

울릉도 해산 원시복족류(Archeogastropods)의 분류 및 기재

최 병 래 · 윤 숙 희

성균관대학교 이과대학 생물학과

= Abstract =

Classification and Description of Archeogastropods from Ullŭng Island Waters

Byung Lae Choe and Sook Hee Yoon

Department of Biology, College of Science, Sung Kyun Kwan University

The present study on the classification and description of the marine archeogastropods based on the materials which were collected during the period from 12th to 17th of July in 1989 at nine localities of the Ullŭng Island.

In addition to the 3 families and 8 species of the marine archeogastropods that have been reported, 7 families and 29 species were reported including the 4 families and 21 unrecorded species from the Ullŭng Island as a result of this study.

Among them, 3 species: *Tugali decussata* A. Adams 1852, *Tristichotrochus koma* Shikawa & Habe 1965, *Alcyna ocellata* A. Adams, 1860 are found to be new to the fauna of Korea.

서 론

울릉도 해산 원시복족류에 관하여는 Yoshita 및 Fusita(1933)가 일본산 소라(*Turbo cornutus*)의 분포를 조사하는 가운데 기록한 것이 처음이며, 뒤이어 Uchida 및 Yamamoto(1941)가 한국산 전복의 분포를 논하면서 1종을 새로이 기록하였다. 근래에 들어서는 Kim 및 Choe(1981)가 울릉도의 해양 무척추동물상을 보고하면서 5종을, Choe 및 Kim(1988)이 한국 해산 원시복족류를 정리하면서 1종을 각각 추가시켰다. 그외에 Shiba(1934), Lee(1956)등의 한국산 연체류 목록에 울릉도산이 1종씩 포함되어 있으나 새

로이 추가된 종은 없다.

이상에서와 같이 이제까지 밝혀진 결과는 모두 3과 8종인데, 이들 중 Choe 및 Kim(1988)을 제외한 모든 보고들은 기재가 없는 목록이며, Kim 및 Choe(1981)를 제외하고는 울릉도산만을 대상으로 한 연구가 없었다. 따라서 이것만으로 본도의 해산 복족류를 파악하기에는 매우 미흡하기 때문에, 저자들은 1989년 7월 12일부터 17일까지 울릉도의 9개 지점(Fig. 1)에서 채집한 해산 원시복족류의 표본들을 분류, 동정하고 미기록 종에 대한 기재를 하여 울릉도 해산 원시복족류를 정리하였다.

재료 및 방법

본 연구에 사용된 재료는 모두 본 연구실에서 직접 채집한 것으로서 대부분 95% ethanol로 고정하여 보관한 것이다. 고정된 표본은 분류학적 형질들을 자

Received December 20, 1990

* 본 연구는 1989~1990년도 서울대학교 기초과학연구소에 지원한 문교부 학술연구 조성비(ED 8943)에 의하여 수행되었음.

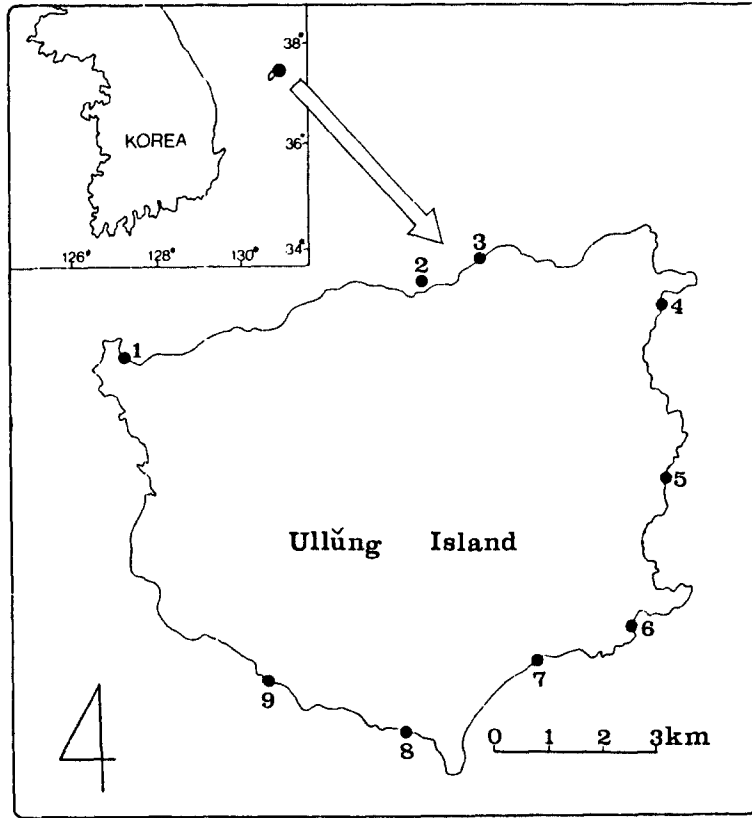


Fig. 1. Map of Ullŭng Island, showing collection localities in the survey.

1. Taep'ungch'wi (대풍취); 2. Hyŏlam (혈암); 3. Ch'ŏnbu (천부); 4. Sŏmmok (섬목); 5. Naesujŏn (내수전); 6. Todong (도동); 7. Sadong (사동); 8. T'onggumi (통구미); 9. Kulam (굴암).

세히 관찰하였고, 한국 미기록 종 중 연체부가 있는 2 종은 치석을 적출하여 10% KOH 용액에 약 24시간 동안 담그어 육질을 녹인 후 70% ethanol에 씻은 다음 Au-Pd로 증착하여 주사전자현미경으로 관찰하였다.

결 과

1. 울릉도 해산 원시복족류의 분류목록

(*: 울릉도 미기록 종; **: 한국 미기록 종)

Order Archeogastropoda 원시복족 목
 Suborder Zeugobranchia 쌍새 아목
 Superfamily Pleurotomarinaceae
 큰방석고둥 상과
 Family Haliotidae 전복 과

Genus Nordotis Habe & Kosuge, 1964

1) *Nordotis discus* (Reeve, 1846) 둥근전복

Superfamily Fissurellacea

구멍삿갓조개 상과

Family Fissurellidae 구멍삿갓조개 과

Genus *Tugali* Gray, 1843

**2) *Tugali (Tugalina) gigas* (von Martens, 1881) 뿔럭지삿갓조개

**3) *Tugali decussata* A. Adams, 1852
 흰이랑삿갓조개 (신칭)

Suborder Docoglossa 양설 아목

Superfamily Patellacea 삿갓조개 상과

Family Patellidae 삿갓조개 과

Genus *Cellana* H. Adams, 1869

*4) *Cellana grata* (Gould, 1859) 진주배말

- *5) *Cellana toreuma* (Reeve, 1885)
 애기삿갓조개
 Family Acmaeidae 흰삿갓조개 과
 Genus *Chiazacmea* Oliver, 1926
- *6) *Chiazacmea pygmaea* (Dunker, 1860)
 애기배말
 Genus *Conoidacmea* Habe, 1944
- *7) *Conoidacmea grata* (Gould, 1859)
 두드럭배말
 Genus *Notoacmea* Iredale, 1915
- *8) *Notoacmea concinna* (Lischke, 1870)
 둥근배무래기
 Genus *Acmaea* Eschscholtz, 1833
 Subgenus *Niveotectura* Habe, 1944
- *10) *Acmaea (Niveotectura) pallida* (Gould, 1859) 흰삿갓조개
 Suborder Anisobranchia 단새 아목
 Superfamily Trochacea 밤고둥 상과
 Family Trochidae 밤고둥 과
 Genus *Tristichotrochus* Ikebe, 1942
- 11) *Tristichotrochus unicus* (Dunker, 1860)
 방석고둥
- **12) *Tristichotrochus koma* Shikawa & Habe, 1965 팽이방석고둥 (신칭)
 Genus *Monodonta* Lamarck, 1799
 Subgenus *Neomonodonta* Kuroda & Habe, 1971
- 13) *Monodonta (Neomonodonta) neritoides* (Philippi, 1850) 각시고둥
- *14) *Monodonta (Neomonodonta) perplexa* (Philippi, 1850) 감장각시고둥
 Genus *Cantharidus* Montfort, 1810
- *15) *Cantharidus hirasei* (Pilsbry, 1901)
 꼬마얼룩고둥
- *16) *Cantharidus japonicus* (A. Adams, 1853)
 남방얼룩고둥
- *17) *Cantharidus callichroa* (Philippi, 1850)
 얼룩고둥
- *18) *Cantharidus callichroa bisbalteatus* (Pilsbry, 1901) 두줄얼룩고둥
 Genus *Chlorostoma* Swainson, 1840
- *19) *Chlorostoma argyrostoma lischkei* (Tapparone-Canefri, 1874) 밤고둥
- *20) *Chlorostoma argyrostoma turbinatum* (A. Adams, 1853) 구멍밤고둥
 Genus *Omphalius* Philippi, 1847
- 21) *Omphalius pfeifferi carpenteri* (Dunker, 1860) 팽이고둥
- 22) *Omphalius rusticus* (Gmelin, 1791)
 보말고둥
 Genus *Alcyna* A. Adams, 1860
- **23) *Alcyna ocellata* A. Adams, 1860
 유리밤고둥 (신칭)
 Family Stomatellidae 넓은입고둥 과
 Genus *Stomatolina* Iredale, 1937
- *24) *Stomatolina rubra* (Lamarck, 1882)
 넓은입고둥
 Family Turbinidae 소라 과
 Genus *Batillus* Schumacher, 1817
- 25) *Batillus cornutus* (Lightfoot, 1786) 소라
 Genus *Pomaulax* Gray, 1850
- 26) *Pomaulax japonicus* (Dunker, 1844)
 납작소라
 Genus *Homalopoma* Carpenter, 1864
- 27) *Homalopoma nocturnum* (Gould, 1861)
 괄알고둥
- *28) *Homalopoma sangarensense* (Schrenck, 1862)
 산괄알고둥
 Family Phasianellidae 유리고둥 과
 Genus *Hiloa* Pilsbry, 1917
- *29) *Hiloa megastoma* (Pilsbry, 1895)
 분홍유리고둥

2. 종의 기재

Order Archeogastropoda 원시복족 목
 Suborder Zeugobranchia 쌍새 아목
 Superfamily Pleurotomarinaceae
 큰방석고둥 상과
 Family Haliotidae 전복 과

1) *Nordotis discus* (Reeve, 1846) 동근전복

Haliotis discus Reeve, 1846, Conch. Icon., *Haliotis*, sp. 31. (cited from Kuroda *et al.*, 1971); Samata, 1988, p. 127-140.

Haliotis gigantea var. *discus*: Tryon, 1890, p. 85, pl. 8, fig. 46; Murata, 1936, p. 653; Hirase, 1941, p. 33, pl. 61, fig. 1; Uchida & Yamamoto, 1942, p. 119.

Haliotis gigantea kamtschatkana: Shiba, 1934, p. 16.

Haliotis (Euhaliotis) discus: Kuroda, 1941, p. 71; Kawamoto & Tanabe, 1956, p. 3, pl. 1, fig. 5; Lee, 1956a, p. 2; Lee, 1956b, p. 64; Kang *et al.*, 1971, p. 53; Ino, 1980, p. 167.

Haliotis (Euhaliotis) discus hannai: Lee, 1956b, p. 64; Oyama 1959a, *Haliotis* (2), figs. 1-3, 10-11; Kang *et al.*, 1971, p. 53; Ino, 1980, p. 167.

Haliotis (Euhaliotis) discus discus: Oyama, 1959a, *Haliotis* (1), figs. 7-9, *Haliotis* (2), fig. 12.

Notohaliotis discus: Yamamoto & Habe, 1962, p. 2, pl. 1, fig. 3-4; Kim, 1973, p. 428.

Nordotis discus: Habe & Kosuge, 1964, p. 8; Kim & Rho, 1971, p. 12; Kuroda *et al.*, 1971, p. 6 (in Japanese), p. 2 (in English), pl. 4; Higo, 1973, p. 13; Kira, 1975, p. 4, pl. 4, fig. 2; Yoo, 1977, p. 36, pl. 1, figs. 1-2; Kim & Lee, 1978, p. 98; Kim & Choe, 1981, p. 195, 196; Okada, 1981, p. 19; Kim *et al.*, 1983, p. 102; Choe & Kim, 1988, p. 139, pl. 1, figs. 2-3, pl. 11, figs. 1-2; Watanabe & Naruke, 1988, p. 28, pl. 4, fig. 1.

Haliotis (Nordotis) discus: Habe & Ito, 1979, p. 3, pl. 1, fig. 2; Inaba, 1982, p. 72; Habe, 1983, p. 416, pl. 3, fig. 2.

Haliotis discus hannai: Chau *et al.*, 1982, p. 17, pl. 3, figs. 14-15; Ma, 1982, p. 24; Qi *et al.*, 1989, p. 17.

Haliotis discus discus: Hayashi, 1988, p. 104-

120, pl. 1.

Nordotis discus hannai: Watanabe & Naruke, 1988, p. 28.

모식산지: Japan.

관찰재료: 3개체, 1989. 7. 11, Kulam, Scuba; 4개체(빈것 1), 1989. 7. 12, T'onggumi, Scuba; 13개체(빈것 12), 1989. 7. 13, Naesujön, Scuba; 1개체, 1989. 7. 14, Hyölam, Scuba; 2개체(빈것 1), 1989. 7. 15, Taep'ungch'wi, Scuba; 17개체(모두 빈것), 1989. 7. 16, Sömmok, Scuba.

분 포: Ullüng Island Todong (gill net), Sohüksando, Shinsöndae, T'aerangdo, Paengnyöngdo, Kömundo, Kungshido, Pusan, Kaehwado, T'aedo, Ch'ujado, Ududo, Och'öngdo, Anhüng, Ch'öngjin, Tokchin, Sap'o, Shinp'o, Hwangtodo, Yödo, Mangdong, Chumunjün, Chukpyön, Namhae, Pyönghae, Wando, Ch'üksan, Kuryongp'o, P'ohang, Kangp'o, Pangöjin, T'öngyöng, Köjedo, Tolsando, Sorido, Nabakto, Soando, Taehüksando, Inch'ön, Cheju, Pyönghae in Korea; Northern Hokkaido, Honshu, Shikoku, Kyushu, Choshi, Sagami Bay, Nonai, Kugurizaka, Asamushi, Yunoshima, Gomejima, Moura, Futagojima, Oshima, Asadokoro, Noheji, Mutsu Bay, Seto Inland Sea in Japan; China.

서 식 처: 조간대부터 수심 20 m까지의 바위.

Superfamily Fissurellacea 구멍삿갓조개 상과
Family Fissurellidae 구멍삿갓조개 과

2) *Tugali (Tugalina) gigas* (von Martens, 1881) 뿔럭지삿갓조개

Submarginula gigas von Martens, 1881, p. 103, pl. 19. (cited from Tryon, 1890); Tryon, 1890, p. 286-287, pl. 43, figs. 76-77.

Tugalia gigas: Nomura & Hatai, 1928, p. 97; Hirase, 1941, p. 34, pl. 63, fig. 4.

Siphonella gigas: Shiba, 1934, p. 16.

Tugali gigas: Lee, 1956b, p. 64; Kang *et al.*, 1971, p. 53; Kim *et al.*, 1983, p. 102; Qi *et al.*,

1989, p. 18.

Tugalina gigas: Yamamoto & Habe, 1962, p. 3, pl. 3, fig. 12; Habe & Ito, 1979, p. 6, pl. 3, fig. 4; Okada, 1981, p. 21.

Tugali (Tugalina) gigas: Kira, 1975, p. 6, pl. 5, fig. 14; Yoo, 1977, p. 43, pl. 3, fig. 12; Choe & Kim, 1988, p. 141, pl. 1, fig. 6, pl. 11, fig. 6, pl. 12, fig. 1; Watanabe & Naruke, 1988, p. 29, pl. 4, fig. 2.

모식산지: Northern Honshu in Japan.

관찰재료: 1개체, 1989. 7. 14, Hyōlam, Scuba.

분 포: Hamnam, Samch'ok, Hujin, Kangwon, Chumunjin, Kuryongp'o in Korea; Hokkaido, Tohoku, Northern Japan Sea, Northern Honshu, Yunoshima, Gomejima, Futagojima, Mutsu Bay, Choshi in Japan.

서 식 처: 조간대부터 수심 10 m까지의 바위.

3) *Tugali decussata* (A. Adams, 1852)
(Plate-Figs. 1-2)

Tugali decussata A. Adams, 1852, p. 89; Yamamoto & Habe, 1962, p. 3, pl. 3, fig. 5; Kuroda et al., 1971, p. 15 (in Japanese), p. 8 (in English), pl. 6, figs. 29-30; Higo, 1973, p. 17; Kira, 1975, p. 5, pl. 5, fig. 2; Habe & Ito, 1979, p. 8, pl. 4, fig. 3; Inaba, 1982, p. 73; Watanabe & Naruke, 1988, p. 29, pl. 4, fig. 2.

Submarginula decussata: Tryon, 1890, p. 286, pl. 43, fig. 88.

Emarginula angastata Thiele, 1915, Conch. Cab., 2 (4a), p. 108 (cited from Kuroda et al., 1971).

Tugalia decussata: Hirase, 1941, p. 34, pl. 63, fig. 5.

모식산지: Philippines.

관찰재료: 2개체, 1989. 7. 14, Hyōlam, Scuba; 2개체, 1989. 7. 13, Naesujōn, Scuba; 4개체(민것 1), 1989. 7. 15, Taep'ungch'wi, Scuba; 1개체(민것), 1989. 7. 16, Sōmmok, Scuba.

분 포: Southern Hokkaido, Honshu (Boso Peninsula as north limit), Shikoku,

Kyushu, Jogashima (50~85 m), Mitsuiso-Hirashima (15 m), Mutsu Bay, Kamekisho-Mosaki (15 m), Seto Inland Sea in Japan; Western Pacific region.

서 식 처: 조간대부터 수심 50 m까지. 모래와 자갈 받 속.

기 재: 껍각은 백색의 낮은 샷갸모양이며, 각고 2.5 mm, 각구 장경 7.6 mm, 단경 4.3 mm의 소형종이다. 각구는 난원형이고 뒤쪽이 약간 넓다. 각정은 앞에서 부터 약 7/10의 위치에 있으며 뒤쪽으로 말려있다. 각정으로 부터 약 30개 내외의 굵은 방사맥이 뻗어있고 그 사이 사이에 가느다란 방사맥이 끼어 있으며 이들은 성장맥과 교차하여 과립을 이룬다. 성장맥은 껍각의 앞면에 20줄, 뒷면과 옆면에는 각각 10줄 내외가 있다. 앞면의 중앙에 있는 2줄의 방사맥은 다른 방사맥보다 약간 굵으며 그 사이에 열구가 있다. 열구는 뒷면에서 보면 뚜렷하지 않으나, 껍각의 아랫면에서 보면 넓은 V자형으로 알개 패여 있다. 방사맥이나 성장맥은 각정 주위에서는 매우 가늘어서 뚜렷하지 않으나 각구쪽으로 내려갈수록 점점 굵고 뚜렷해진다. 껍각의 내면은 백색이며 광택이 나고 근흔은 각정 주위에서 매우 약한 갈색을 띠나 뚜렷하지 않다. 어린 개체의 껍각은 투명하며 내면에서 볼 때 표면의 방사맥과 성장맥이 비취보인다.

외투막 주연은 미세한 톱니를 이루고 있으며 **branchial plume**은 가장자리가 늘어나 있어 굴곡을 이루



Textfig. 1. *Tugali decussata* A. Adams, 1852
흰이랑샷갸조개.

고 앞쪽의 열구 안쪽에서는 갈라져서 확장되어 겹쳐있다.

치설은 폭이 넓은 중치가 한 개 있고 그 양쪽에 가늘고 긴 4개씩의 측치(제 1~제 4 측치)가 배열되어 있는데 이들은 크기가 비슷하지만 다섯번째에 있는 제 5 측치는 유난히 크고 중앙에 중점을 가지며 그 바깥쪽에 한 개씩의 외침을 가지며 돌출해 있다. 연치는 매우 가늘고 다수 존재하는데 중앙에 한 개씩의 중점을 가지고 있으며 그 양쪽에 각각 7~8개씩의 외침과 내침을 가진다.

부 기: Lee 등(1984)의 목록 중 Haliotidae에 *Tugali decussata* A. Adams, 1852의 기록이 있으나 과명이 다르고 기재가 없으며 표본이 보관되어 있지 않아 본종과의 일치 여부는 확인할 수 없었다. 따라서 저자는 Fissurellidae에 속하는 본종을 한국 미기록 종으로 기재한다.

Suborder Docoglossa 양설 아목

Subfamily Patellacea 삿갓조개 상과

Family Patellidae 삿갓조개 과

4) *Cellana grata* (Gould, 1859) 진주배말

Patella grata Gould, 1859, p. 161.

Patella (Helcioniscus) stearnsii Pilsbry, 1891, The Nautilus, Vol. 4, p. 100. (cited from Powell, 1973).

Helcioniscus eucosmius Pilsbry, 1892. (cited from Inaba, 1982).

Helcioniscus stearnsii Pilsbry, 1895, Cat. Marine Moll. Japan, p. 112, pl. 7, figs. 4-6. (cited from Powell, 1973).

Cellana eucosmia: Lee, 1956b, p. 64; Oyama, 1958, *Cellana* (3), figs. 1-3; Kang *et al.*, 1971, p. 53.

Cellana grata: Kang *et al.*, 1971, p. 53; Powell, 1973, p. 159-160, pl. 134, figs. 1-4; Higo, 1973, p. 12; Kira, 1975, p. 7, pl. 6, fig. 3; Christiaens, 1977, p. 67, fig. 7; Yoo, 1977, p. 41, pl. 3, figs. 3-4; Kim *et al.*, 1979, p. 107; Habe & Ito, 1979, p. 6, pl. 3, fig. 6; Christiaens, 1980, p. 461; Tsi & Ma, 1980, p.

433; Okada, 1981, p. 22; Inaba, 1982, p. 75; Kim *et al.*, 1983, p. 102; Lan *et al.*, 1983, p. 13; Kim & Kim, 1984, p. 193; Lee *et al.*, 1984, p. 121; Kim & Yoon, 1985, p. 37; Kim & Kim, 1986, p. 318; Lai, 1986, p. 5, pl. 2, fig. 4; Choe & Kim, 1988, p. 144, pl. 2, fig. 4, pl. 13, figs. 1-3; Watanabe & Naruke, 1988, p. 28.

모식산지: Japan.

관찰재료: 6개체, 1989. 7. 12, T'onggumi(조간대), B.L. Choe; 32개체(빈것 5), 1989. 7. 14, Hyölam(조간대), B.L. Choe; 2개체(모두 빈것), 1989. 7. 14, Hyölam, S.S. Yum; 17개체, 1989. 7. 14, Hyölam, Scuba; 15개체(빈것 1), 1989. 7. 14, Hyölam, Y.J. Kim; 12개체, 1989. 7. 15, Taep'ungch'wi(조간대), B.L. Choe; 9개체, 1989. 7. 15, Taep'ungch'wi, Scuba; 6개체(빈것 2), 1989. 7. 16, Sömmok(조간대), B.L. Choe; 1개체(빈것), 1989. 7. 16, Sömmok, B.L. Choe; 18개체, 1989. 7. 17, Sadong(조간대), B.L. Choe.

분 포: Taehöksando, Hongdo, Chindo, Kaldo, Haeg ũ mgang, Kukto, Chumunjin, Ch'ujado, Pusan Ch'öngsapo, Pijindo, Chang-süngp'o Kujora, Kuryongp'o Kuman, Chuk-pyön, Ulsan Chujöndong, Hyöpchae, Kanggu, Cheju(Söngsan, Pomokri, Sehwa, Udo), Yöng-jinni, Taesambudo, Sangbaekto, Hujin in Korea; Hokkaido, Shikoku, Kyushu, Honshu, Choshi, Nonai, Asamushi, Yunoshima, Tsuchiya, Mourajima, Futagojima, Mutsu Bay, Seto Inland Sea Fukura, Awaji Island in Japan; Coast of Zhejiang to Hainan Island in China; Hong Kong; Taiwan.

서 식 처: 조간대 바위.

5) *Cellana toreuma* (Reeve, 1855)

애기삿갓조개

Patella amussitata Reeve, 1855, Conch. Iconica, pl. 30, figs. 83a, b. (cited from Powell, 1973).

Patella affinis Reeve, 1855, Conch. Iconica,

pl. 35, figs. 108a, b. (cited from Powell, 1973).

Patella toreuma Reeve, 1855, Conch. Icon., *Patella*, sp. 69. (cited from Kuroda *et al.*, 1971); Lischke, 1869, p. 109, pl. 8, figs. 12-15; Lischke, 1871, p. 102, pl. 6, fig. 12; Dunker, 1882, p. 156.

Helcioniscus nigrolieatus divergens Pilsbry, 1891, Man. Conch., vol. 13, p. 134, pl. 73, figs. 81-84. (cited from Powell, 1973).

Helcioniscus toreuma: Pilsbry, 1892, Man. of Conch, 13, p. 135, pl. 13, figs. 50-53. (cited from Kuroda *et al.*, 1971).

Cellana toreuma: Kuroda, 1928, P. 22; Shiba, 1934, p. 17; Hirase, 1941, p. 32, pl. 58, fig. 3; Kuroda, 1941, p. 72; Kawamoto & Tanabe, 1956, p. 4; Lee, 1956a, p. 3; Lee, 1956b, p. 64; Oyama, 1958, *Cellana* (2), figs. 9-12; Yamamoto & Habe, 1962, p. 4, pl. 1, figs. 7, 10, 12; Kang *et al.*, 1971, p. 53; Kuroda *et al.*, 1971, p. 22 (in Japanese), p. 15 (in English), pl. 7, fig. 3-5; Higo, 1973, p. 11; Kim, 1973, p. 428; Powell, 1973, p. 162-163; Kira, 1975, p. 7, pl. 6, fig. 2; Christiaens, 1977, p. 67, fig. 6; Yoo, 1977, p. 40, pl. 3, figs. 1-2; Habe & Ito, 1979, p. 6, pl. 3, fig. 5; Kim *et al.*, 1979, p. 107; Chen *et al.*, 1980, p. 60; Christiaens, 1980, p. 461; Tsi & Ma, 1980, p. 433; Kim & Choe, 1981, p. 195; Okada, 1981, p. 22; Chau *et al.*, 1982, p. 18, pl. 2, fig. 1, pl. 3, figs. 1-2; Inaba, 1982, p. 75; Ma, 1982, p. 25; Kim & Kwon, 1983, p. 320; Kim *et al.*, 1983, p. 102; Lan *et al.*, 1983, p. 11; Kim & Kim, 1984, p. 193; Kim & Kwon, 1984, p. 42; Lee *et al.*, 1984, p. 121; Kim & Yoon, 1985, p. 37; Lee *et al.*, 1985, p. 95; Kim & Kim, 1986, p. 319; Lai, 1986, p. 5, pl. 2, fig. 2; Choe & Kim, 1988, p. 144, pl. 2, fig. 5, pl. 13, fig. 4; Watanabe & Naruke, 1988, p. 28; Qi *et al.*, 1989, p. 19.

Helcioniscus toreumus: Nomura & Hatai,

1928, p. 97.

Cellana amussitata: Kuroda & Habe, 1952, Check List Rec. Mar. Moll. Japan, p. 44. (cited from Powell, 1973).

Cellana toreuma (Reeve) forma *amussitata*: Habe, 1975, p. 7, pl. 3, fig. 4.

모식산지: Monterey, California (in error).

관찰재료: 31개체(모두 빈것), 1989. 7. 11, Kulam, Scuba; 7개체(빈것 6), 1989. 7. 11, Kulam, Y.J. Kim; 7개체, 1989. 7. 12, T'ong-gumi, Scuba; 8개체, 1989. 7. 13, Naesujŏn, Scuba; 34개체(빈것 29), 1989. 7. 14, Hyŏlam, B. L. Choe; 3개체, 1989. 7. 15, Ch'ŏnbu, B.L. Choe; 10개체(빈것 2), 1989. 7. 15, Taep'ungch'wi, Scuba; 19개체(빈것 16), 1989. 7. 16, Sŏm-mok, Scuba; 31개체(빈것 15), 1989. 7. 17, Sadong(조간대), B.L. Choe.

분포: Pusan (Suyŏng, Yŏngdo, Songdo, Songjŏng Ch'ŏngsap'o), Kaldŏ, Hajodo, Chukhangdo, Ch'ŏngdŏngdo, Kwansado, Kalmokto, Nulokto, Yŏsu, Kadŏkto, Paengnyŏngdo, Changho, Kangwon, T'ongyŏng, Kŏmundo, Wando, Taehŭksando, Ch'ujado, Ulsan Chujŏndong, Cheju, Namhaedo, Masan, Mosŭlp'o (intertide), Samch'ŏnp'o, Kuryongp'o Kuman, Tolsando Imhaemyŏn, Namhae Sangju, Changsŏngp'o, Chumunjin Yŏngjiinni, Kanggu, Hujin, Tokdo, Sŏdo, Ōch'ŏngdo, Oenaru Ponghori in Korea; Southern Hokkaido, Honshu, Amami-Oshima, Shikoku, Kyushu, Choshi, Ogasawara Island, Nishinosaki, Sagami Bay, Ryukyu Islands, Seto Inland Sea, Nagasaki in Japan; Naji Island, Coast of Liaoning to Hainan Island in China; Western Pacific Region; Taiwan; Hong Kong.

서식처: 조간대 바위.

Family Acmaeidae 환삿갓조개 과

6) *Chiazacmea pygmaea* (Dunker, 1860)

애기배말

Patella pygmaea Dunker, 1860, 6, p. 254. (cited from Kuroda *et al.*, 1971); Dunker, 1861, p. 24. pl. 3, fig. 20.

Acmaea heroldi pygmaea: Pilsbry, 1881, Man, Conch., 13, p. 45, pl. 9, figs. 19-21. (cited from Kuroda *et al.*, 1971)

Acmaea heroldi signata Pilsbry, 1901a, p. 202.

Acmaea pygmaea: Nomura & Hatai, 1928, p. 97; Shiba, 1934, p. 17; Lan *et al.*, 1983, p. 17.

Patelloida pygmaea: Hirase, 1941, p. 31, pl. 56, fig. 4; Kamita & Sato, 1941, p. 2; Kuroda, 1941, p. 73; Christiaens, 1977, p. 75, pl. 3A; Christiaens, 1980, p. 462; Tsi & Ma, 1980, p. 433; Chau *et al.*, 1982, p. 21, pl. 2, fig. 3, pl. 3, figs. 4-5; Lai, 1986, p. 7, pl. 3, fig. 7.

Patelloida (Asteracmea) pygmaea: Habe, 1944, p. 176, fig. 2; Kawamoto & Tanabe, 1956, p. 5; Lee, 1956b, p. 65; Oyama, 1958, *Patelloida*, figs. 1-3; Kang *et al.*, 1971, p. 53.

Patelloida (Chiazacmea) pygmaea: Yamamoto & Habe, 1962, p. 5, pl. 1, fig. 14; Habe, 1975, p. 7, pl. 3, fig. 6; Habe & Ito, 1979, p. 10, pl. 4, fig. 17; Okada, 1981, p. 23; Inaba, 1982, p. 74; Kim & Kim, 1984, p. 193.

Chiazacmea pygmaea: Kuroda *et al.*, 1971, p. 24 (in Japanese), p. 16 (in English), pl. 8, figs. 7-8; Higo, 1973, p. 9; Choe, 1986, p. 28; Choe & Kim, 1988, p. 147, pl. 3, fig. 2, pl. 14, fig. 2; Watanabe & Naruke, 1988, p. 27.

모식산지: Decima(=Dejima), Nagasaki City, Kyushu in Japan.

관찰재료: 1개체(빈것), 1989. 7. 17, Sadong, B. L. Choe.

분 포: Hamnam, Inch'ŏn Coast, Kyŏnggi, Pusan, Kadŏkto, Kŏmundo, Taesambudo, Sangbaekto in Korea; Southern Hokkaido, Honshu, Shikoku, Kyushu, Hayama, Sagami

Bay, Choshi, Kugurizaka, Asamushi, Futagojima, Seto Inland Sea, Kamekisho-Mosaki in Japan; Coast of Liaoning to Hainan Island in China; Taiwan; Hong Kong.

서 식 처: 조간대의 바위나 자갈 또는 갯고동 따위의 배각 표면에 붙어 서식한다.

7) *Conoidacmea grata* (Gould, 1859)

두드럭배말

Acmaea dorsuosa Gould, 1859, p. 162; Nomura & Hatai, 1928, p. 96; Lan *et al.*, 1983, p. 17.

Tectura dorsuosa: Dunker, 1882, p. 154.

Tectura grata: Kuroda, 1928, p. 21; Shiba, 1934, p. 17.

Patelloida grata: Hirase, 1941, p. 31, pl. 56, fig. 8; Kuroda, 1941, p. 73.

Collisella (Collisella) grata: Habe, 1944, p. 178.

Collisella grata: Kawamoto & Tanabe, 1956, p. 5; Lee, 1956b, p. 65; Oyama, 1960, *Collisella* (1), figs. 10-12; Yamamoto & Habe, 1962, p. 5, pl. 1, fig. 8; Kang *et al.*, 1971, p. 53.

Collisella dorsuosa: Kang *et al.*, 1971, p. 53; Kira, 1975, p. 8, pl. 6, fig. 11; Habe & Ito, 1979, p. 7, pl. 3, fig. 8; Kim *et al.*, 1979, p. 108; Okada, 1981, p. 24; Kim & Kwon, 1982, p. 195; Kim & Kwon, 1983, p. 320; Kim *et al.*, 1983, p. 102; Kim & Kim, 1984, p. 193; Lee *et al.*, 1984, p. 121; Kim & Yoon, 1985, p. 37; Lai, 1986, p. 7, pl. 3, fig. 5.

Collisella (Conoidacmea) dorsuosa: Kuroda *et al.*, 1971, p. 26 (in Japanese), p. 18 (in English), pl. 8, figs. 22-23; Higo, 1973, p. 10; Yoo, 1977, p. 44, pl. 4, figs. 4-6; Choe & Kim, 1988, p. 148, pl. 3, fig. 4, pl. 14, fig. 4; Watanabe & Naruke, 1988, p. 27.

Collisella (Collisella) dorsuosa: Christiaens, 1977, p. 72.

Patelloida dorsuosa: Chau *et al.*, 1982, p. 20, pl. 3, fig. 13.

모식산지: Hakodadi(=Hakodate), Hokkaido in Japan.

관찰재료: 2개체(모두 빈것), 1989. 7. 11, Kulam, Scuba; 1개체(빈것 1), 1989. 7. 11, Kulam, Y.S. Kim; 17개체, 1989. 7. 12, T'onggumi(조간대), B. L. Choe; 8개체, 1987. 7. 15, Taep'ungch'wi, B. L. Choe; 2개체, 1989. 7. 16, Sömmok(조간대), B. L. Choe; 12개체(빈것 3), 1989. 7. 17, Sadong(조간대), B.L. Choe.

분 포: Kukto, Ch'ujado, Haegümgang, Chukhangdo, Soando, Kangnüng, Kyönggi, Taehüksando, Cheju Udo, Kuryongp'o Kuman, Pusan, Taesambudo, Hujin Ch'öngsap'o in Korea; Japan Sea (Minoshima), Bungo Straits, Okinoshima Island, Suthern Hokkaido, Honshu, Shikoku, Kyushu, Amami-Öshima, Choshi, Asamushi, Tsuchiya, Gomejima in Japan; Ping Chau in China; Taiwan.

서 식 처: 조간대의 바위.

8) *Notoacmea concinna* (Lischke, 1870)

등근배무래기

Acmaea concinna Lischke, 1870, p. 25; Lischke, 1871, p. 98, pl. 6, figs. 1-6; Nomura & Hatai, 1928, p. 97; Shiba, 1934, p. 17; Lan *et al.*, 1983, p. 15.

Tectura concinna: Dunker, 1882, p. 154.

Patelloida concinna: Kuroda, 1928, p. 21; Hirase, 1941, p. 31, pl. 56, fig. 2.

Notoacmea (Notoacmea) concinna: Habe, 1944, p. 183.

Notoacmea concinna: Kawamoto & Tanabe, 1956, p. 5; Lee, 1956a, p. 3; Lee, 1956b, p. 65; Yamamoto & Habe, 1962, p. 6; Oyama, 1963 *Notoacmea* (1), figs. 1-3; Kang *et al.*, 1971, p. 53; Kuroda *et al.*, 1971, p. 28 (in Japanese), p. 19 (in English), pl. 8, fig. 17; Higo, 1973, p. 10; Kim, 1973, p. 428; Kira, 1975, p. 7, pl. 6, fig. 10; Yoo, 1977, p. 44, pl. 4, figs. 2-3, 9; Kim & Lee, 1978, p. 98; Habe & Ito, 1979, p.

10, pl. 4, figs. 11-13; Kim *et al.*, 1979, p. 108; Okada, 1981, p. 24; Inaba, 1982, p. 74; Kim & Kwon, 1983, p. 320; Kim & Kim, 1984, p. 193; Kim & Kwon, 1984, p. 42; Lee *et al.*, 1985, p. 95; Choe, 1986, p. 28; Kim & Kim, 1986, p. 319; Choe & Kim, 1988, p. 149, pl. 4, figs. 1-3, pl. 15, figs. 1-3.

Notoacmea teramachii Kira, 1961, p. 293, 295, fig. 3; Oyama, 1963, *Notoacmea* (2) · *Acmaea*, figs. 4-6.

Notoacmea radula Kira, 1961, p. 292, 294, fig. 1.

Notoacmea nigrans Kira, 1961, p. 293, 295, fig. 2.

모식산지: Nagasaki City, Kyushu in Japan.

관찰재료: 2개체(빈것 1), 1989. 7. 14, Hyölam, Scuba. forma *fuscoviridis*: 7개체(빈것 5), 1989. 7. 11, Kulam, Y.J. Kim; 18개체(모두 빈것), 1989. 7. 11, Kulam, Scuba; 1개체, 1989. 7. 12, T'onggumi(조간대), B.L. Choe; 5개체, 1989. 7. 15, Ch'önbu, B.L. Choe; 5개체, 1989. 7. 15, Taep'ungch'wi(조간대), B.L. Choe; 3개체, 1989. 7. 15, Taep'ungch'wi, B.L. Choe; 8개체(빈것 5), Scuba; 14개체(빈것 13), 1989. 7. 16, Sömmok(조간대), B.L. Choe; 20개체(빈것 10), 1989. 7. 17, Sadong(조간대), B.L. Choe.

분 포: Pusan (Songjöng, Yöngdo), Kyönggi, Hongdo, Yösu, Hajodo, Chukhangdo, Kwansado, Kalmokto, Nulokto, Kadökto, Donggyeogryeolbido, Paengny ö ngdo, Tokgido, T'ongyöng, Cheju, Taehüksando, Ch'ujado, Hajodo, Kömundo, Yokchido, Köjedo, Taesambudo, Western Coast, Hongdo, Tokdo, Söngmando in Korea; Southern Hokkaido, Sagami Bay, Arasaki, Kashiwajima Island, Bungo Straits Honshu, Shikoku, Kyushu, Nagasaki City, Amami shima, Choshi, Asamushi, Tsuchiya, Seto Inland Sea in Japan; North China; Taiwan.

서 식 지: 조간대의 바위와 자갈.

9) *Notoacmea gloriosa* (Habe, 1944)

멋쟁이 배무래기

Notoacmea (Notoacmea) gloriosa Habe, 1944, p. 180, 184. figs. 6, 8.

Notoacmea gloriosa: Oyama, 1963, *Notoacmea* (2) • *Acmaea*; Kuroda *et al.*, 1971, p. 28 (in Japanese), p. 20 (in English), pl. 8, figs. 18-19; Higo, 1973, p. 10; Kira, 1975, p. 7. pl. 6, fig. 8; Choe & Kim, 1988, p. 150, pl. 4, fig. 4, pl. 15, fig. 4; Watanabe & Naruke, 1988, p. 27.

Notoacmea schrenckii gloriosa: Inaba, 1982, p. 75.

모식산지: Urado, Kochi City, Shikoku in Japan.

관찰재료: 17개체(빈것 10), 1989. 7. 11, Kulam, Scuba; 6개체, 1989. 7. 12, T'onggumi, Scuba; 5개체, 1989. 7. 13, Naesujön, Scuba; 1개체(빈것), 1989. 7. 14, Hyölam, B.L. Choe; 2개체(빈것 1), 1989. 7. 16, Sömmok, Scuba.

분 포: Cheju P'yosön in Korea; Honshu (Boso Peninsula), Shikoku, Kyushu, Seto Inland Sea, Kasajima, Arasaki, Choshi, Fukura, Awaji in Japan.

서 식 처: 조간대의 바위와 자갈.

10) *Acmaea (Niveotectura) pallida*

(Gould, 1859) 흰삿갓조개

Patella pallida Gould, 1859, p. 162; Lischke, 1869, p. 112; Dunker, 1882, p. 156; Habe, 1960, p. 12; Habe, 1978, p. 217, figs. 1-4.

Patella lamanois Schrenck, 1867, Reisen Forsch. Amurl., 2, p. 303, pl. 14, figs. 6-9. (cited from Habe, 1978).

Helcioniscus pallidus: Pilsbry, 1892, Man. of Conch., 13, p. 133, pl. 67, figs. 9-10. (cited from Kuroda *et al.*, 1971).

Acmaea pallida: Nomura & Habe, 1928, p. 96; Oyama, 1963, *Notoacmea* (2) • *Acmaea*, figs. 10-12; Oyama, 1973, p. 9, pl. 1, figs. 1, 5; Kim

et al., 1983, p. 102; Lan *et al.*, 1983, p. 17; Lee *et al.*, 1984, p. 121; Lai, 1986, p. 7, pl. 3, fig. 8; Qi *et al.*, 1989, p. 20.

Tectura pallida: Shiba, 1934, p. 17; Lee, 1956a, p. 3; Lee, 1956b, p. 65.

Patelloida pallida: Hirase, 1941, p. 31, pl. 56, fig. 9.

Tectura (Niveotectura) pallida Habe, 1944, p. 185, fig. 7.

Acmaea (Niveotectura) pallida: Yamamoto & Habe, 1962, p. 4, pl. 3, figs. 6-7; Kang *et al.*, 1971, p. 53; Kuroda *et al.*, 1971, p. 29 (in Japanese), p. 20 (in English), pl. 8. figs. 1-2; Higo, 1973, p. 10; Kira, 1975, p. 8, pl. 6, fig. 13; Yoo, 1977, p. 45; Kim & Lee, 1978, p. 98; Habe & Ito, 1979, p. 7, pl. 3, fig. 7; Okada, 1981, p. 23; Hong, 1982, p. 315; Kim & Kwon, 1982, p. 195; Kim & Kwon, 1983, p. 320; Kim & Yoon, 1985, p. 37; Choe & Kim, 1988, p. 151, pl. 4, fig. 5, pl. 15, figs. 5-6; Watanabe & Naruke, 1988, p. 27.

모식산지: Hakodadi, Hokkaido in Japan.

관찰재료: 3개체, 1989. 7. 11, Kulam, Scuba; 9개체(빈것 1), 1989. 7. 12, T'onggumi, Scuba; 1개체, 1989. 7. 15, Taep'ungch'wi, Scuba.

분 포: Pusan (Songjöng, Haeundae), Mangan, Yongho, Hamnam, Kangwon, Chagaedo, Soando, Kungshido, T'ongyöng, P'ohang, Kangnŭng, Chumunjin, Tökchökdt in Korea; East Northern Honshu, Hokkaido, Jogashima, Northern Tōhoku, Kant Kugurizaka, Asamushi, Gomejima, Mourajima, Futagojima, Kannontsukadashi-Oshima, Karibasawa, Noheji, Wakinozawa, Maruyamadashi (86 m), Fukura, Awaji, Choshi in Japan; Northern China; Taiwan; Siberia, Sakhalin in Russia.

서 식 처: 하조간대부터 수심 20 m까지. 바위 표면.

Suborder Anisobranchia 단새 아목
Superfamily Trochacea 받고둥 상과

Family Trochidae 뱀고둥 과

11) *Tristichotrochus unicus* (Dunker, 1860) 방석고둥

Trochus unicus Dunker, 1860, Malak. Blatt., 6, p. 238. (cited from Kuroda *et al.*, 1971); Dunker, 1861, p. 23, pl. 3, fig. 3; Lischke, 1869, p. 94.

Ziziphinus unicus: Reeve, 1863, Conch. Icon., *Ziziphinus*, sp. 8. (cited from Kuroda *et al.*, 1971).

Calliostoma affinis Dall, 1872, Amer. Jour. Conch., 7, p. 125, pl. 15, fig. 14. (cited from Kuroda *et al.*, 1971).

Calliostoma unicum: Fujita, 1929, p. 88; Hirase, 1941, p. 39, pl. 70, fig. 2; Kuroda, 1941, p. 74; Chen *et al.*, 1980, p. 60; Chau *et al.*, 1982, p. 24; Lai, 1986, p. 13, pl. 6, fig. 3; Qi *et al.*, 1989, p. 24.

Calliostoma (Tristichotrochus) unicum: Kawamoto & Tanabe, 1956, p. 6, pl. 3, fig. 26; Lee, 1956a, p. 3; Lee, 1956b, p. 65; Kang

et al., 1971, p. 54.

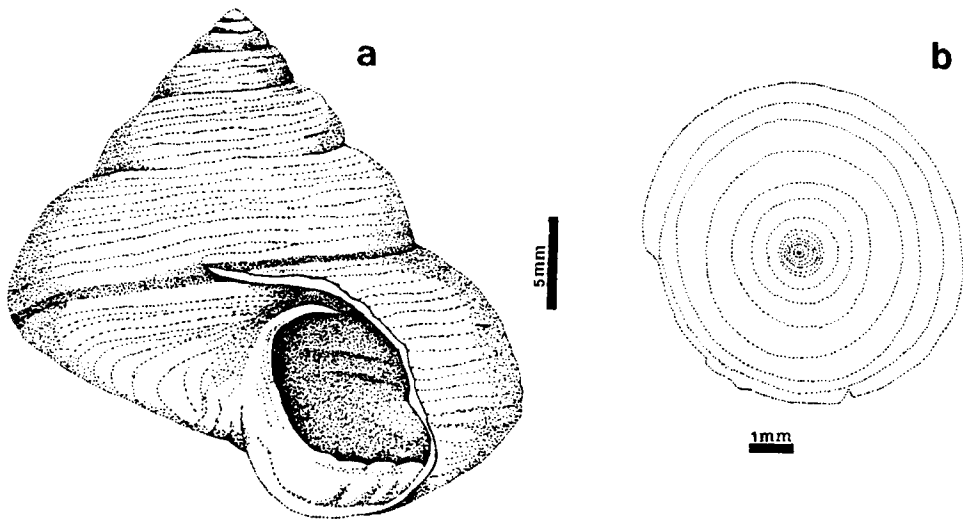
Tristichotrochus unicus: Yamamoto & Habe, 1962, p. 7, pl. 2, fig. 2; Kuroda *et al.*, 1971, p. 36 (in Japanese), p. 25 (in English), pl. 10, fig. 9; Higo, 1973, p. 21; Kira, 1975, p. 11, pl. 8, fig. 11; Habe & Ito, 1979, p. 13; Kim *et al.*, 1979, p. 108; Kim & Choe, 1981, p. 195, 196; Okada, 1981, p. 25; Inaba, 1982, p. 76; Kim & Kwon, 1982, p. 195; Kim & Kim, 1984, p. 194; Kim & Kim, 1986, p. 319; Choe & Kim, 1988, p. 154, pl. 5, figs. 2-3, pl. 16, figs. 1-2; Watanabe & Naruke, 1988, p. 31.

Tristichotrochus unicus koma: Yoo, 1977, p. 45, figs. 13-14.

모식산지: Decima (=Dejima), Nagasaki City, Kyushu in Japan.

관찰재료: 6개체(빈것 1), 1989. 7. 11, Kulam, Scuba; 2개체(빈것 1), 1989. 7. 12, T'onggumi, Scuba; 3개체, 1989. 7. 14, Hyölam, Scuba.

분포: Pusan (Haeundae), Kaldö, Yöngil, T'ongyöng, Ch'ujado, Kömundo, Taehöksando, Yokjido, Cheju Söngsan, Namhae Sangju, Yösödo, Soando, Paekryöngdo Tumujin (in-



Textfig. 2. *Tristichotrochus koma* Shikawa & Habe, 1965 뱀이방석고둥. a: Shell b: Operculum

tertide), Inch'ŏn, Sochŏngdo Yedong in Korea; Honshu, Shikoku, Kyushu, Kasajima (9~11 m), Amadaiba (110 m), Kamekisho-Ohne (5 m), Futagojima, Kamekisho-Mosaki (9~13 m), Nagasaki, Zushi, Seto Inland Sea, Japan Sea in Japan; Naji Island in China; Taiwan.

서 식 처: 조간대부터 수심 15 m까지. 바위와 자갈.

12) *Tristichotrochus koma* (Shikawa & Habe, 1965) 팽이방석고둥(신칭)
(Plate-Fig. 3)

Tristichotrochus koma Shikawa & Habe, 1965, p. 101-102, pl. 12, figs. 1-2; Higo, 1973, p. 21.

Calliostoma koma: Qi *et al.*, 1989, p. 23.

모식산지: Bungo channel between Shikoku and Kyushu.

관찰재료: 1개체(빈것), 1989. 7. 12, T'onggumi, Scuba.

분 포: Shikoku, Kyushu, Tateyama Bay in Japan; China Sea.

기 재: 패각은 원추형, 나층은 8층. 각고 17.3 mm, 각폭 17.8 mm의 중형종으로서 얇지만 견고하다. 태각은 1 1/2이고 작으며, 밝은 베이지색이다. 체층과 차체층에는 10개의 나선맥이 있는데 윗 층으로 올라갈 수록 그 수가 줄어든다. 황갈색 바탕의 체표에는 밤갈색의 운상 무늬가 있다. 봉합은 뚜렷하고 흑갈색의 띠가 둘러져 있으며, 주연은 각이져서 모가 난다. 체층은 커서 전체의 7/10을 차지한다. 각저는 다소 부풀어 있고 거기에는 12개의 나구가 나 있다. 각구는 사각형이며 회고 진주 광택이 강하며, 외순과 각구의 기저는 얇고 날카롭다. 축순은 회고 두꺼우며 진주 광택이 강하다. 제공은 약간 패어 있다.

뚜껑은 16개의 원으로 이루어진 나선형인데, 혁질이며 투명한 갈색을 띤다.

13) *Monodonta (Neomonodonta) neritoides* (Philippi, 1850) 각시고둥

Trochus neritoides Philippi, 1850, Zeitschr. f. Malak., (1849), p. 170. (cited from Kuroda

et al., 1971); Lischke, 1871, p. 87.

Monodonta neritoides: Dunker, 1882, p. 140, pl. 6, figs. 22-23; Kuroda, 1928, p. 25; Shiba, 1934, p. 17; Kawamoto & Tanabe, 1956, p. 7; Lee, 1956a, p. 4; Lee, 1956b, p. 65; Yamamoto & Habe, 1962, p. 9, pl. 3, fig. 20; Kang *et al.*, 1971, p. 54; Kuroda *et al.*, 1971, p. 47 (in Japanese), p. 32 (in English), pl. 11, figs. 17-18; Kira, 1975, p. 10, pl. 8, fig. 7; Chen *et al.*, 1980, p. 60; Tsi & Ma, 1980, p. 433; Lee *et al.*, 1984, p. 122.

Monodonta (Neodiloma) neritoides: Pilsbry, 1889, Man. of Conch., 11, p. 106, pl. 34, figs. 20-22. (cited from Kuroda *et al.*, 1971).

Monodonta (Melagraphia) neritoides: Hirase, 1941, p. 36, pl. 66, fig. 10.

Diloma (Melagraphina) neritoid: Kuroda, 1941, p. 74.

Diloma neritoides: Oyama, 1959b, *Diloma* • *Monodonta*, fig. 6.

Monodonta (Neomonodonta) neritoides: Higo, 1973, p. 25; Yoo, 1977, p. 47; Habe & Ito, 1979, p. 12, pl. 5, fig. 2; Kim *et al.*, 1979, p. 108; Kim & Choe, 1981, p. 195; Okada, 1981, p. 31; Inaba, 1982, p. 77; Kim & Kwon, 1982, p. 195; Kim & Kwon, 1984, p. 42; Choe & Kim, 1988, p. 157, pl. 6, fig. 1, pl. 17, figs. 1-2; Watanabe & Naruke, 1988, p. 32.

모식산지: 원기재에 기록되어 있지 않음.

관찰재료: 본 실험에서는 사용되지 않았음. 문헌에 의함.

분 포: Ullŭng Island, Pusan (Yŏngdo, Namch'ŏn, Songjŏng, Shinsŏnda, Suyŏng, Tadaep'ŏ, Haeunda), Cheju, Hongdo, Ch'ujado, Kaldo, Tokto, Kŏmundo, Kukto, Hae-gŭm-gang, Chagaedo, Yŏsŏdo, Kadŏkto, Pang ŏjin, Yokjido, Ch'ujado, T'ongyŏng, Namhae Sangju, Sŏgwip'ŏ Pomokri, Yŏsu Tolsan, Changsŭngp'ŏ Kusora, Changho, Chŏnnam, Yŏch'ŏ in Korea; Honshu, Shikoku, Kyushu, Amami Oshima, Southern Hokkaido, Choshi,

Sagami Bay, Asamushi, Futagojima, Kari-basawa, Seto Inland Sea in Japan; Naji Island, Coast of Zhejiang to Coast Guangdong in China; Taiwan.

서 식 처: 조간대의 바위 위나 자갈.

14) *Monodonta (Neomonodonta) perplexa*

(Pilsbry, 1889) 갑장각시고둥

Monodonta perplexa: Kawamoto & Tanabe, 1956, p. 7; Lee, 1956b, p. 66; Kang *et al.*, 1971, p. 54; Kira, 1975, p. 10, pl. 8, fig. 6; Yoo, 1977, p. 47; Kim *et al.*, 1983, p. 102; Lai, 1986, p. 15, pl. 7, fig. 4.

Diloma perplexa: Oyama, 1959b, *Diloma · Monodonta*, fig. 4.

Monodonta (Neomonodonta) perplexa: Higo, 1973, p. 26; Inaba, 1982, p. 77; Watanabe & Naruke, 1988, p. 32.

모식산지: 원기재에 기록되어 있지 않음.

관찰재료: 24개체(빈것 9), 1989. 7. 11, Kulam, Scuba; 10개체(빈것 5), 1989. 7. 11, Kulam, Y.J. Kim; 3개체, 1989. 7. 12, T'onggumi(조간대), B. L. Choe.

분 포: Pusan, Cheju, Hongdo, Ch'ujado, Kōmundo, Aninjin in Korea; Honshu, Shikoku, Kyushu, Japan Sea, Seto Inland Sea in Japan.

15) *Cantharidus hirasei* (Pilsbry, 1901)

꼬마얼룩고둥

Cantharidus (Phasianotrochus) hirasei Pilsbry, 1901a, P. 199, pl. 21, fig. 32; Hirase, 1941, p. 37, pl. 68, fig. 1; Oyama, 1959b, *Cantharidus · Komaitrochus* (1), fig. 1.

Cantharidus hirasei: Pilsbry, 1901b, p. 398, pl. 21, fig. 32; Kawamoto & Tanabe, 1956, p. 7; Kuroda *et al.*, 1971, p. 54 (in Japanese), p. 36 (in English), pl. 12, figs. 11-12; Higo, 1973, p. 29; Habe, 1975, p. 11, pl. 4, fig. 19; Inaba, 1982, P. 77; Choe & Kim, 1988, p. 158, pl. 6, fig. 5, pl. 17, fig. 3-4.

모식산지: Hirado, Nagasaki Pref., Kyushu in Japan.

관찰재료: 1개체, 1989. 7. 11, Kulam, Scuba; 1개체, 1989. 7. 12, T'onggumi, Scuba.

분 포: Sōgwip'o, Namhae Sangju, Tolsando Pangjukp'o, Cheju Sōngsan in Korea; Japan Sea, Seto Inland Sea, Kyushu, Shikoku, Kii Straits, Honshu (Boso Peninsula), Amadaiba-Maruyamadashi in Japan.

서 식 처: 조간대부터 수심 10 m까지. 바위 사이에 서식하는 해조류.

16) *Cantharidus japonicus* (A. Adams,

1853) 남방얼룩고둥

Ziziphinus japonicus A. Adams, 1853, p. 167.

Trochus japonicus: Lischke, 1871, p. 170; Lischke, 1874, p. 66.

Cantharidus (Thalotia) japonicus: Hirase, 1941, p. 37, pl. 68, fig. 2.

Cantharidus japonicus: Kawamoto & Tanabe, 1956, p. 7; Lee, 1956a, p. 3; Lee 1956b, p. 65; Oyama, 1959b, *Cantharidus · Komaitrochus* (1), fig. 7, (2), fig. 6; Kang *et al.*, 1971, p. 54; Kuroda *et al.*, 1971, p. 55 (in Japanese), p. 36 (in English), pl. 12, figs. 3-5; Higo, 1973, p. 29, pl. 8, fig. 4; Kira, 1975, p. 10; Okada, 1981, p. 29; Inaba, 1982, p. 77; Kim & Kim, 1984, p. 193; Kim & Kim, 1986, p. 319; Choe & Kim, 1988, p. 158, pl. 6, fig. 6, pl. 17, fig. 5; Watanabe & Naruke, 1988, p. 33.

Cantharidus hilaris: Yamamoto & Habe, 1962, p. 9, pl. 2, fig. 6.

Cantharidus japonicus forma *hilaris*: Habe, 1975, p. 11, pl. 4, fig. 21.

모식산지: Nagasaki, Kyushu in Japan.

관찰재료: 55개체(빈것 17), 1989. 7. 11, Kulam, Scuba; 4개체(모두 빈것), 1989. 7. 11, Kulam, Y. J. Kim; 23개체(빈것 3), 1989. 7. 12, T'onggumi, Scuba; 1개체, 1989. 7. 12, T'onggumi, B.L.

Choe; 2개체, 1989. 7. 15, Taep'ungch'wi, Scuba; 1개체, 1989. 7. 15, Ch'õnbu, B.L. Choe; 1개체, 1989. 7. 16, Sõmmok, Scuba.

분 포: Yongho, Pusan, Sõgwip'o (gill net), Cheju Sehwa, Ch'ujado in Korea; Southern Hokkaido, Honshu, Shikoku, Kyushu, Kamekiso-Mosaki (9~11 m, 10~13 m), Kasajima, Ebine (16~18 m), Choshi, Hatsuse, Sagami Bay, Seto Inland Sea in Japan.

서 식 처: 조간대부터 수심 20 m까지. 바위에 서식하는 해조류.

17) *Cantharidus callichroa* (Philippi, 1850) 얼룩고둥

Trochus callichroa Philippi, 1850, Zeitschr. f. Malak., 6 (1849), p. 140. (cited from Kuroda *et al.*, 1971).

Gibbula callichroa: Hirase, 1941, p. 37, pl. 68, fig. 4.

Cantharidus callichroa: Kawamoto & Tanabe, 1956, p. 7, pl. 4, fig. 29; Lee, 1956a, p. 3; Oyama, 1959b, *Cantharidus • Komaitrochus* (1), figs. 2-3, *Cantharidus • Komaitrochus* (2), fig. 2; Kang *et al.*, 1971, p. 54; Kuroda *et al.*, 1971, p. 55 (in Japanese), p. 37 (in English), pl. 12, fig. 8-10; Higo, 1973, p. 29; Yoo, 1977, p. 45, pl. 4, figs. 9-10; Okada, 1981, p. 29; Inaba, 1982, p. 77; Kim & Kwon, 1983, p. 320; Kim & Kim, 1984, p. 193; Kim & Kim, 1986, p. 319; Choe & Kim, 1988, p. 159, pl. 7, fig. 1, pl. 17, fig. 6, pl. 18, fig. 1; Watanabe & Naruke, 1988, p. 33.

모식산지: 원기재에 기록되어 있지 않음.

관찰재료: 9개체(모두 빈것), 1989. 7. 11, Kulam, Scuba.

분 포: Pusan (Yõngdo, Chõngsap'o), Ch'õngdõngdo, Pijin, Namhae (Misodo, Sangju) (rocks), Wando Chõngdori, Sõgwip'o, Ulsan Chujõndong in Korea; Southern Hokkaido, Honshu, Shikoku, Kyushu, Akiya, Choshi, Amadaiba-Maruyamadashi, Seto Inland Sea,

Sagami Bay, Funakoshi, Akita Pref. in Japan.

서 식 처: 조간대부터 수심 20 m까지. 바위에 서식하는 해조류.

18) *Cantharidus callichroa bisbalteatus* (Pilsbry, 1901) 두줄얼룩고둥

Cantharidus bisbalteatus Pilsbry, 1901a, p. 199; Pilsbry, 1901b, p. 398, pl. 21, fig. 33.

Cantharidus callichroa bisbalteatus: Oyama, 1959b, *Cantharidus • Komaitrochus* (1), fig. 4, *Cantharidus • Komaitrochus* (2), fig. 3; Yamamoto & Habe, 1962, p. 8, pl. 2, fig. 5; Higo, 1973, p. 29; Habe & Ito, 1979, p. 17, pl. 6, fig. 11; Choe & Kim, 1988, p. 159, pl. 7, fig. 2, pl. 18, figs. 2-3.

Cantharidus callichroa forma *bisbalteatus*: Habe, 1975, p. 11, pl. 4, fig. 18.

모식산지: 원기재에 기록되어 있지 않음.

관찰재료: 5개체(빈것 4), 1989. 7. 11, Kulam, Scuba; 9개체(빈것 3), 1989. 7. 12, T'onggumi, Scuba; 1개체, 1989. 7. 13, Naesujõn, Scuba; 3개체, 1989. 7. 15, Taep'ungch'wi, Scuba; 1개체(빈것), 1989. 7. 16, Sõmmok, Scuba.

분 포: Kuryongp'o (gill net), Cheju (Sõngsan, Sehwa, Sõgwip'o), Namhae Sangju in Korea; Honshu, Kyushu, Japan Sea, West Southern Hokkaido, sezaki, Asamushi in Japan.

서 식 처: 조간대에 서식하는 해조류 사이.

19) *Chlorostoma argyrostoma lischkei* (Tapparone-Canefri, 1874) 밝고둥

Trochus argyrostomus: Lischke, 1869, p. 96, 100, pl. 7, figs. 3-5.

Chlorostoma lischkei Tapparone-Canefri, 1874, Zool. Viag. Int. Globo Freg. Magenta, Malac., p. 64. (cited from Kuroda *et al.*, 1971); Kim & Rho, 1971, p. 13; Habe & Ito, 1979, p. 14, pl. 5, fig. 11.

Chlorostoma argyrostoma basiliratum Pilsbry,

1901, p. 202.

Chlorostoma argyrostoma basilirata: Shiba, 1934, p. 17.

Tegula (Chlorostoma) argyrostoma basilirata: Hirase, 1941, p. 36, pl. 67, fig. 2.

Tegula (Chlorostoma) lischkei: Kawamoto & Tanabe, 1956, p. 8; Lee, 1956b, p. 66; Kang *et al.*, 1971, p. 54.

Chlorostoma argyrostomum: Yamamoto & Habe, 1962, p. 10, pl. 2, figs. 22-24.

Chlorostoma argyrostoma lischkei: Kuroda *et al.*, 1971, p. 57 (in Japanese), p. 38 (in English), pl. 11, figs. 5-7; Higo, 1973, p. 30; Kira, 1975, p. 11, pl. 8, fig. 17; Okada, 1981, p. 32; Inaba, 1982, p. 78; Kim & Kwon, 1982, p. 195; Kim *et al.*, 1983, p. 102; Kim & Yoon, 1985, p. 38; Kim & Kim, 1986, p. 319; Choe & Kim, 1988, p. 159, pl. 7, fig. 4, pl. 18, figs. 4-5; Watanabe & Naruke, 1988, p. 33.

모식산지: Nagasaki in Japan.

관찰재료: 1개체, 1989. 7. 11, Kulam, Y.J. Kim; 1개체, 1989. 7. 12, T'onggumi, Scuba; 4개체, 1989. 7. 13, Naesujön, Scuba; 3개체(빈것 1), 1989. 7. 15, Ch'önbu, B.L. Choe.

분 포: Soando, Yösödo, Pyosön, Pusan, T'ongyöng, Yösu, Kõmundo, Chumunjin, Cheju, Taehüksando, Ch'ujado, Wando Chöngdori, Namhae Sangju, Söngsanp'o, Kuryongp'o Kuman, Chumunjin Yöngjinni, Kanggu, Changsüngp'o Kusora, Ulsan Chujöndong, Sögwip'o, Tolsando, Wando, Chukpyön, Hüksando, Soch'öngdo, Taech'öngdo, Paekryöngdo (fish trap), Namhaedo, Hujin, Aninjin in Korea; Southern Hokkaido, Shikoku, Kyushu, Honshu (Boso Peninsula 이남), Kurosaki, Sagami Bay, Choshi, Seto Inland Sea in Japan; China.

서 식 처: 조간대부터 수심 20 m까지. 바위와 해조류.

20) *Chlorostoma argyrostoma turbinatum*

(A. Adams, 1853) 구멍밭고둥

Chlorostoma turbinatum A. Adams, 1853, p. 182, 183.

Tegula (Chlorostoma) argyrostoma turbinata: Kawamoto & Tanabe, 1956, p. 7, pl. 4, fig. 34; Lee, 1956a, p. 4; Lee, 1956b, p. 66; Kang *et al.*, 1971, p. 54.

Chlorostoma argyrostoma turbinatum: Kim & Rho, 1971, p. 13; Higo, 1973, p. 30; Habe & Ito, 1979, p. 14, pl. 5, fig. 12; Choe & Kim, 1988, p. 160, pl. 7, fig. 3, pl. 18, fig. 6, pl. 19, fig. 1; Watanabe & Naruke, 1988, p. 33.

Omphalius rustics: Yoo, 1977, p. 47, pl. 5, fig. 55.

모식산지: 원기재에 기록되어 있지 않음.

관찰재료: 26개체(빈것 2), 1989. 7. 11, Kulam, Scuba; 1개체, 1989. 7. 11, Kulam, Y.J. Kim; 25개체, 1989. 7. 12, T'onggumi, Scuba; 12개체, 1989. 7. 13, Naesujön, Scuba; 6개체(빈것 1), 1989. 7. 15, Ch'önbu, B.L. Choe; 1개체, 1989. 7. 16, Sömmok(조간대), B.L. Choe; 5개체, 1989. 7. 16, Sömmok, Scuba; 4개체, 1989. 7. 17, Sadong(조간대), B.L. Choe.

분 포: Kukto, Kaldo, Haegümgang, Taech'öngdo, Sönjinp'o, T'ongyöng, Pijin, Taehüksando, Kõmundo, Pusan, Wando, Changsüngp'o Kujora, Hajodo, Samchönp'o (fish market), Kuryongp'o, Namhae Sangju, Kalmokdo, Hujin, Sögwip'o, Ch'öngdüngdo, in Korea; Southern Honshu, Choshi in Japan; China; Taiwan.

서 식 처: 조간대의 바위나 자갈밭.

21) *Omphalius pfeifferi carpenteri*

(Dunker, 1860) 팽이고둥

Chlorostoma carpenteri: Shiba, 1934, p. 17.

Tegula (Omphalius) pfeifferi carpenteri: Kawamoto & Tanabe, 1956, p. 8, pl. 5, figs. 39-40; Lee, 1956a, p. 4; Lee, 1956b, p. 66;

Kang *et al.*, 1971, p. 54.

Chlorostoma (Omphalius) pfeifferi carpenteri: Yamamoto & Habe, 1962, p. 10, pl. 2, figs. 32-33.

Omphalius pfeifferi carpenteri: Kim & Rho, 1971, p. 13; Kira, 1975, p. 11, pl. 8, fig. 18; Yoo, 1977, p. 46, pl. 5, figs. 3-4, 8; Habe & Ito, 1979, p. 15, pl. 5, fig. 13; Kim & Choe, 1981, p. 195, 196; Kim & Kim, 1984, p. 194; Kim & Kim, 1986, p. 319; Choe & Kim, 1988, p. 161, pl. 7, fig. 6, pl. 19, figs. 4-5.

모식산지: 원기재에 기록되어 있지 않음.

관찰재료: 3개체(빈것 1), 1989. 7. 11, Kulam, Y.J. Kim; 8개체(빈것 1), 1989. 7. 11, Kulam, Scuba; 7개체, 1989. 7. 11, Todong(자망), B.L. Choe; 36개체(빈것 1), 1989. 7. 13, Naesujön, Scuba; 1개체, 1989. 7. 14, Hyölam, Scuba; 1개체, 1989. 7. 15, Taep'ungch'wi, Scuba; 2개체, 1989. 7. 15, Taep'ungch'wi, B.L. Choe; 2개체, 1989. 7. 15, Taep'ungch'wi(조간대), B.L. Choe; 4개체, 1989. 7. 15, Ch'önbu, B.L. Choe; 1개체, 1989. 7. 16, Sömmok, Scuba.

분 포: Ullöng Island, P'yosön, Söngsan Mosölp'o, Cheju, Sögwip'o, Southern Coast, Ch'ujado, Wando, Taebyön, T'ongyöng, Pusan, Yöngil, Ulsan, Chujöndong, Kanggu, Changsüngp'o Kujora, Kuryongp'o Kuman, Namhae Sangju, Mosölp'o in Korea; Japan Sea, Hokkaido, Honshu, Shikoku, Western Kyushu, Mutsu Bay in Japan.

서 식 처: 조간대의 바위나 자갈밭.

22) *Omphalius rusticus* (Gmelin, 1791)

보말고둥

Trochus rusticus Gmelin, 1791, Syst. Nat., ed. 13, p. 3572. (cited from Kuroda *et al.*, 1971).

Tegula (Omphalius) rustica: Lee, 1956b, p. 66; Kang *et al.*, 1971, p. 54.

Chlorostoma rusticum: Pilsbry, 1889, Man. of Conch., 11, p. 166, pl. 25, figs. 1-4. (cited

from Kuroda *et al.*, 1971); Shiba, 1934, p. 17; Chen *et al.*, 1980, p. 60; Ma, 1982, p. 29.

Omphalius rusticum: Kira, 1975, p. 11, pl. 8, fig. 16.

Omphalius rusticus: Kuroda *et al.*, 1971, p. 59 (in Japanese), p. 39 (in English), pl. 11, fig. 20; Inaba, 1982, p. 78.

Chlorostoma (Omphalius) rusticum: Yamamoto & Habe, 1962, p. 10, pl. 2, figs. 19-20.

Tegula (Chlorostoma) rustica: Nomura & Hatai, 1928, p. 97.

모식산지: China.

관찰재료: 본 실험에서는 사용되지 않았음. 문헌에 의함.

분 포: Ullöng Island Todong(gill net), Kyökp'o, Anmyöndo, Pyönsan, Wando, Samch'önp'o, Shinsudo, Pangp'o, Toch'odo, Pianto, Namhae Mijodo, Oenarudo Ponghori, Kuryongp'o Kuman, Masan Sujöng, Yösu Tolsando, Cheju, Soyado, Anhöng, Taech'öngdo, Changsüngp'o Kujora, Yönp'o, Soch'öngdo, Hüksando, Hamnam, Kangwön, Kyöngnam, Hwanghae, Inch'ön, Kulöpto, Soando, Söngdo, Tongkökyölbido, Kungshido, Paeknyöngdo, Kangnöng, Yokchido in Korea; Hokkaido, Honshu, Shikoku, Kyushu; China; Taiwan; Hong Kong; Siberia.

서 식 처: 조간대부터 수심 20 m까지. 바위나 자갈밭.

23) *Alcyna ocellata* (A. Adams, 1860)

유리밥고둥 (신칭) (Plate-Fig. 4)

Alcyna ocellata Adams, 1860, p. 408; Adams, 1868, p. 43, pl. 4, fig. 8; Dunker, 1882, p. 142; Kuroda & Habe, 1954, p. 86, figs. 7, 19; Habe, 1955, Ser. B, No. 21; Kawamoto & Tanabe, 1956, p. 7, pl. 4, fig. 30; Oyama, 1958, *Alcyna • Chrysostoma*, figs. 1-2; Higo, 1973, p. 30; Habe, 1975, p. 11, pl. 4, fig. 23; Okada, 1981, p. 30; Inaba, 1982, p. 77; Watanabe & Naruke, 1988, p. 33; Robertson,

1985, p. 20, pl. 11, figs. 1-2.

Alcyna rubra Pease, 1861b. (cited from Kay, 1979).

Alcyna kapiolaniae Pilsbry, 1917. (cited from Kay, 1979).

Alcyna kuhnsi Pilsbry, 1917. (cited from Kay, 1979).

Alcyna humerosa Pilsbry, 1917. (cited from Kay, 1979).

Thalotia ocellata: Kay, 1979, p. 52, fig. 14-K, L.

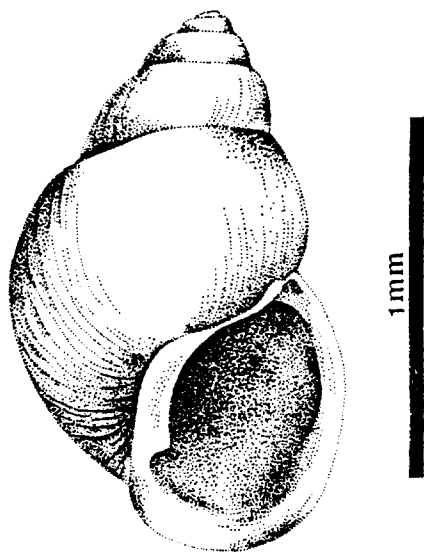
모식산지: Sea of Japan.

관찰재료: 7개체(모두 빈것), 1989. 7. 11, Kulam, Scuba; 2개체(모두 빈것), 1989. 7. 12, T'onggumi, Scuba.

분 포: Japan Sea, Sagami Bay, Honshu to Kyushu, Inatori, Izu Peninsula, Seto Inland Sea, Choshi in Japan; Hawaii.

서 식 처: 조간대의 바위 위에 서식하는 해조류.

기 재: 패각은 난원형이며 나층은 5층으로 나뉘어 높고 각 나층은 불룩하게 팽배되어 있다. 봉합은 깊지 않으나 명확하다. 패각의 각고는 4.1 mm, 각경



Textfig. 3. *Alcyna ocellata* A. Adams, 1860
유리뱀고둥.

은 2.6 mm인 미소한 종이다. 태각은 백색이고 나층은 연분홍색이며, 각 층에는 황색점이 있는 바탕에 주홍색 띠가 나선백을 따라 있는데 체층에는 10줄 내외가 있고 위로 갈수록 그 수가 줄어들고 체층의 주연과 견각에 있는 것은 특히 강해서 뚜렷하다. 개체에 따라 황토색, 주홍색, 흑갈색 등 변이가 많고 무늬가 없는 경우도 있다. 패각은 얇고 투명하며 매끈하고 광택이 난다. 체층은 전체의 약 2/3를 차지하며 견각과 주연은 둥글고 각구는 난원형이다. 내순은 백색이며 활층이 발달하고 백색을 띤다. 축순의 중앙 안쪽에는 하나의 치상 돌기가 각구를 향하여 뚜렷하게 돌출되어 있다. 외순은 얇고 둥글게 굽어 있으며 안쪽으로는 표면의 줄무늬가 비쳐 보인다.

Family Stomatellidae 넓은입고둥 과

24) *Stomatolina rubra* (Lamarck, 1882)

넓은입고둥

Stomatia rubra: A. Adams, 1850, p. 35; Lischke, 1874, p. 69; Dunker, 1882, p. 146, pl. 6, figs. 11-13; Tryon, 1890, p. 33, pl. 51, figs. 26-28, pl. 54, figs. 31-33; Hirase, 1941, p. 34, pl. 63, fig. 7; Kira, 1975, p. 14, pl. 9, fig. 16.

Stomatia angulata: Sowerby, 1874, Conch. Icon., *Stomatia*, sp. 10. (cited from Kuroda *et al.*, 1971).

Stomatella rubra Lamarck, 1882, Anim. S. Vert., 6 (2), p. 210. (cited from Kuroda *et al.*, 1971).

Stomatia (Stomatolina) rubra: Kawamoto & Tanabe, 1956, p. 9.

Stomatolina rubra: Kuroda *et al.*, 1971, p. 67 (in Japanese), p. 44 (in English), pl. 12, figs. 1-2; Higo, 1973, p. 34; Inaba, 1982, p. 79; Choe & Kim, 1988, p. 163.

Stomatolina angulata Habe, 1975, p. 17, pl. 6, fig. 17.

모식산지: Philippines.

관찰재료: 3개체(빈것 1), 1989. 7. 11, Kulam, Scuba; 1개체, 1989. 7. 12, T'onggumi, Scuba; 1개체, 1989. 7. 16, Sömmok, Scuba.

분 포: Korea; Honshu (Boso Peninsula), Shikoku, Kyushu, Amami-Oshima, Kamekisho-Mosaki (15 m), Kii Peninsula, Seto Inland Sea in Japan; Philippines; Western Pacific.

서 식 처: 조간대부터 수심 20 m까지. 바위나 자갈밭.

Family Turbinidae 소라 과

25) *Batillus cornutus* (Lightfoot, 1786)

소라

Turbo cornutus Lightfoot, 1786, Cat. Portland Mus., p. 147. (cited from Kuroda *et al.*, 1971); Lischke, 1869, p. 87; Lischke, 1871, p. 81; Lischke, 1874, p. 62; Sowerby, 1930, p. 24; Okada & Fujita, 1933, p. 108, figs. 1, 6, 9; Shiba, 1934, p. 18; Chen *et al.*, 1980, p. 60; Tsi & Ma, 1980, p. 433; Ma, 1982, p. 30; Dong, 1983, p. 197; Samata, 1988, p. 127-140.

Turbo japonicus Reeve, 1848, Conch. Icon., Turbo, sp. 33b. (cited from Kuroda *et al.*, 1971).

Turbo (Maromorotoma) coronatus: Nomura & Hatai, 1928, p. 97.

Turbo (Batillus) cornutus: Hirase, 1941, p. 41, pl. 73, fig. 3; Kuroda, 1941, p. 77; Kawamoto & Tanabe, 1956, p. 10, pl. 5, figs. 41-42; Lee, 1956a, p. 4; Lee, 1956b, p. 67; Oyama, 1960, *Turbo* (2), figs. 5-11; Kang *et al.*, 1971, p. 55; Oyama, 1973, p. 17, pl. 1, fig. 25; Kira, 1975, p. 16, pl. 10, figs. 5a, 5b; Habe & Ito, 1979, p. 5, pls. 1-2, figs. 5-7; Habe, 1983, p. 418, pl. 1, fig. 2; Hayashi, 1983, p. 212.

Batillus cornutus: Kim & Rho, 1971, p. 13; Kuroda *et al.*, 1971, p. 70 (in Japanese), p. 46 (in English), pl. 13, figs. 1-2, pl. 15, fig. 8; Higo, 1973, p. 38; Yoo, 1977, p. 38, pl. 2, figs. 1-4; Kim & Choe, 1981, p. 195, 196; Okada, 1981, p. 37; Inaba, 1982, p. 80; Kim & Kwon, 1982, p. 195; Kim & Kim, 1984, p. 194; Kim

& Kim, 1986, p. 320; Choe & Kim, 1988, p. 164, pl. 8, fig. 4, pl. 20, figs. 4-5; Watanabe & Naruke, 1988, p. 34.

모식산지: China Sea.

관찰재료: 15개체(빈것 1), 1989. 7. 11, Kulam, Scuba; 1개체, 1989. 7. 11, Todong (자망), B.L. Choe; 6개체, 1989. 7. 12, T'onggumi, Scuba; 3개체, 1989. 7. 13, Naesujön, Scuba; 1개체, 1989. 7. 15, Taep'ungch'wi, Scuba; 3개체, 1989. 7. 16, Sömmok, Scuba.

분 포: Ullüng Island, Mokp'o, Songdo, Kö-mundo, Marado, Hüksando, Chukdo, Sögwip'o, East Coast, Yösödo, Pusan, Cheju (Sehwa, Söngsan, Mosülpo, Pyosön), Namhaedo Sangju in Korea; Southern Hokkaido, Honshu, Shikoku, Kyushu, Kamekisho-Mosaki, Izu-Oshima Island, Kumomi, Izu Peninsula, Kanto, Seto Inland Sea, Nagasaki, Manazuru, Kanaguwa Pref., Shirahama, Toshima Island in Japan; Naji Island Coast of Zhejiang to Coast of Guangdong in China; Taiwan; Hong Kong.

서 식 처: 조간대부터 수심 20 m까지의 바위.

26) *Pomaulax japonicus* (Dunker, 1844)

납작소라

Trochus japonicus Dunker, 1844, in Philippi, Abbild. Besch. Conchyl., 1(8), p. 187, pl. 5, fig. 1. (cited from Kuroda *et al.*, 1971).

Pomaulax japonicus: Dunker, 1882, p. 130; Lee, 1958, p. 16; Kang *et al.*, 1971, p. 55; Kim & Rho, 1971, p. 13; Higo, 1973, p. 40; Habe, 1975, p. 21, pl. 7, fig. 20; Yoo, 1977, p. 38, pl. 2, figs. 5-6; Kim *et al.*, 1979, p. 108; Kim & Choe, 1981, p. 196; Okada, 1981, p. 39; Choe & Kim, 1988, p. 167, pl. 9, fig. 3, pl. 21, fig. 6, pl. 22, fig. 1; Watanabe & Naruke, 1988, p. 35.

Astraliium japonicum Pilsbry, 1888, Man. of Conch., 10, p. 243, pl. 58, figs. 63, 64. (cited from Kuroda *et al.*, 1971).

Pomaulax japonica: Kuroda *et al.*, 1971, p.

76 (in Japanese), p. 50 (in English), pl. 4, fig. 1.

모식산지: Japan.

관찰재료: 10개체(빈것 2), 1989. 7. 11, Todong (자망), B.L. Choe; 2개체(빈것 2), 1989. 7. 12, T'onggumi, Scuba; 1개체(빈것), 1989. 7. 16, Sömmok, Scuba; 6개체(빈것 3), 1989. 7. 17, Sadong (자망), B.L. Choe.

분 포: Ullüng Island Todong (gill net), Kaldo, Sögwip'o (gill net), Cheju Sehwa in Korea; Honshu, Shikoku, Kyushu, Seto Inland Sea, Sagami Bay in Japan.

서 식 처: 조간대부터 수심 20~50 m까지. 바위.

27) *Homalopoma nocturnum* (Gould, 1861) 팔알고둥

Turbo nocturnus Gould, 1861, Proc. Boston Soc. Nat. Hist., 8, p. 22. (cited from Kuroda *et al.*, 1971); Habe, 1960, p. 16.

Collonia rubra Dunker, 1882, p. 128, pl. 12, figs. 7-9.

Collonia nocturnus Pilsbry, 1888, Man. of Conch., 10, p. 256. (cited from Kuroda *et al.*, 1971).

Leptothyra rubra laeviscostata Pilsbry, 1901b, p. 398.

Homalopoma rubrum: Kawamoto & Tanabe, 1956, p. 10; Lee, 1956b, p. 67; Kang *et al.*, 1971, p. 55.

Homalopoma nocturnum: Kuroda *et al.*, 1971, p. 77 (in Japanese), p. 50 (in English), pl. 15, figs. 16-17; Higo, 1973, p. 40; Habe, 1975, p. 19, pl. 7, fig. 7; Yoo, 1977, p. 55, pl. 7, figs. 9-10; Habe & Ito, 1979, p. 19, pl. 6, fig. 23; Kim & Choe, 1981, p. 196; Okada, 1981, p. 40; Inaba, 1982, p. 80; Kim *et al.*, 1983, p. 102; Kim & Kim, 1984, p. 194; Lee *et al.*, 1984, p. 122; Kim & Yoon, 1985, p. 38; Kim & Kim, 1986, p. 320; Choe & Kim, 1988, p. 197, pl. 9, fig. 4; Watanabe & Naruke, 1988, p. 35.

Homalopoma rubrum laeviscostatum: Kira, 1975, p. 20, pl. 12, fig. 3.

Homalopoma ruber: Habe & Ito, 1979, p. 19.

모식산지: Simoda (=Shimoda), Izu Peninsula in Japan.

관찰재료: 2개체, 1989. 7. 17, Sadong (통발), B. L. Choe.

분 포: Ullüng Island Todong (gill net), Kömundo, Pusan Ch'öngsap'o, Kuryongp'o (gill net), Namhae Sangju, Chejudo, Changho, Samch'önp'o, Tolsando Imp'o, Ulsan Chujöndong, Kanggu, Changsüngp'o Kujora in Korea; Southwestern Hokkaido, Honshu, Shikoku, Kyushu, Choshi, Sagami Bay in Japan.

서 식 처: 조간대부터 수심 20 m까지. 바위와 자갈밭.

28) *Homalopoma sangarensis* (Schrenck, 1862) 산팔알고둥

Turbo sangarensis Schrenck, 1862, (in 1862-1863) 4: 409. (cited from Ruhoff, 1980); 1867, 2: 363, pl. 16, figs 6-11. (cited from Ruhoff, 1980); Ruhoff, 1980, p. 480.

Homalopoma sangarensis: Kawamoto & Tanabe, 1956, p. 10; Yamamoto & Habe, 1962, p. 13, fig. 8; Higo, 1973, p. 40; Oyama, 1973, p. 16, pl. 3, fig. 8; Habe, 1975, p. 19, pl. 7, fig. 8; Habe & Ito, 1979, p. 19, pl. 6, fig. 24; Tomita & Mizushima, 1984, p. 333; Choe & Kim, 1988, p. 168, pl. 9, fig. 5, pl. 22, figs. 2-3.

모식산지: Asamushi in Japan.

관찰재료: 3개체(모두 빈것), 1989. 7. 11, Kulam, Scuba; 3개체, 1989. 7. 12, T'onggumi, Scuba; 8개체(빈것 1), 1989. 7. 16, Sömmok, Scuba; 2개체, 1989. 7. 17, Sadong (통발), B.L. Choe.

분 포: Wando Chöngdori, Samch'önp'o Shinsudo, Pusan Ch'öngsap'o, Namhae Sangju (rocks), Kuryöngp'o, Masan Sujöng in Korea; Honshu, Hokkaido in Japan; Siberia.

서 식 처: 수심이 얇은 곳의 해조류.

Family Phasianellidae 유리고둥 과

29) *Hiloa megastoma* (Pilsbry, 1895)

분홍 유리고둥

Phasianella megastoma Pilsbry, 1895, Cat. Mar. Moll. Japan, p. 90, pl. 8, fig. 8. (cited from Kuroda *et al.*, 1971); Kuroda & Habe, 1954, p. 86, figs. 2-3.

Eotricolia megastoma: Kawamoto & Tana-be, 1956, p. 11.

Hiloa megastoma: Kang *et al.*, 1971, p. 55; Kuroda *et al.*, 1971, p. 81 (in Japanese), p. 53 (in English), pl. 106, fig. 23; Higo, 1973, p. 41; Habe, 1975, p. 20, pl. 7, fig. 10; Okada, 1981, p. 41; Inaba, 1982, p. 81; Kim & Kim, 1984, p. 194; Watanabe & Naruke, 1988, p. 35.

Hiloa tristis: Habe & Ito, 1979, p. 20.

모식산지: Nemoto, Boshu (Boso Peninsula, Chiba Pref.) in Japan.

관찰재료: 7개체(모두 빈것), 1989. 7. 11, Kulam, Scuba.

분 포: Taesambudo in Korea; Southern Hokkaido, Honshu, Shikoku, Kyushu, Sagami Bay, Bōsō Peninsula, Seto Inland Sea, Mutsu Bay, Choshi in Japan.

서 식 처: 조간대부터 수심 20 m까지. 바위에 서식하는 해조류.

결 론

지금까지 울릉도 해산 원시복족류에 관하여는 3과 8종이 보고되었고 본 연구에서는 21종의 울릉도 미기록 종을 추가하여 모두 7과 29종이 되었다. 그 중 *Monodonta* (*Neomonodonta*) *neritoides* (Philippi, 1850), *Omphalius rusticus* (Gmelin, 1791) 등 2종은 문헌에 의한 것이었다. 이들 29종의 해산 원시복족류 중 *Tugali decussata* A. Adams, 1852; *Tristichotrochus koma* Shikawa & Habe, 1965; *Alcyra ocellata* A. Adams, 1860 등 3종은 한국 미기록종이다.

사 사

본 연구에 참고한 많은 문헌을 보내 주시고 동정을 감수하여 준 일본 국립과학 박물관의 波部忠重 박사와 문헌을 보내주시고 일부 복사에 협조하여 준 일본 Kyushu 대학의 Akihiko Matsukuma 박사 및 Nara 여자대학의 Keiji Wada 박사에게 심심한 사의를 표한다.

참 고 문 헌

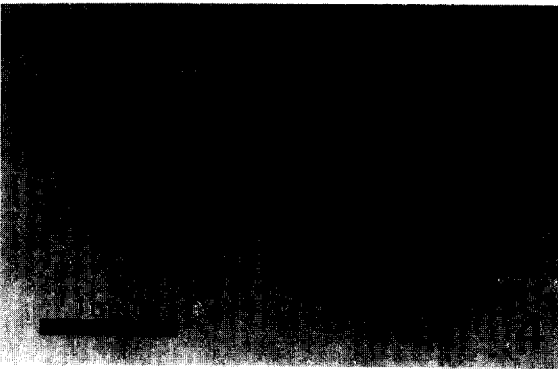
- Adams, A. (1850) An arrangement of Stomatellidae, including the characters of a new genus and of several new species. *Proc. Zool. Soc. London*, 29-40
- Adams, A. (1852) A catalogue of the species of *Emarginula*, a genus of gastropodous mollusca, belonging to the family Fissurellidae in the collection of H. Cuming Esq. *Proc. Zool. Soc. London*, 1851: 89-92
- Adams, A. (1853) Contributions towards a monograph of the Trochidae, a family of gastropodous mollusca. *Proc. Zool. Soc. London*, 1851: 150-192
- Adams, A. (1860) On some new genera and species of Mollusca from Japan. *Ann. Mag. Nat. Hist.*, 5(3): 405-413
- Adams, A. (1868) Note sur quelques nouveaux genres de mollusques du Japon, par M. Arthur Adams (1). *Jour. De Conchyl.*, 16: 40-56, pl. 4
- Chau, Y., Cheng, J. and Chau, T. (1982) 大連海産軟體動物誌, 1-167, pls. 1-22. (in Chinese)
- Chen, S., Wang, Y., Sun, J., Qi, Z., Ma, X. and Zhuang, Q. (1980) Studies on molluscan fauna of Nanji Islands, East China Sea. *Collected Oceanic Works*, 3(2): 59-66
- Choe, B.L. (1986) The ecological and faunal study on the benthic animals in the lower reaches of the Yōngsan River. *Rep. KACN.*, 8: 25-42
- Choe, B.L. and Kim, H.S. (1988) On the classification and distribution of archeogastropods from Korean Waters. *Korean J. Syst. Zool. Special Issue*, 2: 135-198
- Christiaens, J. (1977) The limpets of Hong Kong with descriptions of seven new species and

- subspecies. pp. 61-84, *Proc. 1st Intn. Workshop on the Malacofauna of Hong Kong and Southern China, Hong Kong*
- Christiaens, J. (1980) Supplementary notes on Hong Kong limpets. pp. 459-468, *Proc. 1st Intn. Marine Biol. Workshop: The Marine Flora and Fauna of Hong Kong and Southern China, Hong Kong*
- Dong, Z. (1983) Taxonomic study of the Trochacea of the Xisba Islands, Guangdong Province, China. *Studia Marina Sinica*, **20**(20): 185-204, pl. 11
- Dunker, G. (1861) Mollusca Japonica Descripta et Tabulis Tribus Iconum. pp. 1-36, pls. 1-3, *Stuttgartiae, Typis et Sumptibus E. Schweizerbart*
- Dunker, G. (1882) Index Molluscorum Maris Japonici. pp. 1-301, pls. 1-16, *Cassellis Cattorum, Sumptibus Theodori Fischer*
- Fujita, T. (1929) Notes and distributions of some new and noteworthy species from Tateyama Bay in the report. *Venus*, **1**(3): 88-97.
- Gould, A.A. (1859) Descriptions of shells, collected by the North Pacific exploring expedition. *Proc. Boston Soc. Nat. Hist.*, **7**: 161-168
- Habe, T. (1944) 日本産 ウノアツ科 Lottiidae(= Acmaeidae)に就いて. *Venus*, **13**(5-8): 171-187 (*in Japanese*)
- Habe, T. (1955) *Alcyona ocellata* A. Adams (Trochidae). *Illustrated Catalogue of Japanese Shells, Ser. B., No. 21*
- Habe, T. (1960) Notes on the species of Japanese shells described by A. A. Gould. *Venus*, **21**(1): 10-31
- Habe, T. (1975) Shells of the Western Pacific in colour. pp.1-233, pls. 1-66, *Hoikusha Co.*
- Habe, T. (1978) Notes on seven species of shells described by A.A. Gould. *Venus*, **37**(4): 217-222
- Habe, T. (1983) Edible Molluscs in Japan. pp. 415-453, pls. 1-6, *Proc. 2nd N. Pac. Aquaculture Symp. Sep. 1983. Tokyo and Shimizu*
- Habe, T. and Ito, K. (1979) Shells of the world in color. I. The Northern Pacific. pp. 1-176, *Hoikusha Pub. Co. Japan*
- Habe, T. and Kosuge, S. (1964) A list of the Indo-Pacific molluscs, concerning to the Japanese molluscan fauna (I). Superfamily Pleurotomarioidea. pp. 1-8, *National Sci. Museum, Japan*
- Hayashi, I. (1983) Shell morphology of veliger larvae and juveniles of the Japanese top shell, *Turbo (Batillus) cornutus*. *Venus*, **42**(2): 212-216
- Hayashi, I. (1988) Habitat preference, diurnal activity pattern and predators of the artificially bred juvenile abalone *Haliotis discus discus*. *Venus*, **47**(2): 104-120
- Higo, S. (1973) A catalogue of molluscan fauna of the Japanese Islands and the adjacent area. pp. 1-397, *Bio. Soc. Nagasaki Pref., Nagasaki*
- Hirase, S. (1941) A collection of Japanese shells with illustrations in natural colours. pp. 1-217, pls. 1-129, *Matsumura Sanshodo Co.*
- Hong, J.S. (1982) On the distribution pattern of intertidal organisms in Deogjeog Islands, western coast of Korea. *Rep. on the Survey of Natural Environ. in Korea*, **4**(1): 307-324
- Inaba, A. (1982) Molluscan fauna of the Seto Inland Sea, Japan. pp. 1-181, pls. 1-4, *Hiroshima Shell Club*
- Ino, T. (1980) Fisheries in Japan-abalone and oyster. pp. 1-225, *Japan Marine Products Photo Materials Associations*
- Kamita, T. and Sato, T.N. (1941) Marine fauna at Jinsen Bay, Corea. *Journal of Chosen Natural History Society*, **8**(30): 1-3
- Kang, Y.S. (Editor in chief) (1971) *Nomina Animalium Koreanorum* (3). pp. 1-180, *Hyang Moon Co., Seoul*
- Kawamoto, T. and Tanabe, J. (1956) Catalogue of molluscan shells of Yamaguti Prefecture. pp. 1-171, pls. 1-25, *Yamaguti Prefectural Yamaguti Museum*
- Kay, E.A. (1979) Hawaiian marine shells. Reef and Shore Fauna of Hawaii, Section 4 (Mollusc): 1-633
- Kim, H.S. (1973) Report on a collection of animals from Baegryeong I. and Daecheong I. *College Review*, **19**: 427-436
- Kim, H.S. and Choe, B.L. (1981) The fauna of marine invertebrate in Ulreung Is. and Dogdo Is. *Rep. KACN.*, **19**: 193-200
- Kim, H.S. and Kim, I.H. (1984) Marine invertebrate fauna of Kōmundo I., Taesambudo I. and Sangpaekdo I. *Rep. on the Survey of Natural Environ. in Korea*, **4**: 181-206
- Kim, H.S. and Kim, I.H. (1986) Marine invertebrate fauna of Ch'ujado Islands. *Rep. on the*

- Survey of Natural Environ. in Korea*, 5: 311-332
- Kim, H.S. and Kwon, D.H. (1982) Marine invertebrate fauna in the vicinity of Wando Island. *Rep. on the Survey of Natural Environ. in Korea*, 2(1): 187-206
- Kim, H.S. and Kwon, D.H. (1983) Marine invertebrate fauna in the vicinity of Jindo Island. *Rep. on the Survey of Natural Environ. in Korea*, 3: 313-336
- Kim, H.S. and Kwon, D.H. (1984) The fauna and distribution of mollusks in the lower reaches of the Naktong River where migratory birds flying, *Nature Conservation*, 46: 39-45
- Kim, H.S. and Lee, K.S. (1978) Report on a collection of marine animals from Donggyeogyeolbi I., Seogdo I., and Gungsi I. *Rep. KACN.*, 12: 97-101
- Kim, H.S., Lee, K.S., Koh, C.H., Kim, I.H., Suh, B. Y. and Sung, N. (1983) Studies on the marine benthic communities in inter- and subtidal zones. I. Analysis of benthic community structures at Aninjin, eastern coast of Korea. *Proc. Coll. Natur. Sci., SNU.*, 8(1): 71-108
- Kim, H.S. and Rho, B.J. (1971) On the distribution of the benthic animals of Korean coastal seas. 1. Jeju Island region. *Rep. IBP.*, 5: 7-27
- Kim, H.S., Rho, B.J., Hong, S.Y., Kim, I.H., Shin, S. and C.H. Han (1979) The marine invertebrate fauna in the southern part of Geoje Island and it's adjacent five islands. *Rep. KACN.*, 14: 103-126, pls. 1-2
- Kim, H.S. and Yoon, S.M. (1985) The marine mollusks and arthropods in Hujin, Kang-won-do. *Nature Conservation*, 50: 35-42
- Kira, T. (1961) On three new species of *Notoacmea*. *Venus*, 21: 292-295, Textfigs. 1-3
- Kira, T. (1975) Shells of the Western Pacific in color. pp. 1-224, pls. 1-72, *Hoikusha Co.*
- Kuroda, T. (1928) Catalogue of the shell-bearing Mollusca, Amami-Ôshima. pp. 21-84
- Kuroda, T. (1941) A catalogue of molluscan shells from Taiwan (Formosa), with descriptions of new species. *Mem. of Fac. of Sci. and Agri., Taihoku Imp. Univ., Japan*, 15(4): 65-216, pls. 1-7
- Kuroda, T. and Habe, T. (1954) New genera of Japanese marine gastropods. *Venus*, 18(2): 84-97
- Kuroda, T., Habe, T. and Oyama, K. (1971) The sea shells of Sagami Bay. pp. 1-484 (*in Japanese*), 1-304 (*in English*), pls. 1-64, 106-114, *Maruzen Co.*
- Lai, K.Y. (1986) Marine gastropods of Taiwan(I). pp. 1-49, *Taiwan Museum*.
- Lan, T.C., Shih, J.R., Kang, C.S. and Lai, K.Y. (1983) 貝友. 中華民國 貝類學會, 7: 9-21 (*in Chinese*)
- Lee, B.D. (1956a) Catalogue of molluscan shells in Pusan Region. *Pusan Fisheries College*, 1: 1-17
- Lee, B.D. (1956b) The catalogue of molluscan shells of Korea. *Bull. Fish. Coll.*, 1(1): 53-100
- Lee, B.D. (1958) Unrecorded species of molluscan shells in Korea. *Bull. Fish. Coll.*, 2(1-2): 15-26
- Lee, I.K., Kim, H.S., Koh, C.H., Kang, J.W., Hong, S.Y., Boo, S.M., Kim, I.H. and Kang, Y.C. (1984) Studies on the marine benthic communities in inter- and subtidal zones. II. Qualitative and quantitative analysis of the community structure in south-eastern coast of Korea. *Pro. Coll. Natur. Sci., SNU.*, 9(1): 71-126
- Lee, I.K., Kim, H.S., Choe, B.L. and Lee, H.B. (1985) Studies on the marine benthic communities in inter- and subtidal zones. III. Qualitative and quantitative analysis of the community structure in western coast of Korea. *Proc. Coll. Natur. Sci., SNU.*, 10(2): 57-100
- Lischke, C.E. (1869) Japanische Meeres-Conchylien. 1: 1-191, pls. 1-14
- Lischke, C.E. (1870) Diagnosen neuer Meeres-Conchylien von Japan. *Malak. Blatt.*, 17: 23-29
- Lischke, C.E. (1871) Japanische Meeres-Conchylien. 2: 1-184, pls. 1-14
- Lischke, C.E. (1874) Japanische Meeres-Conchylien. 3: 1-123, pls. 1-9
- Ma Xiutong (1982) 我國產 海產貝類及其採集. 海洋出版社, 1-166, pls. 1-10 (*in Chinese*)
- Murata, B. (1936) 鮮滿動物通鑑: Mollusca. 目白書院, 632-661 (*in Japanese*)
- Nomura, S. and Hatai, K. (1928) 朝鮮沿岸ニ於ケル 貝類分布ノ概況. *J. Chosen Natural Hist. Soc.*, 6: 92-100 (*in Japanese*)
- Okada, K. (1981) New illustrated encyclopedia of the fauna of Japan (II). pp. 1-208, *Hokuryukan*
- Okada, Y. and Fujita, T. (1933) On the distribution of the Japanese species of the genus *Turbo*. *Venus*, 4(2): 101-113, pls. 1-9
- Oyama, K. (1958) The molluscan shells II. *Science & Photography Club. Tokyo, Japan*

- Oyama, K. (1959a) The molluscan shells I. *Resources Exploitation Institute*
- Oyama, K. (1959b) The molluscan shells III. *Science & Photography Club. Tokyo, Japan*
- Oyama, K. (1960) The molluscan shells IV. *Resources Exploitation Institute*
- Oyama, K. (1963) The molluscan shells VI. *Resources Exploitation Institute*
- Oyama, K. (1973) Revision of Matajiro Yokoyama's type Mollusca from the tertiary and quaternary of the Kanto Area. *Paleontological Society of Japan Special Papers No. 17*, 1-148, pls. 1-57
- Pilsbry, H.A. (1901a) New mollusca from Japan, the Loo Choo Islands, Formosa and the Philippines. *Proc. Acad. Nat. Sci. Phila.*, **53**: 193-210
- Pilsbry, H.A. (1901b) The Japanese marine, land and fresh-water Mollusca. *Proc. Acad. Nat. Sci. Phila.*, **53**: 385-408, pls. 19-21
- Powell, A.W. (1973) The patellid limpets of the world (Patellidae) in Indo-Pacific Mollusca. Vol. 3, No. 15. *Delaware Museum of Natural History*
- Qi, Z., Ma, X., Wang, Z., Lin, G., Xu, F., Dong, Z., Li, F. and Lu, D. (1989) Mollusca of Huanghai and Bohai. *Agricultural Publishing House*, 14-143
- Robertson, R. (1985) Archeogastropod biology and the systematics of the genus *Tricolia* (Trochacea: Tricoliidae) in the Indo-West-Pacific. *Monographs of Marine Mollusca*, **3**: 1-38
- Ruhoff, F.A. (1980) Index to the species of] Mollusca introduces from 1850 to 1870. pp. 480, *Smithsonian Institution Press*
- Samata, T. (1988) Studies on the organic matrix in molluscan shells- I. amino acid composition of the organic matrix in the nacreous and prismatic layers. *Venus*, **47**(2): 127-140
- Shiba, N. (1934) Catalogue of the molluscs of Chosen (Corea). *J. Chosen Natural Hist. Soc.*, **18**: 6-31 (in Japanese)
- Shikawa, T. and Habe, T. (1965) A new species of the genus *Tristichotrochus*. *Venus*, **24**(2): 101-102
- Sowerby, A.C. (1930) The naturalist in Manchuria. Vol. 5. The invertebrates and flora of the manchurian region. pp. 1-224, *Tientsin Press*
- Tomita, K. and Mizushima, T. (1984) Mollusks on leaves of *Zostera Marina* in Notsuke Bay-I. Fauna and growth of the major three species. *Venus*, **43**(4): 331-338
- Tryon, G.W. (cont. H. A. Pilsbry) (1890) Manual of conchology; structural and systematic, Vol. 12: Stomatellidae, Scissurellidae, Pleurotomariidae, Haliotidae, Scutellinidae, Addisoniidae, Cocculinidae, Fissurellidae. 1-323, pls. 1-68 *Conchological Section, Academy of Natural Sciences*
- Tsi, C.Y. and Ma, S.T. (1980) A preliminary checklist of the marine Gastropoda and Bivalvia (Mollusca) of Hong Kong and Southern China. pp. 431-458, *Proc. of the 1st Intern. Marine Biological Workshop. The Marine Flora and Fauna of Hong Kong and Southern China, Hong Kong*
- Uchida, K. and Yamamoto, T. (1942) On the distribution of *Haliotis* species in the Korean waters. *Venus*, **11**(11): 119-125
- Watanabe, T. and Naruke, M. (1988) A catalogue of mollusca of Choshi. 銚子.自然を楽しむ會會報, **4**: 1-140 (in Japanese)
- Yamamoto, G. and Habe, T. (1962) Fauna of shell-bearing molluscs in Mutsu Bay Scaphopoda and Gastropoda. *Bull. Mar. Biol. Station of Asamushi*, **11**(1): 1-20, pls. 1-3
- Yoo, J.S. (1977) Korean shells in colour. pp. 1-196, pls. 1-36, *Iljisa Co., Seoul*

PLATE



1. *Tugali decussata* A. Adams 1852 (Shell)
2. *Tugali decussata* A. Adams 1852 (Radula): $\times 120$, $100 \mu\text{m}$ (bar)
3. *Tristichotrochus koma* Shikawa & Habe 1965 (Shell)
4. *Alcyna ocellata* A. Adams (Shell)