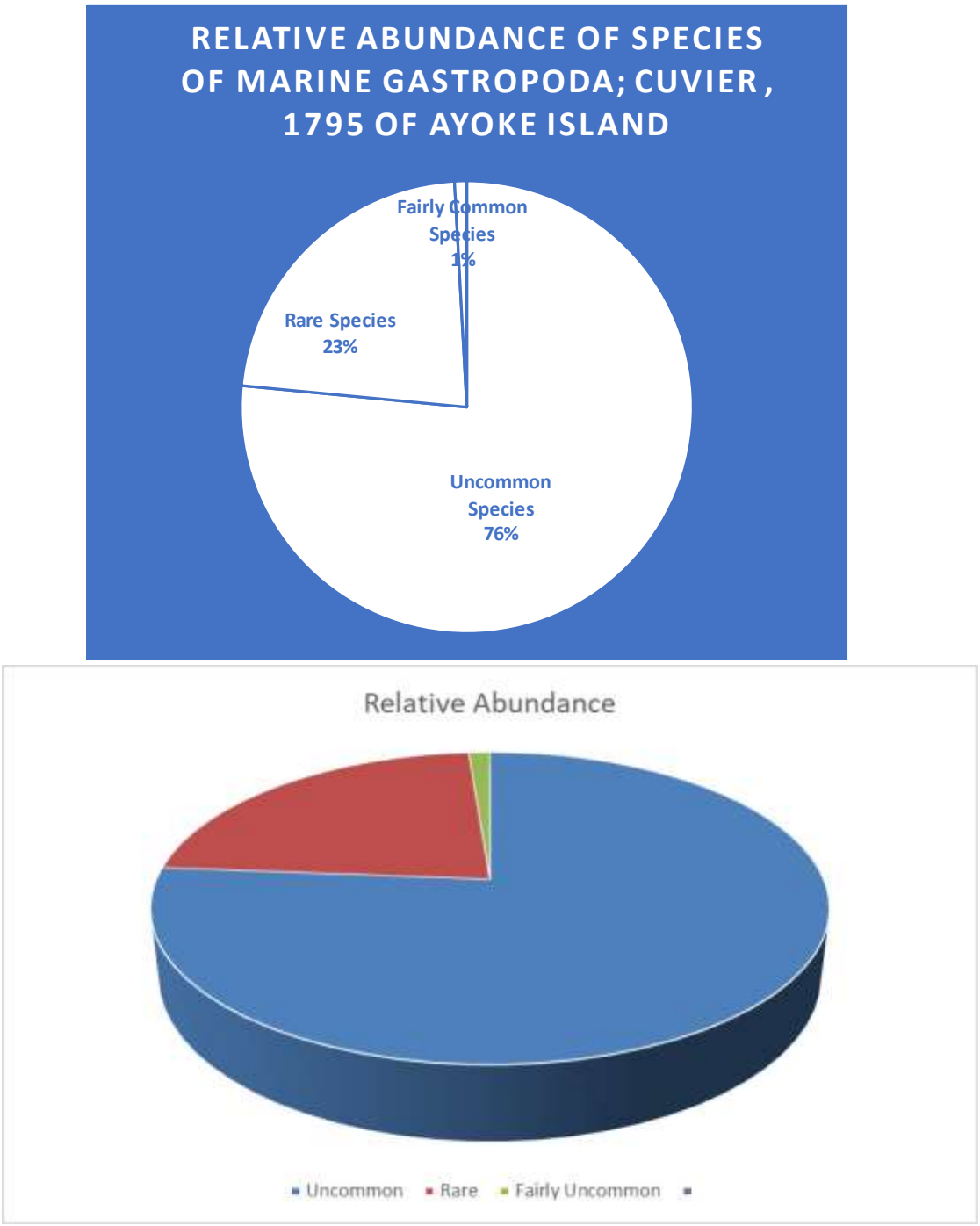


Figure 2 . Relative Abundance of Species of Marine Gastropoda; Cuvier, 1795 of Ayoke Island

The table below (Table 3) shows the relative abundance of each species accounted in Ayoke Island.

Table 3 Relative Abundance of each species collected in Ayoke Island

No	Species	S1	S2	S3	Total Count	Relative Abundance Description
1	*Bulla ampulla* Linnaeus, 1758	3	1	2	6	Uncommon
2	*Tutufa rubeta* (Linnaeus, 1758)	2	0	3	5	Uncommon
3	*Casmaria erinacea erinacea* forma vibex (Linnaeus, 1758)	2	1	5	8	Uncommon
4	*Casmaria erinacea erinacea* forma vibex (Linnaeus, 1758)	0	3	2	5	Uncommon
5	*Phalium bandatum bandatum* Perry, 1811	2	3	1	6	Uncommon
6	*Cassis cornuta* (Linnaeus, 1758)	3	1	1	5	Uncommon
7	*Cerithium lutosum* Menke, 1828	2	1	2	5	Uncommon
8	*Cerithium nodulosum* Bruguiere, 1792	3	1	1	5	Uncommon
9	*Cerithium punctatum* Bruguiere, 1789	1	3	1	5	Uncommon
10	*Rhinoclavis sinensis* (Gmelin, 1791)	2	1	3	6	Uncommon
11	*Pictocolumbella* ocellata Link, 1807	1	2	1	4	Rare
12	*Pictocolumbella ocellata* Link, 1807	1	1	1	3	Rare
13	*Conus sanguinolentus* Quoy & Gaimard, 1834	3	1	2	6	Uncommon
14	*Conus spectrum Linnaeus*, 1758	2	0	3	5	Uncommon
15	*Conus lividus* Hwass, 1792	2	1	5	8	Uncommon
16	*Conus striatus* Linnaeus, 1758	0	3	2	5	Uncommon
17	*Conus imperialis imperialis* Linnaeus, 1758	2	3	1	6	Uncommon
18	*Conus thalassiarchus* G. B. Sowerby I, 1834	3	1	1	5	Uncommon
19	*Conus leopardus* (Roding, 1798)	2	1	2	5	Uncommon
20	*Conus chaldaeus* (Röding, 1798)	3	1	1	5	Uncommon
21	*Conus distans* Bruguiere,1792	1	3	1	5	Uncommon
22	*Conus quercinus* Lightfoot, 1786	2	1	3	6	Uncommon
23	*Conus litteratus* Linnaeus,1758	1	2	1	4	Rare
24	*Conus lienardi* Biernardi et Crosse, 1861	1	1	1	3	Rare
25	*Conus cumingii* Reeve, 1848	3	1	2	6	Uncommon
26	*Conus cernicus* G.B. Sowerby I, 1883	2	0	3	5	Uncommon

27	*Conus vitulinus* Hwass, 1792	**2**	**1**	**5**	**8**	**Uncommon**
28	*Conus ebraeus* Linnaeus,1758	**0**	**3**	**2**	**5**	**Uncommon**
29	*Conus coelinae* Croose, 1858	**2**	**3**	**1**	**6**	**Uncommon**
30	*Conus generalis generalis* Linnaeus,1767	**3**	**1**	**1**	**5**	**Uncommon**
31	*Conus marmoreus* Linnaeus, 1758	**2**	**1**	**2**	**5**	**Uncommon**
32	*Conus miles* Linnaeus, 1758	**3**	**1**	**1**	**5**	**Uncommon**
33	*Distorsio anus* (Linnaeus,1758)	**1**	**3**	**1**	**5**	**Uncommon**
34	*Distorsio anus* (Linnaeus,1758	**2**	**1**	**3**	**6**	**Uncommon**
35	*Lotoria lotoria* (Linnaeus, 1758)	**1**	**2**	**1**	**4**	**Rare**
36	*Cypraea tigris Linnaeus, 1758*	**1**	**1**	**1**	**3**	**Rare**
37	*Chelycypraea testudinaria* (Linnaeus, 1758)	**3**	**1**	**2**	**6**	
38	*Talparia talpa* (Linnaeus, 1758)	**2**	**0**	**3**	**5**	**Uncommon**
39	*Talparia exusta* (J. E. Gray in G. B. Sowerby I, 1832)	**2**	**1**	**5**	**8**	**Uncommon**
40	*Leporicypraea mappa mappa* (Linnaeus, 1758)	**0**	**3**	**2**	**5**	**Uncommon**
41	*Arestorides argus* (Linnaeus, 1758)	**2**	**3**	**1**	**6**	**Uncommon**
42	*Arestorides argus* (Linnaeus, 1758)	**3**	**1**	**1**	**5**	**Uncommon**
43	*Erosaria erosa* (Linnaeus, 1758)	**2**	**1**	**2**	**5**	**Uncommon**
44	*Lyncina lynx* (Linnaeus, 1758)	**3**	**1**	**1**	**5**	**Uncommon**
45	*Lyncina vitellus* (Linnaeus, 1758)	**1**	**3**	**1**	**5**	**Uncommon**
46	*Lyncina aurantium* (Gmelin, 1791)	**2**	**1**	**3**	**6**	**Uncommon**
47	*Lyncina carneola* (Linnaeus, 1758)	**1**	**2**	**1**	**4**	**Rare**
48	*Ovatipsa chinensis* (Gmelin, 1791)	**1**	**1**	**1**	**3**	**Rare**
49	*Monetaria moneta* (Linnaeus, 1758)	**10**	**7**	**6**	**23**	**Fairly common**
50	*Monetaria caputserpentis* (Linnaeus, 1758)	**2**	**0**	**3**	**5**	**Uncommon**
51	*Mauritiana mauritiana* (Linnaeus, 1758)	**2**	**1**	**5**	**8**	**Uncommon**
52	*Melampus semisulcatus* Mousson, 1869	**0**	**3**	**2**	**5**	**Uncommon**
53	*Melampus fasciatus* Deshayes, 1830	**2**	**3**	**1**	**6**	**Uncommon**
54	*Pleuroploca trapezium* (Linnaeus, 1758)	**3**	**1**	**1**	**5**	**Uncommon**
55	*Hemitoma octoradiata* Gmelin ,1791	**2**	**1**	**2**	**5**	**Uncommon**
56	*Haliotis asinina* Linnaeus, 1758	**3**	**1**	**1**	**5**	**Uncommon**
57	*Harpa cf. harpa*	**1**	**3**	**1**	**5**	**Uncommon**
58	*Patelloida striata Quoy & Gaimard, 1834*	**2**	**1**	**3**	**6**	**Uncommon**
59	*Patelloida saccharina (Linnaeus, 1758)*	**1**	**2**	**1**	**4**	**Rare**

60	*Patella saccharinoides Habe & Kosuge, 1996*	**1**	**1**	**1**	**3**	**Rare**
61	*Nebularia eremitarum* (Röding, 1798)	**3**	**1**	**2**	**6**	**Uncommon**
62	*Tiarella stictica* (Link, 1807)	**2**	**0**	**3**	**5**	**Uncommon**
63	*Mitra mitra* (Linnaeus, 1758)	**2**	**1**	**5**	**8**	**Uncommon**
64	*Canarium urceus urceus* (Linnaeus, 1758)	**0**	**3**	**2**	**5**	**Uncommon**
65	*Nucella lima* (Gmelin, 1791)	**2**	**3**	**1**	**6**	**Uncommon**
66	*Chicoreus ramosus* (Linnaeus, 1758)	**3**	**1**	**1**	**5**	**Uncommon**
67	*Murex aduncospinosus* G. B. Sowerby II, 1841	**2**	**1**	**2**	**5**	**Uncommon**
68	*Nassarius pullus* (Linnaeus, 1758)	**3**	**1**	**1**	**5**	**Uncommon**
69	*Nassarius vibex* Say,1822	**1**	**3**	**1**	**5**	**Uncommon**
70	*Nassarius olivaceus* (Bruguiere, 1789)	**2**	**1**	**3**	**6**	**Uncommon**
71	*Natica vitellus* (Linnaeus, 1758)	**1**	**2**	**1**	**4**	**Uncommon**
72	*Polinices hepaticus* (Roding, 1798)	**1**	**1**	**1**	**3**	**Uncommon**
73	*Polinices mammilla* (Linnaeus, 1758)	**3**	**1**	**2**	**6**	**Uncommon**
74	*Nerita polita* Linnaeus, 1978	**2**	**0**	**3**	**5**	**Uncommon**
75	*Nerita undata* Linnaeus, 1758	**2**	**1**	**5**	**8**	**Uncommon**
76	*Septaria porcellana borbonica* (Bory de Saint-Vincent, 1804)	**0**	**3**	**2**	**5**	**Uncommon**
77	*Nerita chameleon* Linnaeus, 1758	**2**	**3**	**1**	**6**	**Uncommon**
78	*Oliva miniacea miniacea* forma saturata Dautzenberg, 1927	**3**	**1**	**1**	**5**	**Uncommon**
79	*Oliva irisans forma chrysoides* Dautzenberg, 1927	**2**	**1**	**2**	**5**	**Uncommon**
80	*Oliva tigridella* Duclos, 1835	**3**	**1**	**1**	**5**	**Uncommon**
81	*Oliva vidua vidua* forma albofasciata Dautzenberg, 1927	**1**	**3**	**1**	**5**	**Uncommon**
82	*Oliva tigridella* Duclos, 1835	**2**	**1**	**3**	**6**	**Uncommon**
83	*Oliva tricolor* Lamarck, 1811	**1**	**2**	**1**	**4**	**Rare**
84	*Ovula ovum* (Linnaeus, 1758)	**1**	**1**	**1**	**3**	**Rare**
85	*Atys naucum* (Linnaeus, 1758)	**3**	**1**	**2**	**6**	**Uncommon**
86	*Telescopium telescopium* (Linnaeus, 1758)	**2**	**0**	**3**	**5**	**Uncommon**
87	*Euprotomus aurisdianae* (Linnaeus, 1758)	**2**	**1**	**5**	**8**	**Uncommon**
88	*Euprotomus bulla* (Roding, 1798)	**0**	**3**	**2**	**5**	**Uncommon**
89	*Harpago chiragra* (Linnaeus, 1758)	**2**	**3**	**1**	**6**	**Uncommon**
90	*Lambis scorpius scorpius* (Linnaeus, 1758)	**3**	**1**	**1**	**5**	**Uncommon**
91	*cf. Harpago chiragra x Lambis lambis*	**2**	**1**	**2**	**5**	**Uncommon**

92	*Lambis truncata* (Lightfoot, 1786)	**3**	**1**	**1**	**5**	**Uncommon**
93	*Lambis lambis* (Linnaeus, 1758)	**1**	**3**	**1**	**5**	**Uncommon**
94	*Laevistrombus canarium* (Linnaeus, 1758)	**2**	**1**	**3**	**6**	**Uncommon**
95	*Canarium mutabile* (Swainson, 1821	**1**	**2**	**1**	**4**	**Rare**
96	*Canarium urceus urceus* (Linnaeus, 1758)	**1**	**1**	**1**	**3**	**Rare**
97	*Acus felina* (Dillwyn, 1817)	**3**	**1**	**2**	**6**	**Uncommon**
99	*Acus dimidiata* (Linnaeus, 1758)	**2**	**0**	**3**	**5**	**Uncommon**
100	*Acus maculata* (Linnaeus, 1758)	**2**	**1**	**5**	**8**	**Uncommon**
101	*Acus crenulata* (Linnaeus, 1758)	**0**	**3**	**2**	**5**	**Uncommon**
102	*Terebra dislocate* Say,1822	**2**	**3**	**1**	**6**	**Uncommon**
103	*Impages hectica* (Linnaeus, 1758)	**3**	**1**	**1**	**5**	**Uncommon**
104	*Tonna allium* (Dillwyn, 1817)	**2**	**1**	**2**	**5**	**Uncommon**
105	*Tonna perdix* (Linnaeus, 1758)	**3**	**1**	**1**	**5**	**Uncommon**
106	*Tectus fenestratus* (Gmelin, 1791)	**1**	**3**	**1**	**5**	**Uncommon**
107	*Tectus fenestratus* (Gmelin, 1791)	**2**	**1**	**3**	**6**	**Uncommon**
108	*Trochus niloticus* Linnaeus, 1767	**1**	**2**	**1**	**4**	**Rare**
109	*Trochus histrio* Reeve,1848	**1**	**1**	**1**	**3**	**Rare**
110	*Trochus cf. rota* Dunker, 1860	**3**	**1**	**1**	**5**	**Uncommon**
111	*Trochus maculatus* Linnaeus, 1758	**1**	**3**	**1**	**5**	**Uncommon**
112	*Turbo reevei* Philippi 1847	**2**	**1**	**3**	**6**	**Uncommon**
113	*Turbo bruneus* (Roding, 1798)	**1**	**2**	**1**	**4**	**Rare**
114	*Turbo chrysostomus* Linnaeus, 1758	**3**	**1**	**1**	**5**	**Uncommon**
115	*Turritella terebra* (Linnaeus, 1758)	**1**	**3**	**1**	**5**	**Uncommon**
	Total				**648**	

Legend: S1 =Station 1; S2= Station 2; S3=Station 3

Conclusion

We have developed a comprehensive field guide to document the 115 species of univalve mollusks belonging to the Class Gastropoda: Cuvier, 1795, found on Ayoke Island in Cantilan, Surigao del Sur, Mindanao. This guide serves as a valuable reference tool, offering significant utility to academics and various professionals in related fields.

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