Below are the changes made to HAWAII'S SEA CREATURES for the Revised Editiion 11-02-2005

Text to remove is in ~~red strikethrough.~~
Text to add is in blue
Sometimes I use blue underlined to show where something is inserted, or to highlight a small change of one or two characters.

Boxed paragraphs show complete species accounts in final form after all individual corrections have been made. However I did not do boxed paragraphs for most of the species.

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change Copyright 199~~8~~ to Copyright 1999
-Replace First printing March ~~1998~~ with March 1999

p. iv: Add at bottom:
Note to the Revised Edition. This revision attempts to bring the book taxonomically up to date as of October 2005. In addition, errors have been corrected, photos improved, new information incorporated, and several species added. For continuing updates please visit http://www.hawaiisfishes.com. Special thanks to Gustav Paulay, Cory Pittman, Pauline Fiene, Chela Zabin, Richard Mooi, Ray Caldwell, Christopher Mah, Alain Crosnier, Alexander Bruce, Leslie Newman, Junji Okuno, Christine Huffard, Mark Norman, Daphne Fautin, Jerry Crow, Ralph DeFelice, Colin McLay, Peter Castro, Arthur Anker, Daryl Feldman and Dale Calder for taxonomical help. This revised edition is dedicated to the memory to Darrell Takaoka, who contributed so much to the first edition.

p. vi
-line 15: Delete "Pauline Fiene ~~Severns~~, Kihei, Maui." Should be "Pauline Fiene, Kihei, Maui."

p. x
-line 1: Replace "There are 30-33 named phyla" with "There are 30-33 named phyla of multicelled animals"

p. xiv top right photo caption:
-Replace entire caption with:
The Hawaiian Elegant Hermit Crab has orange bands on its legs while those of its Indo-Pacific sister species are blue (see p. 253). Hekili Point, Maui. 3 ft.

p. xiv
1st line: change "~~nine~~ species of cowries" to "eight species of cowries"

p. xiv
4th line from bottom: Delete 2 sentences: "~~Similarly, Elegant.....a separate species~~."

p. xiv Bottom photo caption
-2nd line from bottom: Replace (~~An~~thelia edmondsoni) with (Sarcothelia edmondsoni)

p. 5. bottom:
-Replace YELLOW ~~LUFFARIELLA~~ with YELLOW HYRTIOS
-Replace ~~*Luffariella metachromia*~~"~~(de Laubenfels, 1954)~~ with *Hyrtios* sp.
-3rd line from bottom. Delete sentence "~~Tiny endemic nudibranchs....feed on it.~~"
-Add sentence at end, after "50 ft." (There are a number of similar yellow sponges in the Islands.)

p. 9 center:
-Replace *Axinyssa* ~~*aculeata* Wilson, 1925~~ with *Axinyssa* sp.
-Replace Order ~~Hadromerida~~ with Order Halichondrida, Family ~~Suberitidae~~ with Family Halichondriidae.
-Delete entire sentence ~~Species name means "sharp pointed, in reference...skeleton."~~

p. 10 top:
-Replace BLUE ~~CALLYSPONGIA~~ with BLUE DYSIDEA
-Replace ~~*Callyspongia(?)* sp~~. with *Dysidea herbacea* (Keller, 1889)
-Replace Order ~~Haplosclerida(?)~~ with Order Dendroceratida
-Replace Family ~~Callyspondiidae(?)~~ with Family Dysideidae
-Replace sentence: ~~Sponges of the genus *Callyspongia*...composed of spicules~~. with It is most abundant in locations with strong to moderate surge and sometimes occurs on boulders in shallow water close to shore.

p. 19 HYDROIDS AND SIPHONOPHORES
-1st paragraph, 2nd line: Replace "~~There are five orders of hydrozoans, of which the hydroids (order Hydroida) are the largest and most prominent.~~" with "There is little agreement among specialists, but nine orders of hydrozoans have been proposed, with Anthoathecata and Leptothecata (together comprising the hydroids) being the most diverse and prominent."
-last paragraph, 1st line: Add word: "The medusa stages of hydroids (hydromedusae) often resemble...."

p. 20 1st paragraph
-1st line: Replace "Other members of the ~~order Hydroida are~~ small floating..." "Other members of the hydroid group include small floating..."

p. 20 CHRISTMAS TREE HYDROID
-Replace Family ~~Halocordylidae~~ with Family Pennariidae
3rd line from bottom: After "colonize its stems" add "and tiny shrimps sometimes live among the branches (see p. 225).

p. 20 CHRISTMAS TREE HYDROID
p. 22 SEA FAN HYDROID
p. 23 BY-THE-WIND-SAILOR
p. 23 BLUE BUTTON
- in all of the above: Replace Order ~~Hydroida~~ with Order Anthoathecata

p. 20 GREEN HYDROID
p. 21 ALL 3 SPECIES
p. 22 BLACK HYDROID
- in all of the above: Replace Order ~~Hydroida~~ with Order Leptothecata

p. 24
PORTUGUESE MAN-OF-WAR
Replace entire species account with:

PACIFIC PORTUGUESE MAN-OF-WAR · **pa`imalau**
Physalia utriculus La Martiniere, 1829
Order Siphonophora. Family Physaliidae
· These open-ocean animals, also known as Bluebottles, are not true jellyfishes (scyphozoans), as many people assume, but floating colonies of hydrozoan polyps and medusae (see above). Each colony is kept afloat by a balloon filled mostly with carbon monoxide and raised into a crest at one end to catch the wind. Sailing the open ocean, the colony trails a single long tentacle which paralyzes or kills small fishes or organisms it happens to touch. The tentacle then contracts, drawing the prey up to be consumed. All polyps in the colony share in the catch by means of an interconnecting digestive tube. Strong winds often wash these animals up on Island beaches by the hundreds. Dark bluish purple or violet, they stand out on the sand but are almost invisible in the ocean. Humans contacting one while swimming experience a fiery sting but seldom see what hit them. Sixteenth century British sailors likened them to enemy battleships (men-of-war). Even beached animals can sting. The pain usually subsides in about 20 minutes and requires little or no treatment. Remove any adhering tentacles and flood the site with fresh or salt water. Vinegar, alcohol, urine or other liquids may cause more nematocysts to fire and thus do more harm than good. Ice packs may lessen the pain.

Despite their stinging ability, *Physalia* are preyed upon by the pelagic nudibranch *Glaucus atlanticus* (p. 179) and little pelagic snails, *Janthina* spp. (p. 104) which float on rafts of bubbles. At sea they may be accompanied by small, blue-mottled juveniles of the fish *Nomeus gronovii*. (Although not completely immune, these commensals can tolerate up to ten times the amount of venom that kills other fishes.) Beached *Physalia* are eaten by the Mole Crab, *Hippa pacifica* (p. 263) and ghost crabs, *Ocypode* spp. (p. 288).

Portuguese Men-of-War occur in all warm seas. Two species are known, one in the Pacific and another in the Atlantic. The Pacific species has a float 1-2 in. long and a single long fishing tentacle. The much larger Atlantic species, *P. physalis* (Linnaeus, 1758), has a float up to 1 ft. long and multiple fishing tentacles as much as 30 ft. long. Photo: David B. Fleetham. Maui.

p. 26, 4th paragraph:
-5th line: Replace 2 sentences beginning: "~~Box jellyfishes...are known~~." with:
Cubozoans (box jellyfishes), on the other hand, are generally modest in size, typically from 1-2 in. diameter, but sometimes as long as 10 in. About 20 cubozoan species are known.

p. 26, 5th paragraph: replace entire paragraph with:
Hawaiian waters are home to fifteen known scyphozoan jellyfish species, including one tiny "stalked" jelly that grows on seaweed in shallow water. Many of these Hawaiian jellyfishes occur only in quiet harbors, bays and lagoons into which snorkelers and divers rarely venture. Occasionally a pelagic species drifts into shoreline waters, but in general these animals are seldom seen by beachgoers, snorkelers or divers in Hawai`i. Box jellyfishes can be much more plentiful, however, sometimes washing ashore by the hundreds. They deliver an extremely painful sting and are a regular, though short-lived, nuisance on some of O`ahu's south-facing beaches. As many as 800 swimmers have sought treatment for box jelly stings in one day at Waikīkī Beach, although such numbers are unusual. There are probably four species of box jellyfishes in Hawai`i, two of which are extremely small and rarely noticed. The Hawaiian word for jellyfishes of any kind is **pololia**.

p. 27 MOON JELLYFISH
-Replace *Aurelia* ~~*aurita* (Linnaeus, 1758)~~ with *Aurelia* sp.
-2nd line from bottom. Replace sentence: ~~The species can be plentiful in open coastal waters in other parts of the world.~~ with: There are a number of similar *Aurelia* species around the world. This one matches specimens from Borneo and Palau and appears to have been accidentally introduced to Hawai`i.

p. 28 top: UPSIDE-DOWN JELLYFISH.
-Replace *Cassiopea* ~~*medusa* Light 1914~~ with *Cassiopea andromeda* (Forsskål 1775)
-Replace 2 sentences beginning ~~The lagoon at Hilton Hawaiian Village...~~ and ending ...~~Kane`ohe Bay, O`ahu~~. with
A different species of *Cassiopea* occurs in Kāne`ohe Bay and other areas of windward O`ahu. DNA analysis shows that this windward species (as yet unnamed) was introduced from the Western Pacific, possibly New Guinea, whereas the leeward species, *C. andromeda*, came from the Atlantic Ocean or the Red Sea.

p. 28 bottom: CROWNED JELLYFISH
-Change *Cephea cephea* Forsskål 1775 to (Forsskål 1775)

p. 29: WHITE-SPOTTED JELLYFISH
-11th line from bottom: Replace Kane`ohe Bay with Kāne`ohe Bay

p. 31, RASTON'S BOX JELLYFISH
-4th line from bottom: Add after "these animals" —*Carybdea sivickisi* Stiasny 1926 with banded tentacles—
Entire sentence should read: "One of these animals—*Carybdea sivickisi* Stiasny 1926 with banded tentacles—is visible in the lower right corner."

p. 32 photo caption:
-Replace ~~*Anthelia*~~ *edmondsoni* with *Sarcothelia edmondsoni.*

p. 33. SNOWFLAKE CORAL:
- Replace entire text with:
· Corals of the order Telastacea secrete internal skeletons composed of calcareous spicules. This species forms flexible tapering stems that may or may not have branches. The white polyps open along the sides and at the tip, generally only at night or when a current is running. With polyps closed, the naked branches are red or orange. This coral forms dense colonies in cavities along vertical walls or on the ceilings of caves and overhangs where current is strong, or under docks in harbors where plankton is plentiful. It is abundant on wrecks and occurs to depths of several hundred feet where it overgrows and kills black coral trees, threatening the industry. Unknown in Hawai`i prior to 1974, this Western Atlantic native was introduced unintentionally and now occurs on all the main Hawaiian Islands. Branches attain 4-6 in. Photo: Mākua, O`ahu. 20 ft. (polyps closed). (See also p. 17.)

p. 33. LEATHER CORAL:
-Change "LEATHER CORAL" to "DENSE LEATHER CORAL"
-Replace ~~*Sinularia abrupta* Tixier-Durivault, 1970~~ with *Sinularia densa* (Whitelegge, 1897)
-Replace entire text with:
· This soft coral forms short, tough flexible lobes on a flat encrusting base. Growing on rocky substrate, it is most common at depths of 15-30 ft. in clear turbulent water. Individual colonies may be as much as 3 ft. across but are usually considerably smaller. Lobes attain a height of about 2 in. Previously known in Hawai`i as *Sinularia abrupta*, it occurs from the Maldive Islands to Hawai`i. Photo: Mōkapu Rock, Moloka`i. 20 ft. [A smaller Hawaiian leather coral, *S. molokaiensis*, has been described from colonies overgrowing Finger Coral *(Porites compressa)* off the southeast side of Moloka`i.]

DENSE LEATHER CORAL
Sinularia densa (Whitelegge, 1897)
Order Alcyonacea. Family Alcyoniidae
· This soft coral forms short, tough flexible lobes on a flat encrusting base. Growing on rocky substrate, it is most common at depths of 15-30 ft. in clear turbulent water. Individual colonies may be as much as 3 ft. across but are usually considerably smaller. Lobes attain a height of about 2 in. Previously known in Hawai`i as *Sinularia abrupta*, it occurs from the Maldive Islands to Hawai`i. Photo: Mōkapu Rock, Moloka`i. 20 ft. [A smaller Hawaiian leather coral, *S. molokaiensis*, has been described from colonies overgrowing Finger Coral *(Porites compressa)* off the southeast side of Moloka`i.]

p. 34. BLUE OCTOCORAL:
-Replace ~~*Anthelia*~~ *edmondsoni* with *Sarcothelia edmondsoni.*
-2nd line from bottom: between "across." and "Photo:" add Previously known as *Anthelia edmondsoni.*

p. 36 SWIMMING ANEMONE
-REPLACE PHOTO WITH Boloceroides_mcmurrichi_sc.TIF
-last line: Replace "Photo: ~~Gustav Paulay, Guam~~" with Photo: Kāne`ohe Bay. O`ahu. 5 ft. (swimming)

p. 38. SESERE'S ANEMONE:
-Replace ~~*Actiniogeton*~~ *sesere* with *Gyractis sesere*
-2nd line from bottom: Replace "~~Known from Australia.....and probably more widespread~~" with The species has an Indo-Pacific distribution.

p. 39 SAND ANEMONE
-7th line from bottom: Replace Hawaiian ~~Domino D~~amselfish with Hawaiian Dascyllus damselfish

p. 43 BLUE-GRAY ZOANTHID
-1st line of text: After "This common species" add: ", also known as Pillow Zoanthid," (note commas)
Sentence should read "This common species, also known as Pillow Zoanthid, forms tough mats..."

p. 44 *Protopalythoa* spp.
The three colonies illustrated here all belong to the genus *Protopalythoa.* ~~Whether they represent the same or different species can only be determined by genetic analysis.~~ Colony "A" —probably *P. heliodiscus* Ryland & Lancaster, 2003—was photographed at Mākaha, O`ahu, ...

p. 50. CAULIFLOWER CORAL:
-Replace entire text with:
· This common coral forms compact branching colonies, often abundant in high energy environments where few other Hawaiian corals will live. It occurs in splash pools above high tide to depths of 200 ft. or more and is often the first coral to colonize new submarine lava flows. The flattened branches, usually equal in length, may curve into a "C" shape at the tips. Viewed from above, channels appear to meander between the branches, hence the species name. Coral guard crabs, shrimps, and fish of several species commonly inhabit these spaces. Ordinarily brownish, colonies can be green or

rose-pink in shallow water. (These pigments may help protect the coral from harmful ultraviolet radiation.) Synchronized spawning occurs within a few hours after sunrise primarily 1-3 days following the April and May full moons, often reducing visibility to a few feet. To about 12 in. across. Indo-Pacific. Photo: Hanauma Bay, O`ahu. 10 ft. The similar *P. ligulata* is generally uncommon, although abundant at Midway and Kure atolls. It has thinner branches and more irregular verrucae.

p. 51: ANTLER CORAL
-5th line from bottom: Replace Hawaiian Domino Damselfish with Hawaiian Dascyllus damselfish
-2nd line from bottom: Replace "ee-dew-eye" with "ay-dew-eye"

p. 52. RICE CORAL
-3rd-4th lines from bottom: Delete 4 sentences beginning with: "*Montipora capitata* is endemic.....and ending with: Neither is common."
-Replace the deleted sentences with: Once considered endemic to Hawai`i, *Montipora capitata* is now known as far west as Sumatra. It is common only in Hawai`i. Colonies in the Islands are more encrusting or platelike than elsewhere and have been confused in the past with the Indo-Pacific coral *M. verrucosa*, which does not occur here."

p. 53 BLUE RICE CORAL
5th line from bottom: *turgescens* *dilatata*
8the line from bottom: Probably eEndemic.

p. 54: SPREADING CORAL.
-Replace SPREADING CORAL with SPREADING RICE CORAL
-5th line from bottom. Replace Probably endemic with "Endemic."
-4th line from bottom: Replace "(A similar Indo-Pacific species, M. verilli, is rare in Hawai`i.)" with "Also called Sandpaper Rice Coral because of its rough texture."

p. 55 FINGER CORAL
-5th line from bottom: Replace *Porites rus* with *Porites monticulosa*

p. 56: LOBE CORAL
-13th line from bottom: Replace "*evermanni*" with "*lutea*"

p. 57: EVERMANN'S CORAL.
-Replace "EVERMANN'S CORAL" with "MOUND CORAL."
-Replace "*Porites evermanni* Dana 1846" with "*Porites lutea* Milne-Edwards & Haime, 1851"
-12th line from top: Replace Evermann's with Mound
-11th line from bottom: Replace sentence "The name honors.... Steinhart Aquarium." with In Hawai`i this species has long been considered endemic under the name *Porites evermanni*. Recent study shows that it does not differ significantly from *P. lutea*, which ranges from the Red Sea to the Eastern Pacific.
5th line from bottom: Delete "Probably endemic."
-bottom line: "P. lobata" should be in italics. *P. lobata*

p. 58. PLATE-AND-PILLAR CORAL
-Replace PLATE-AND-PILLAR CORAL with PLATE-AND-KNOB CORAL
-Replace *Porites rus* (Forsskal, 1775) with *Porites monticulosa* Dana, 1846
-Replace entire text with:
· This attractive and highly variable coral is common along the Kona coast of the Big Island and also occurs off west Maui. Although rare on O`ahu, extensive colonies occur off Ali`i Beach Park. Overall color is bluish gray to light brown and polyps are often visible as tiny yellow spots. It is primarily encrusting but sometimes forms thick columns in shallow water and thin stacked plates deeper down. The species may also overgrow colonies of *P. compressa*, forming brackets and plates at the base. Unlike most other members of the genus *Porites*, the calyces of *P. monticulosa* are slightly separated and cluster between irregular raised ridges, especially in the upright column form. Indo-Pacific. Photos: a) Hōnaunau, Hawai'i, 30 ft. (overgrowing *P. compressa*); b) Kealakekua Bay, Hawai`i, 15 ft (pillars); c) Kealakekua Bay, Hawai`i, 90 ft. (plates). Formerly known in the Islands as *Porites rus* (Plate-and-Pillar Coral), a similar but less common species.

p. 58 all photo captions:
-Replace "Plate-and-Pillar Coral" with Plate-and-Knob Coral

p. 59. DUERDEN'S CORAL:
Replace DUERDEN'S with PORKCHOP
-2nd line from bottom. Replace "Probably endemic" with "Indo-Pacific and Eastern Pacific."

p. 61 MUSHROOM CORAL
Change to OVAL MUSHROOM CORAL

p. 62. CRUST CORAL
Delete entire species description. Replace with:

BEWICK CORAL
Leptastrea bewickensis Veron, Pichon, and Wijsman-Bes, 1977

· This coral typically forms flat encrusting colonies on smooth hard bottom down to about 20 ft. in areas with good water movement. Colonies are almost flush with the bottom and are typically about a foot in diameter, though some are much larger. The calyces are brown, often with whitish centers. The space between calyces is often pale. This coral is abundant at some sites. For many years in Hawai`i it was considered a variant of Crust Coral (*Leptastrea purpurea)*, a similar Indo-Pacific coral which has larger, more irregular calyces and is rare in Hawai`i. Named for Bewick Island on Australia's Great Barrier Reef. Photo: Kepuhi Point, O`ahu. 10 ft.

p. 63
- caption of upper photo: change "~~Crust Coral (a)~~" to Bewick Coral
- caption of lower photo: change "~~Crust Coral (b)~~" to Transverse Coral

TRANSVERSE CORAL
Leptastrea transversa Klunzinger, 1979
· An encrusting species, this coral is generally brown, greenish brown, or purplish brown. The center of the calyces may be green. It grows on both horizontal and vertical surfaces and may form rounded lobes. It is common at some sites, but absent from most. For many years in Hawai`i it was considered a variant of Crust Coral (*Leptastrea purpurea),* a similar Indo-Pacific coral which has more irregular calyces and is rare in Hawai`i. Photo: Molokini Islet, Maui. 25 ft.

p. 64. Upper photo caption:
- Replace ~~Solitary~~ and ~~Colonial~~ Cup Corals..... with Oval and Orange Cup Corals....

First paragraph, 3rd line of text:
-Replace: "Some people call them "~~flower~~ corals." with "Some people call them "tube corals."

First paragraph, last line:
-Replace "~~Two genera are common in Hawai`i~~" with "Eight species in five genera are known from Hawai`i.

SOLITARY CUP CORAL
-replace ~~SOLITARY~~ CUP CORAL with OVAL CUP CORAL
-replace ~~*Balanophyllia* sp.~~ with *Cladopsammia eguchii* Wells, 1982
10th line from bottom: Replace "The tentacles ~~often~~ extend...." with "The tentacles do not extend...."
9th line from bottom: Delete 2 sentences "~~The animal pictured... (Semper, 1872). Other solitary..... deep water~~."

REPLACE PHOTO WITH cladopsammia_eguchii_sc.tif

p. 65:
upper photo caption:
-Replace ~~Colonial~~ Cup Coral (a) with Orange Cup Coral (a)
lower photo caption:
-Replace ~~Colonial~~ Cup Coral (b) with Orange Cup Coral (b)

-Replace ~~COLONIAL~~ CUP CORAL with ORANGE CUP CORAL
-1st line of text: Replace "almost always bright ~~orange;"~~ with "almost always bright orange-red." note: replace semicolon with period
-bottom line: Add at end after "sp.)" Other colonial species of *Tubastraea* are known in the Islands: the almost black *T. diaphana* and possibly two unnamed orange species. A solitary orange cup coral, *Rhizopsammia verrilli*, also occurs here.

text should read:
In Hawai`i this coral is almost always bright orange-red. Colonies (clumps of about 10-20 polyps) typically grow on the roofs of caves, arches and overhangs where current or surge is strong. They occur at all depths attainable by snorkeling and scuba. Tentacles extend most fully at night, when the water is full of plankton, but withdraw completely by day unless current or surge is bringing food. Polyps are colonial, sharing common tissue and a common skeletal base. Calyces are round in cross-section. The eolid nudibranch *Phestilla melanobrachia* (p. 180) both mimics and preys on this coral. Photos: a) Pūpūkea, O`ahu. 30 ft. b) Palea Point, O`ahu. 30 ft. (with red sponge *Clathria (Microciona)* sp.) Other colonial species of *Tubastraea* are known in the Islands: the almost black *T. diaphana* and possibly two unnamed orange species. A solitary orange cup coral, *Rhizopsammia verrilli*, also occurs here.

p. 68: photo caption: Change "Feathery Black Coral ~~*(Antipathes ulex)*~~." to "Dense Feathery Black Coral *(Myriopathes* c.f. *japonica)*. See p. 70."

p. 69. BRANCHING BLACK CORAL
-Replace ~~*Antipathes dichotoma* Pallas, 1766~~ with *Antipathes* sp.
-3rd line from bottom: Replace sentence "The species name means.....main branches." with "This black coral, formerly identified as the Indo-Pacific species *Antipathes dichotoma*, is now thought to be undescribed."

p. 70: FEATHERY BLACK CORAL
-Replace "~~Antipathes ulex~~ Ellis & Solander, 1786" with "*Myriopathes ulex* (Ellis & Solander, 1786) -- note: add parentheses around Ellis & Solander, 1786
-bottom line: Replace ~~(See also p. 68).~~ with A somewhat similar species, Dense Feathery Black Coral *(Myriopathes* c.f. *japonica),* is shown on p. 68.

p. 71. COMMON WIRE CORAL
-4th line from bottom: Replace "near the tip..." with ", often near the tip," note: add two commas

p. 71. RED WIRE CORAL
-Replace "*Stichopathes~~(?) sp.~~*" with "*Stichopathes* c.f. *echinulata* Brook 1889"
-3rd line from bottom: Replace "~~not~~" with "also". It should read "shrimps have also been observed on it."

p. 72 photo caption:
-Replace: *(Sabellastarte ~~sanctijosephi~~)* with *(Sabellastarte spectabilis)*

p. 73 FLATWORMS
-bottom line: Delete "Twelve ~~commonly seen~~ species are illustrated..."

p. 74 HYMAN'S FLATWORM
-Replace ~~HYMAN'S~~ FLATWORM with TRANSLUCENT WHITE FLATWORM
-Replace *Pericelis ~~hymanae~~* ~~Poulter, 1974~~ with *Pericelis* sp.
Replace entire text with:
· These translucent white flatworms are locally common under stones in shallow water areas with moderate wave action such as Black Point, O`ahu. They may be associated with the Brown Purse Shell, *Isognomon perna*, (p. 186). To almost 2 in. Known to date only from Hawai`i. Photo: Nāpili Bay, Maui. 10 ft.

TRANSLUCENT WHITE FLATWORM
Pericelis sp.
Family Pericelidae
· These translucent white flatworms are locally common under stones in shallow water areas with moderate wave action such as Black Point, O`ahu. They may be associated with the Brown Purse Shell, *Isognomon perna*, (p. 186). To almost 2 in. Known to date only from Hawai`i. Photo: Nāpili Bay, Maui. 10 ft.

p. 74 WHITE STRIPE FLATWORM
-Add on line above Family Pseudocerotidae - *Pseudobiceros* sp.1
-Change sentence " This undescribed animal ~~belongs to no established genus and~~ is currently under study." with "This undescribed animal is currently under study by Dr. Leslie Newman."

p. 75. DIVIDED FLATWORM
-Change "*Pseudoceros dimidiatus* von Graff, 1893" to "*Pseudoceros* c.f. *dimidiatus* von Graff, 1893" note: the 'c.f.' is in normal type, not italics
-Replace entire text with:
· This black, yellow, and orange flatworm is active by day and easy to spot on the reef. Scientists have long speculated that worms with bright contrasty colors might be poisonous, and tests have recently confirmed that this worm contains tetrodotoxin, the same deadly poison found in pufferfishes. The "c.f." in the species name means that this animal is similar to, but different from, the original specimen. Someday this pretty flatworm will probably be recognized as distinct. The current species name means "divided in half" (because of the line down the center of the body.) To about 2 1/2 in. Indo-Pacific. Photo: "Casa de Emdeko," Kailua-Kona, Hawai`i. 30 ft.

DIVIDED FLATWORM
Pseudoceros c.f. *dimidiatus* von Graff, 1893
Family Pseudocerotidae
· This black, yellow, and orange flatworm is active by day and easy to spot on the reef. Scientists have long speculated that worms with bright contrasty colors might be poisonous, and tests have recently confirmed that this worm contains tetrodotoxin, the same deadly poison found in pufferfishes. The "c.f." in the species name means that this animal is similar to, but different from, the original specimen. Someday this pretty flatworm will probably be recognized as distinct. The current species name means "divided in half" (because of the line down the center of the body.) To about 2 1/2 in.. Indo-Pacific. Photo: "Casa de Emdeko," Kailua-Kona, Hawai`i. 30 ft.

p. 76 GOLD RIM FLATWORM
REPLACE PHOTO with Pseudoceros_paralaticlavus_johnson_rc.TIF
-bottom line. Replace "Photo: ~~Magic Island, O`ahu. 5 ft.~~" with Photo: Scott Johnson. O`ahu.

p. 77 FALSE GOLD RIM FLATWORM
-Change *Pseudobiceros* sp. ~~1~~ to *Pseudobiceros* sp. 2

p. 77 HAWAIIAN SPOTTED FLATWORM
-Change *Pseudobiceros* sp. ~~2~~ to *Pseudobiceros* sp. 3
-3rd line from bottom: Replace sentence: ~~The advantage of the striking color pattern is not clear, since the worm is never seen in the open by day~~. with "The striking spots may indicate that the worm is toxic and probably make it more visible at night, when it is active."

p. 78 ORANGE RIM FLATWORM
-Change *Pseudobiceros* sp. ~~3~~ to *Pseudobiceros* sp. 4

p. 78.
Bottom 2 photo captions:
-Replace ~~Glorious~~ Flatworm with Hyman's Flatworm (2 places)
-REPLACE BOTTOM PHOTO with Pseudobiceros_hymanae_sc.TIF

-Replace ~~GLORIOUS~~ FLATWORM WITH HYMAN'S FLATWORM
-Replace "*Pseudobiceros ~~gloriosus~~* Newman & Cannon ~~1994~~" with "*Pseudobiceros hymanae* Newman & Cannon 1997"
-Replace entire text with:
· This species is black with two marginal bands, an orange inner one and a narrow black outer one. Like many flatworms of its genus, it is most active at night and capable of swimming well off the bottom with rapid undulations of the body. The species name honors American zoologist Libbie H. Hyman (1888-1969), a specialist in free-living flatworms and author of a widely-used multivolume text on invertebrates. It grows to about 3 in., but in Hawai`i may not attain this size. Indo- Pacific. Photos: a) Waimea Bay, O`ahu. 30 ft. (swimming) b) Hālona Blowhole, O`ahu. 20 ft.

HYMAN'S FLATWORM
Pseudobiceros hymanae Newman & Cannon, 1997
Family Pseudocerotidae
· This species is black with two marginal bands, an orange inner one and a narrow black outer one. Like many flatworms of its genus, it is most active at night and capable of swimming well off the bottom with rapid undulations of the body. The species name honors American zoologist Libbie H. Hyman (1888-1969), a specialist in free-living flatworms and the author of a widely-used multivolume text on invertebrates. It grows to about 3 in., but in Hawai`i may not attain this size. Indo- Pacific. Photos: a) Waimea Bay, O`ahu. 30 ft. (swimming) b) Hālona Blowhole, O`ahu. 20 ft.

p. 81 ORANGE FIREWORM
-Replace ~~ORANGE~~ FIREWORM with IRIDESCENT FIREWORM

p. 83: FEATHER DUSTER WORM.
-Replace: *Sabellastarte* ~~sanctijosephi (Gravier, 1906)~~ with *Sabellastarte spectabilis* (Grube, 1878)

p. 87 photo caption:
-Replace ~~(Savignyella lafontii)~~ with *(Vittaticella uberrima)*

p. 88: BLUE FAN BRYOZOAN
-Replace *Bugula* ~~stolonifera Ryland, 1960~~ with *Bugula dentata* (Lamouroux, 1816)

p. 89: LAFONT'S BRYOZOAN
-Replace entire species account with

CURLY BRYOZOAN
Vittaticella uberrima (Harmer, 1957)
Family Vittaticellidae
· This "sea moss" occurs on exposed rocky walls in clear water where it forms curled branching colonies about 1/2 in. high, usually under overhangs or in crevices. It is abundant along the current-swept back side of Molokini Islet, Maui, but appears to be rare or absent elsewhere in Hawai`i. Photo: Molokini Islet, Maui, 70 ft. (See also p. 87.)

p. 99 HAWAIIAN TURBAN
-4th line from bottom: Replace *T. intercostalis,* a ~~widespread Indo-Pacific~~ turban. with *T. intercostalis*, a western Australian turban.

p. 105. SEA CUCUMBER SNAIL:
-Replace ~~Balcis aciculata (Pease, 1861)~~ with *Melanella* sp.
-1st sentence of text: Delete and replace as shown: "At least six ~~similar~~ snails in the ~~genus Balcis~~ family Eulimidae are known...."
-7th line from top: Replace *(~~B~~. aciculata) with (M. aciculata)*
-last line: delete last sentence ~~(identification not confirmed.)~~

SEA CUCUMBER SNAIL
Melanella sp.
Family Eulimidae
· At least six snails in the family Eulimidae are known to live in association with sea cucumbers in Hawai`i. Different species may occur on a single sea cucumber, and up to 15 individuals of a single species *(M. aciculata)* have been found on one host. Most favored as hosts are *Holothuria atra, H. cinerascens, Actinopyga mauritiana, A. obesa* and *Stichopus horrens.* Along some Hawaiian shores up to 60 percent of *H. atra* host eulimids. Photo: Scott Johnson. Diamond Head, O`ahu.

p. 109 2nd paragraph:
-2nd line: Replace "Among these are ~~nine~~ endemics" with "Among these are eight endemics"
-5th line: Replace "*C. semiplota~~,~~ C.sulcidentata ~~and C. tesselata~~*." with *C. semiplota* and *C.sulcidentata.*

p. 110 ALISON'S COWRY
-Replace entire species account with:

TRANSLUCENT COWRY
Cypraea pellucens Melvill, 1888
Family Cypraeidae

· The back of this slender cowry's shell is whitish covered with irregular brown flecks and blotches. There is a large, sometimes squarish brown blotch near the center. The sides are white with a few brown spots mostly near the base. The slightly translucent mantle is red to orange-brown with widely spaced papillae. The foot has pale spots. When attacked the animal sheds the rear section of the foot to facilitate escape (like a lizard shedding its tail). This is a small, shallow-water cowry found both on reef flats and rocky walls. It eats algae and is reported to do well in aquariums. To about 1 1/2 in. Indo-Pacific. (*Cypraea alisonae* is a recent synonym. This species is easily confused with the Tapering Cowry, *C. teres*, which is rare in Hawai`i. Their shells are almost indistinguishable but the living animals show subtle and consistent differences.)

p. 118 CHECKERED COWRY
-Replace text with:
· The best specimens of this unusual cowry have three large, dark, squarish spots set corner to corner, checkerboard fashion; more often there are only two with fainter squares at the corners. Either way, the pattern is unique. The back is lightly banded. The mantle is smooth and translucent, the shell markings showing through clearly. This cowry occurs from shallow water to depths of at least 200 ft., usually far back under ledges. It is uncommon and much sought after. The species name means "inlaid with small square stones" or "mosaic." For many years considered endemic to Hawai`i, it has recently been found in Japan, Taiwan and the Philippines. To about 2 in. Photo: Makua, O`ahu. 15 ft.

p. 131: WAVY SPINDLE: Replace entire species account with:

MAUI SPINDLE· **pupu nuku loa**
Fusinus sp.
· This large spindle lives on sand bottoms, usually in groups, and is most common off the southwest shore of Maui. Active in the late afternoon and evening, it feeds on worms. Although resembling the Indo-Pacific spindle *Fusinus undatus*, it may be undescribed. *Fusinus sandvicensis*, a deepwater Hawaiian endemic, is also similar. Yet another large unidentified Hawaiian spindle has been reported off O`ahu and Kauai. To about 7 in. Photo: Mike Severns. Ma`alaea Bay, Maui. 60 ft.

p. 145. WARTY SLUG
-3rd line from bottom: Replace: "about ~~1~~ in." with "about 1 3/4 in."

p. 145 CYMBAL BUBBLE SHELL
-3rd line from bottom: Replace: "about ~~3/4~~ in." with "about 1 in."

p. 146 SWOLLEN BUBBLE SHELL
-2nd line from bottom: Replace: "about ~~3/4~~ in." with "about 1 in."

p. 147 WAVY BUBBLE SHELL
-3rd line from bottom: Replace: "about ~~1/2~~ in." with "about 3/4 in."

p. 148 BLUE SWALLOWTAIL SLUG
-Replace: *Chelidonura* ~~*hirundina*~~. with *hirundinina*
-3rd line from bottom: Insert "(see inset photo)" into sentence after "*Chelidonura*": (A similar but undescribed species of *Chelidonura* (see inset photo) has bright blue spots ...)
REPLACE photo with Chelidonura_hirundinina_w_inset_rc.PSD (move inset to best position after cropping)

p. 148 PILSBRY'S HEADSHIELD SLUG
-last line of text: Replace ~~Artificial pool~~ with: The similar *Philinopsis* c.f. *reticulata* (see inset photo) also occurs in the Islands.
REPLACE photo with Philinopsis_pilsbryi_w_inset_rc.PSD (move inset to best position after cropping)

p. 149 BLUE HEADSHIELD SLUG
-Replace ~~BLUE~~ HEADSHIELD SLUB BLUE-MARGIN HEADSHIELD SLUG
-Replace entire text with:
· This slug lives just under the sand or on its surface. It varies from light brown to almost black, often with white spots and markings and a few yellow spots. The edges of the parapodia are usually bluish. Sometimes there are pairs of parallel orange-brown lines on the head shield (see inset photo). It feeds on other opisthobranchs, following their slime trails and engulfing them whole. To about 3 in. Indo-Pacific. Photo: Waimea Bay, O`ahu. 30 ft.
REPLACE photo with Philinopsis_speciosa_w_inset_rc.PSD (move inset to best position after cropping)

p. 153. LINED SEA HARE:
-Replace *Stylocheilus* ~~*longicauda (Quoy & Gaimard 1824)*~~ with *Stylocheilus striatus* (Quoy & Gaimard, 1832)
-bottom line: Replace: "about ~~1 1/2~~ in." with "about 2 in."
-Add at end, after "50 ft." (Previously known as *Stylocheilus longicauda*)
REPLACE photo with Stylocheilus_striata_w_inset_rc.PSD (move inset to best position after cropping)

p. 154 ORNATE SAP SUCKING SLUG
-3rd line from bottom: Replace To about ~~1 1/2~~ in. with To about 3 in.

p. 155. ORANGE GUM DROP:
-Replace *Berthellina* ~~citrina (Ruppell & Leuckart, 1831)~~ with *Berthellina* sp.

p. 155. POLYGON PLEUROBRANCH
-Delete "1" from: *Pleurobranchus* sp. ~~1~~

p. 156. TILED PLEUROBRANCH;
-Replace: *Pleurobranchus* ~~sp. 2~~ with *Pleurobranchus grandis* Pease, 1868
-Replace entire text with:
· In Hawai`i, this large, striking slug is typically covered with red tubercles surrounded by white, producing a tesselated, or "tiled," effect. Its color is variable, however, and it can be almost white with yellow-brown tubercles, often with irregular dark brown patches. It is nocturnal and occurs both in silty harbors and lagoons and in more exposed locations. Eggs are laid in beautifully ruffled white strands. To about 12 in. Indo-Pacific. Photo: Magic Island boat channel boat channel, O`ahu. 15 ft.

TILED PLEUROBRANCH · **naka-oni`oni`o**
Pleurobranchus grandis Pease, 1868
Family Pleurobranchidae
· In Hawai`i, this large, striking slug is typically covered with red tubercles surrounded by white, producing a tesselated, or "tiled," effect. Its color is variable, however, and it can be almost white with yellow-brown tubercles, often with irregular dark brown patches. It is nocturnal and occurs both in silty harbors and lagoons and in more exposed locations. Eggs are laid in beautifully ruffled white strands. To about 12 in. Indo-Pacific. Photo: Magic Island boat channel boat channel, O`ahu. 15 ft.

p. 157 bottom photo caption:
-Replace *Hypselodoris* ~~sp.~~ should be *Hypselodoris paulinae*

p. 158. PITTED NUDIBRANCH:
-3rd line from bottom: Replace "Known only from the Hawaiian Islands." with "Known to date only from the Hawaiian Islands and the Marshall Islands."

p. 160. PALI NUDIBRANCH:
-Replace ~~*Sclerodoris*~~ *paliensis* Bertsch & Johnson, 1982 with *Halgerda paliensis* (Bertsch & Johnson, 1982) - note: add parentheses around Bertsch & Johnson, 1982

p. 161 PURPLE-EDGED NUDIBRANCH
-Replace ~~PURPLE-EDGED~~ NUDIBRANCH with WHITE-BUMP NUDIBRANCH

p. 163: TREMBLING NUDIBRANCH
-3rd line from bottom: Replace: "about ~~1 1/4~~ in." with "about 2 1/2 in."

p. 165 ANDERSON'S NUDIBRANCH
-Replace entire species account with:
LOCUST NUDIBRANCH
Hypselodoris peasei (Bergh, 1880)
Family Chromodorididae
· These tiny slugs occur most often on a yellow sponge common under overhangs and in caves. In years of abundance they sometimes mass on their prey like locusts. Creamy white rimmed with blue or purple, their bodies are striped lengthwise with exceedingly fine white lines. Although typically inhabiting exposed rocky shores at depths of 15 to at least 60 ft., these slugs occur also in protected harbors and boat channels as shallow as 6 ft. *H. andersoni* is a recent synonym. To 1/2 in., but usually smaller. Endemic to the Hawaiian Islands. Photo: Scott Johnson, Mākua, O`ahu, 15 ft.

p. 166. PAINTED NUDIBRANCH
-Replace photo with Hypselodoris_infucata_rc.TIF.
-end of text: Replace: "Photo: ~~Mike Severns. Mokoli`i Islet (Chinamen's Hat),~~ O`ahu. 1 ft." with "Photo: Kāne`ohe Bay, O`ahu. 1 ft."

p. 166:
-between Painted Nudibranch and Magenta-Striped Nudibranch add:
Photo: Hypselodoris_violabranchia_rc.TIF
VIOLET-GILLED NUDIBRANCH
Hypselodoris violabranchia Gosliner & Johnson 1999
family Chromodorididae
· This small, uncommon slug is active by day and usually encountered crawling in the open. Its rhinophores and gills are reddish-violet and there is a purple marginal band around both head and tail. The off-white body is marked with fine white longitudinal lines and diffuse pale spots. Two other slugs in Hawaiian waters have similar fine white lines: the Locust Nudibranch (p 165), and *Hypselodoris insulana* (known only from the Northwest Hawaiian Islands and not illustrated here). To about 3/4 in. Endemic. Photo: Molokini Islet, Maui. 40 ft.

p.166. MAGENTA-STRIPED NUDIBRANCH
Replace photo with: Hypselodoris_maridadilus_rc_TIF

p. 167. DOT-AND-DASH NUDIBRANCH
-Replace *Hypselodoris* ~~sp. 1~~ with *Hypselodoris bertschi* Gosliner & Johnson, 1999
-Replace entire text with:

· Named for Hans Bertsch, co-author of the pioneering book *Hawaiian Nudibranchs*, this whitish animal is marked with dark purple longitudinal streaks and spots. Between these "dots and dashes" meander fine longitudinal lines of bright frosty white. The rhinophores are bisected by an orange band and the gills show spots of orange. To about 1 in. Considered endemic but may also occur in Japan. Photo: Magic Island boat channel, O`ahu. 10 ft.

p. 167 WHITE DOT NUDIBRANCH
-Replace *Hypselodoris* ~~sp. 2~~ with *Hypselodoris alboterminata* Gosliner & Johnson, 1999
-Replace entire text with:
· Like many of its genus, this small, uncommon nudibranch is marked with parallel longitudinal lines. The rhinophores are orange-red banded with white, the gills orange-red. Bright white dots fore and aft give it its name. It is usually seen at depths of about 15 to 75 ft. To about 1/2 in. Known only from the Hawaiian Islands, occurring as far north as Kure Atoll. Photo: Scott Johnson. Magic Island, O`ahu. 20 ft.

p. 167 RARE HYPSELODORIS
-Replace ~~RARE HYPSELODORIS~~ with PAULINE'S NUDIBRANCH
-Replace *Hypselodoris* ~~sp. 3~~ with *Hypselodoris paulinae* Gosliner & Johnson, 1999
-Replace entire text with:
· This rare, flamboyant nudibranch is creamy white with red lines and spots. The mantle is rimmed with gold; a purple line encircles the foot. The rhinophores are red, the gills white edged with red. The few known specimens have come from depths of 75 ft. or more. The species name honors Maui naturalist Pauline Fiene, whose abiding interest in the opisthobranchs of Hawai`i has resulted in many new discoveries. To about 2 1/2 in. Endemic. Photo: Scott Johnson. Off the Reef Runway, Honolulu Airport. 90 ft. (see also p. 157)

p. 168. JOLLY GREEN GIANT
-Replace ~~Miamira~~ *sinuata* with *Ceratosoma sinuata*

p. 168 IMPERIAL NUDIBRANCH
-Replace photo with Risbecia_imperialis_rc.TIF Crop so that three species can fit in page

p 168: between Jolly Green Giant and Imperial Nudibranch
-Add photo: Noumea_flava_rc.TIF
Add text at right of photo:

YELLOW NOUMEA
Noumea flava (Eliot, 1904)
family Chromodorididae
· These nudibranchs feed on a yellow sponge and can be difficult to spot, even with the narrow red margin on the edge of the mantle. (Often, the mantle edges fold inward at midbody, creating an "hourglass" shape.) They lay coils of yellow eggs on or near the sponge. In Hawai`i, the species seems to be most common off Maui. To about 1 in. Indo-Pacific. Photo: Mala Wharf, Lahaina, Maui. 20 ft.

p. 168 IMPERIAL NUDIBRANCH
-3rd line from bottom: Add: ", one trailing behind the other, " between "pairs" and "and are active..."
(should be like this: "commonly occur in pairs, one trailing behind the other, and are active...")
-bottom line: Replace: "about ~~2~~ in." with "about 2 1/2 in."

p. 169 DANIELLE'S THORUNNA
-Replace DANIELLE'S ~~THORUNNA~~ with DANIELLE'S NUDIBRANCH
-4th line from bottom: Replace "~~An undescribed species of *Thorunna*~~ (below)..." with *Thorunna kahuna* (below)...
-2nd line from bottom: Replace "To about ~~1/2 in. Central and Western~~ Pacific" with "To about 1 in. Indo-Pacific

p. 169 PINK-TINGED THORUNNA
-Replace ~~PINK-TINGED THORUNNA~~ with: KAHUNA NUDIBRANCH
-Replace *Thorunna* ~~sp~~. with *Thorunna kahuna* Johnson & Gosliner, 2001
-line 1: Replace: "this ~~undescribed~~ nudibranch" with this pretty nudibranch"
-bottom line: Replace: "To about ~~1/2 in.~~ Photo:" with "To about 3/4 in. Endemic. Photo:"

p. 170 WHITE AND BROWN DENDRODORIS
2nd line from bottom:
-Replace: "about ~~3~~ in." with "about 4 1/2 in."
-Add at end: Some taxonomists identify this as *D. elongata* Baba, 1936.

p. 171. TUBERCULOUS NUDIBRANCH
-Replace entire text with:
· This amazing slug resembles a lady's flower hat of the last century. Rosette-like nodules in various subtle hues cover its rounded back. It occurs on rocky, sponge-covered shores, such as those at Pūpūkea, O`ahu, and is active at night. The mantle's underside is beautifully spotted in white. A similar Hawaiian species, *D. carbunculosa*, lacks these spots and secretes a substance irritating to human eyes. To about 6 in. Indo-Pacific. Photo: Mākua, O`ahu. 10 ft.

p. 172. FELLOW'S NUDIBRANCH:
2nd line from bottom. Replace "~~Endemic~~." with: Hawai`i, Japan, Henderson Island, and New Caledonia.

p. 172: SPANISH DANCER. Replace entire text with:

· Spanish Dancers are the largest, most conspicuous nudibranchs in Hawai`i (and probably the world). They vary from a blotchy pinkish red, like fatty ground beef; to a more uniform deep crimson, frequently with yellow or whitish markings. The rhinophores and gills may have yellow or gold highlights. Usually furled out of sight, the mantle's margin is rimmed with white or yellow. If touched, the animal flares out in a colorful display, dramatically increasing its apparent size. These slugs can swim by flexing the body and undulating the outspread mantle (hence their common name). Their conspicuous egg coils resemble pink or red roses attached to the substrate and contain the same sponge-derived poisons as the nudibranchs themselves. Most recent sources recognize only one species but at least three have been proposed and some specialists consider the two forms illustrated here to be distinct. If so, Spanish Dancer "a" appears to be active both day and night while "b" is entirely nocturnal. The small red Imperial Shrimp, *Periclimenes imperator* (p. 224), sometimes lives commensally on the slug's body surface. The species name means "bloody." To at least 15 in., but usually smaller in Hawai`i. Indo-Pacific and tropical Atlantic. Photos: a) David R. Schrichte. Pūpūkea, O`ahu. (with eggs); b) Pūpūkea, O`ahu. 20 ft. (night)

p. 173 VARICOSE PHYLLIDIA
-3rd line from bottom: Replace sentence" ~~A very similar species ... remains unnamed.~~" with Two Hawaiian species very close in appearance, a *Fryeria* and another *Phyllidia*, remain unnamed.

p. 175 SPECKLED PLATYDORIS
-bottom line: Replace: "about ~~3~~ in." with "about 3 1/2 in."

p. 174. POLKADOT PHYLLIDIA: Replace ~~At present known only from Hawai`i, the Banda Islands, Indonesia, and Okinawa~~. with: First discovered in Hawai`i, it is now known from a number of widespread Indo-Pacific locations.

p. 177 INDIAN NUDIBRANCH
REPLACE PHOTO with Flabellina_exoptata_w_inset_rc.psd
Replace entire species account with:

DESIRABLE NUDIBRANCH
Flabellina exoptata Gosliner & Willan, 1991
Family Flabellinidae
· This tiny nudibranch occurs along vertical faces in clear water where there is some surge or current. It preys on hydroids. The cerata tips of Hawaiian specimens are bright white (instead of cream as described by Gosliner and Willan) and the rhinophores are thick, completely orange-red, and studded with papillae. *Caloria indica*, another hydroid-eating eolid found in Hawai`i (see inset photo), is similar in color and form but with slender, smooth, orange-red rhinophores that contain a wide white band. Other differences exist as well. Both species are armed with stinging capsules obtained second hand from the hydroids on which they feed. The name *exoptata*, meaning "much desired," refers to the animal's beautiful appearance. To about 1/2 in. Indo-Pacific. Photo: Kahe Point, O`ahu. 20 ft.

p. 178 EGG-EATING NUDIBRANCH
1st line of text
-Replace "prey exclusively on the eggs of ~~other~~ sea slugs." with prey exclusively on the eggs of sea slugs and marine snails.
4th line from bottom:
-Replace: Known ~~from Japan, Guam and Hawai`i~~ with Known through most of the Indo-Pacific

p. 179 BLUE DRAGON NUDIBRANCH
-2nd line from bottom: Replace: "The largest recorded was ~~almost 6 in. long,~~ most are ~~half~~ that size." with "The largest recorded was a monster over 8 1/2 in. long found on the back side of Molokini Islet, Maui; most are one third that size."

p. 180 ANEMONE-EATING NUDIBRANCH
-bottom line: Replace "(with eggs)" with "(pair with eggs)"

p. 185 bottom line of photo caption:
-Replace *Antipathes* ~~dichotoma~~) with *Antipathes* sp.)

p. 186 BROWN PURSE SHELLS
2nd line from bottom: Replace *Pericelis* ~~*hymanae*~~ with *Pericelis* sp.

p. 187. FRAGILE FILE SHELL:
-Replace ~~Lima~~ *fragilis* ~~Chemnitz, 1784~~ with *Limaria fragilis* (Gmelin, 1791)
-4th line from top: Replace "~~fire-engine~~ red" with "orange-red"

p. 190 HAWAIIAN OYSTER
-Replace "~~Ostrea~~ sandvicensis Sowerby, 1871" with "Dendostrea sandvicensis (Sowerby, 1871)"<--(note: add parentheses)
-2nd line from bottom: Replace "~~Endemic~~" with "Once considered endemic, but now known from many Indo-Pacific locations."

p. 190 ROUNDED COCKLE
-replace ~~Trachycardium~~ orbita ~~(Sowerby, 1833)~~ with Vasticardium orbita hawaiensis (Dall, Bartsch & Rehder, 1938)
-2nd line from bottom: Replace "~~Indo-Pacific~~" with "Endemic to Hawai`i at the subspecies level."

-3rd line from bottom: Replace "Of the three ~~Trachycardium~~ species..." with "Of the three cockle species

p. 194.
-3rd line from top: Replace 7~~3~~ with 76
-4th line from top: Replace "at least ~~nine~~ octopus species" with "at least 15 octopus species".
-6th line from top: Replace "a small relative ~~about 2 in. long~~ occurs" with "a small relative, the Hawaiian Bobtail Squid, occurs"

p. 195
REPLACE PHOTO WITH Octopus_cyanea_chapter_rc.TIF
5th line from bottom: Replace sentence "~~It attains about....4-5 pounds~~." with "The body grows about 6 in. long, and the arms about 32 in."
-3rd line from bottom: Replace "a) ~~D.R. Schrichte. Hanauma Bay~~, O`ahu." with "a) Palea Point, O`ahu.

p. 197 ORNATE OCTOPUS
Replace entire text with:
· This species is known locally as the "night octopus." Reddish to orange brown with buff or white stripes and spots that can be elevated into flaps, it is usually identifiable by color alone. The long, slender arms and elongate, pointed body (mantle) are also distinctive, although the mantle may take a bulbous shape. Hiding by day and emerging at dusk, this animal is usually found flattened against the bottom, snaking its arms into crevices and holes in search its prey of fishes, crustaceans and other octopuses. It is capable of biting divers who toy with it. Persons sensitive to the venom may suffer swelling, aching in the joints, and general discomfort lasting sometimes for weeks. In old Hawai`i this species was sometimes used medicinally. **Pūloa** means "long head" and **mākoko** means "reddish." Tiny juveniles are pelagic. The body grows about 5 in. long, the arms to more than 3 ft. Indo-Pacific. Photo: Makua, O`ahu. 15 ft.

p. 197 HAWAIIAN OCTOPUS: Replace entire species account with:

HAWAIIAN STARRY OCTOPUS
Octopus c.f. *luteus* (Sasaki, 1929)
Order Octopoda. Family Octopodidae
· This small, dark brown, nocturnal octopus with short arms and relatively smooth skin has a scattering of tiny white spots that can be elevated into papillae. Like all octopuses, it can change color, often developing whitish patches. Little is known of its habits. It belongs to the *Octopus macropus* complex, along with *O. ornatus* (above). Although known at present only from the Hawaiian Islands, it is similar to *O. luteus* from elsewhere in the Indo-Pacific. Photo: Mākua, O`ahu, 15 ft. (night)

p. 199 ROUND SPOT OCTOPUS: replace entire species account with:

CRESCENT OCTOPUS
Octopus hawaiiensis (Souleyet, 1852)
Order Octopoda. Family Octopodidae
· Although fairly common in rubble on shallow semi-protected reef flats, tide pools, and to depths of at least 15 ft., these octopuses hide until sunset and are infrequently seen. Their normal color is brown or brown and cream. The common name comes from two white crescent-shape marks often present on top of the mantle about half way between the eyes and the mantle tip (barely visible in photo). These animals grow to about the size of a golfball with a maximum weight of about 3 ounces. A Honolulu aquarist reports that at this species will lure crabs or small fish by darkening the body and wiggling a white arm tip. When noticed by scientists in the 1970s the species was considered new. It was first described, however, in 1852. Known only from the Hawaiian Islands. Photo: Black Point, O`ahu. 3 ft. (night)

p. 198 LONG-ARM SAND OCTOPUS Replace entire species account with:
· These small octopuses occupy holes in silty sand, sometimes old mantis shrimp burrows. They can swim over the bottom by holding their arms together and undulating, much like a flatfish. Little is known about this species—it is rarely seen, appears to be nocturnal, and is probably undescribed. A similar octopus occurs in Indonesia. Photo: Bruce Carlson. Kahe Point, O`ahu. 50 ft.

p. 200
REPLACE TOP PHOTO with Sepioteuthis_lessoniana1_rc.tif
OVAL SQUID
-Replace ~~OVAL~~ SQUID with BIGFIN SQUID

BIGFIN SQUID · **muhe`e**
Sepioteuthis lessoniana Lesson, 1830
Order Teuthoidea: Family Loliginidae
· Most squids are schooling, open-water animals not generally found close to shore; this is one of the comparatively few species which inhabit shallow inshore waters and coral reefs. For several decades these animals were rare or absent at snorkeling and diving spots in the Islands, but in 2001 they began appearing again in numbers. Typically, small aggregations hover together in midwater, apparently resting during the day and feeding at night. Like all squids, they have eight arms and two longer tentacles (usually retracted out of sight), which they shoot out to capture prey. The mouth and a parrot-like beak lie between the arms. A "pen" or thin internal shell made of chitin (the same as fingernails) gives some rigidity to the body. This particular genus is characterized by two expanded fins forming an oval and extending almost the length of the mantle. By rippling these fins the squid can swim forward or backward; for speed it jets backward. In old Hawai`i it was said that the squid "moves two ways, like a crab." This species is of commercial importance; in Japan it has been found to mature in less than 100 days, females growing to about 10 in., males to about 14 in. It has a life span of 9-10 months and is one of the few squids that have been successfully maintained in captivity. Eastern Indian Ocean to Hawai`i. Photos: top) Hanauma Bay, O`ahu. 15 ft.. bottom) Molokini Islet, Maui. 80 ft.

ADD PHOTO at bottom: Sepioteuthis_lessoniana2_rc.tif

p. 205 AMPHITRITE'S ROCK BARNACLE
-Replace "~~B~~alanus amphitrite Darwin, 1854" with Amphibalanus amphitrite (Darwin, 1854) Note: add parentheses
-3rd-4th lines from bottom: Replace ~~*B.*~~ *eburneus* with *A. eburneus* and ~~*B.*~~ *reticulatus* with *A. reticulatus*
-4th line from bottom: Replace "~~are~~ common" with "may be common"

p. 205 TRIGONATE BARNACLE
-3rd line from bottom: Replace "it was spread to the" with "it was apparently spread to the"

p. 206 PROTEUS ROCK BARNACLE
-last line. Replace "~~Caribbean, tropical Western Atlantic, Hawai`i, Guam and Japan~~." with " Tropical Western Atlantic. Introduced to Hawai`i, Guam, French Polynesia"

p. 207 PURPLE ROCK BARNACLE
-3rd line from bottom: Replace "~~Typically a~~bout 1/4 in" with 'About 1/4 in."
-2nd to last line of text: Replace "~~Indo-~~Pacific" with "West & Central Pacific"

p. 211 PHILIPPINE MANTIS SHRIMP
-Replace *Gonodactylaceus ~~mutatus (Lancaster, 1903)~~* with *Gonodactylaceus falcatus* (Forsskål, 1775)
-2nd line from bottom: replace "*G. mutatus*" with "*G. falcatus*"

p. 213 WHITE MANTIS SHRIMP
-Eliminate photo and text for White Mantis Shrimp. In it's place put photo and text for the PHILIPPINE MANTIS SHRIMP (p. 211)

p. 210
-Move photo and text for CILIATED MANTIS SHRIMP to p. 211 bottom (where Philippine Mantis Shrimp used to be)

p. 210
-Add, after last line of 1st paragraph. Other spots on the body, which help mantis shrimps identify each other, contain fluorescent pigments that convert blue light into yellow or green for extra-high contrast underwater.

p. 210
-Replace entire 2nd paragraph with:
To complement their lethal weaponry, mantis shrimps have developed the most advanced and sophisticated eyesight of any known animal, including humans. Superb depth perception and color discrimination improve their accuracy in identifying and striking prey and help them avoid injury from other stomatopods. Their two eyes, set on stalks, can move independently, swiveling vertically and horizontally, and rotating when necessary, to scan the environment on all sides, or track predators and prey. Each eye has independent depth perception, using three focal points for incredible trinocular range-finding capability. Unlike human eyes, which have four visual pigments capable only of perceiving what we call "visible light," mantis shrimps have up to sixteen visual pigments, enabling them to see far beyond human sight into the ultraviolet range. Finally, mantis shrimps can fine-tune and sharpen their vision with up to four different built-in color filters, optimizing their vision to match the quality of light at whatever depth they live. In addition to their mind-boggling color and depth perception, almost all mantis shrimps can also distinguish polarized light, which enhances contrast in certain situations and may help them see transparent prey. Polarized vision also enables them to communicate privately by "flashing" certain movable body parts that reflect only polarized light.

Mantis shrimps occupy burrows in sand or mud or inhabit coral cavities. Species that inhabit cavities (which are typically in short supply) must often defend their homes against other mantis shrimps. Brute force usually rules, but sometimes trickery pays off. Females admitted into a male's cavity, ostensibly to mate, sometimes evict the owner! Unlike most other crustaceans, females do not hold their eggs under the tail, but form them instead into a sheet or ball which they can carry in their mouth appendages. They can put the eggs down when they need to do other things.

p. 211 3rd line of text. Replace (~~below~~) with (p. 213)

p. 211
- top photo caption: remove the left arrow. Change (~~b~~) to (a)
- bottom photo caption. Change (~~a~~) to (b)
-last line of text: Replace:"Photos: a) ~~Roy L. Caldwell; b) Wai`alae Beach Park, O`ahu. 3 ft.~~ " with
"Photos: a) Wai`alae Beach Park, O`ahu. 3 ft.; b) Roy L. Caldwell."

p. 212 GIANT MANTIS SHRIMP
Replace text for Giant Mantis Shrimp

· Monogamous pairs of these strikingly banded spearers inhabit long U-shape burrows in protected sandy or muddy bottoms, often only a few inches deep, where they may live together 20 years or more. They are most commonly seen waiting for prey in their burrow entrances, which may be 4 in. across and camouflaged with a thin membrane of mucus and sand. Males have larger eyes and raptorial appendages and do most of the hunting. In old Hawai`i it was said that if a female were caught, the male would soon follow her out, but if the male were to be caught first, the female would never

emerge. These large stomatopods can seriously injure the hands of anyone attempting to grab them. The heavy, ivory-like claws have been used for making carved ornaments. Up to 14 in. long, these may be the largest of all stomatopods. Indo-Pacific. Photos: a) Rudie Kuiter. Indonesia. b) Typical ambush position. Roy L. Caldwell.

-Replace upper photo with Lysiosquillina_maculata1_Kuiter_rc
-Replace lower photo with upper photo (scan from 70 mm dupe provided. Maybe rotate slightly counterclockwise for best fit)

p. 214 URCHIN-TAIL MANTIS SHRIMP
-Add "i" to the end of "guerini" - should be "guerinii"

p. 218 RICHTER'S SAND SHRIMP
-Replace ~~RICHTER'S~~ SAND SHRIMP with UNNAMED SAND SHRIMP
-Replace *Trachypenaeopsis* ~~*richtersii* (Miers, 1884)~~ with *Trachypenaeopsis* sp.

p. 221 TWO-CLAW SHRIMP
-Replace "(Lucas, 184~~9~~)" with (Lucas, 1846)
-bottom line. Replace: To about ~~1~~ in. with To about 2 in.

p.222 FEEBLE SHRIMP
-bottom line. Replace: To about ~~1 1/4~~ in. with To about 2 in.

p. 222 CLEAR CLEANER SHRIMP
Replace "Photo: Aquarium (cleaning a Convict Tang~~, Acanthurus triostegus). Specimen collected at Hawai`i Kai, O`ahu.~~" with
Photo: Aquarium (cleaning a Convict Tang). A similar unnamed species of *Urocaridella* with more spots also occurs in the Islands.

p. 223
-Replace (Stimpson, 186~~1~~) with (Stimpson, 1860)

p, 224 SEA STAR SHRIMP
-bottom line: Replace "Photo~~s~~: ~~a)~~ Hekili Point, Maui. 3 ft. (on *Asteropsis carinifera*)~~: b) Palea Point, O`ahu. 40 ft. (on *Culcita novaeguineae*)~~" with:
Photo**:** Hekili Point, Maui. 3 ft. (on *Asteropsis carinifera*)

p. 225
DELETE TOP PHOTO. Replace with new photo: Periclimenes_galene_rc.TIF

and text.
HYDROID SHRIMP
Periclimenes galene Holthuis 1952
Subfamily Pontoniinae
· This shrimp is commensal with hydroids, where it presumably gains protection from its host's stinging cells. In Hawai`i it lives on the Christmas Tree Hydroid, *Pennaria disticha*, (p. 20) and possibly others such as the Black Hydroid, *Lytocarpia niger*, (p. 22). Although seldom noticed, these shrimp are not uncommon at some sites. To about 3/4 in. Indo-Pacific. Photo: Mike Roberts, Ulua Beach, Maui. 35 ft.

RECROP BOTTOM PHOTO if necessary. Use: Pontonides_sp1_rc.tif

p. 226 WHITE-STRIPE URCHIN SHRIMP
- Replace text with:
· These unusually slender shrimps spend their adult lives on long-spined sea urchins, clinging head inward to the long primary spines. Their bodies are purplish black with three narrow white longitudinal stripes, one on each side and another on the back, which break up the shrimp's outline. Usually occurring in pairs (females larger), they are commensal with Hawaiian urchins of the family Diadematidae. It takes a practiced eye to spot them on dark Banded Urchins and Long-Spined Urchins (p. 312) but they are not hard to see on the lighter Blue-Spotted and Fine-Spined Urchins (p. 311 and 314). In captivity the shrimps require no special care as long as their host urchin is happy. They appear not to leave the urchin, and it is unclear on what they feed. To almost 1 1/2 in. Indo-Pacific. Photo: Mike Severns, Molokini Islet, Maui. (on Blue-Spotted Urchin, p. 311)

p. 228 ~~HAWAIIAN~~ CAVE SHRIMP
-change to SPOTTED CAVE SHRIMP
-3rd line from bottom: Replace "Known ~~only from Hawai`i~~" with "Known from Hawai`i and Guam"

p. 229 HARLEQUIN SHRIMP
-2nd line: Replace " red spots ~~(brown with bluish edges in the Indian Ocean).~~" with " red spots. (In the Western Pacific and Indian Oceans the spots are brown with bluish edges, likely signifying a different species.)

p. 230 ORANGE-BANDED SNAPPING SHRIMP
-Replace *Alpheus paracrinitus* with *Alpheus* c.f. *paracrinitus*
-top line: Add sentence after "40 ft." "It belongs to a worldwide complex of similar species which is currently under study."
-bottom line: add after "orange bands." To about 1 in.
-bottom line: delete ~~(identity not confirmed)~~

p. 231 PETROGLYPH SHRIMP
-7th line from top: Replace *P. ~~rus~~* with *P. monticulosa*

p. 232 MARBLED SHRIMP
Replace top photo (a) with Saron_marmoratus_f_w_inset_rc.TIF
-put this caption on left side "(a) Marbled Shrimp female - night coloration"
-put this caption on right side "(b) Marbled Shrimp female - daytime coloration"
-bottom photo: Change caption to "(c) Marbled Shrimp males fighting"
- bottom line: replace line with "Photos: a) Honokōhau, Hawai`i (female at night); b) Magic Island, O`ahu (female during day); c) Hanauma Bay, O`ahu. (males fighting at night)"

p. 233 EYESPOT SHRIMP
Replace text with:
· This shrimp has banded green legs, a pair of dark spots on the hump of its tail, and a smaller pair on its tail fan. The false eyespots possibly serve to confuse or discourage predators. Tufts of bristles on its back and underside, characteristic of the genus *Saron,* are much smaller than those of the Marbled Shrimp (above). Males have elongated claw-bearing limbs. It inhabits crevices and heads of branching coral along shorelines with good water movement down to about 30 ft. To about 1 1/2 in. Indo-Pacific. The specimen illustrated was under a boulder at Kewalo Park, O`ahu. 3 ft.

p. 234 SCARLET CLEANER SHRIMP
-Replace ~~SCARLET~~ CLEANER SHRIMP with WHITE-STRIPE CLEANER SHRIMP

p. 235 top: STARRY LYSMATA
Replace entire species account:

STARRY CLEANER SHRIMP
Lysmata ternatensis
De Man, 1902
Family Hippolytidae
· Shrimps of the genus *Lysmata* are usually cleaners. This one typically lives at depths of 30 ft. or more in crevices and holes, often in pairs. It is reddish brown, liberally speckled with tiny white spots and marked with several transverse rows of larger brilliant blue-white spots. (At least four *Lysmata* species occur in Hawai`i. Two shoreline species, *L. trisetacea* and *L. anchisteus,* are not pictured in this book.) To about 1 in. body length. Indo-Pacific. Photo: Jerry Kane. Pūpūkea, O`ahu. 50 ft. (on Conger Eel).

p. 236 BANDED HINGE-BEAK SHRIMP
-bottom line. Replace: To about ~~2~~ in. with To about 3 1/2 in.

p. 236 HAWAIIAN HINGE-BEAK SHRIMP
-Replace "HAWAIIAN HINGE-BEAK SHRIMP" with "STARRY HINGE-BEAK SHRIMP
-bottom line: Replace "Known ~~only from Hawai`i~~." with "Known from Hawai`i and Guam."

p. 237 HENDERSON'S HINGE-BEAK SHRIMP
2nd line from bottom "Known from ~~Japan~~ to the Pacific Coast of Colombia" Known from East Africa to the Pacific Coast of Colombia

p. 237 HIATT'S HINGE-BEAK SHRIMP
-bottom line. Replace: To about ~~1~~ 1/2 in. with To about 3 1/2 in.

p. 238 RETICULATED HINGE-BEAK SHRIMP
-2nd line from bottom: After "aggregations." add "Also common in some sheltered shallow areas."

p. 238 RATHBUN'S HINGE-BEAK SHRIMP:
-Replace species account with:
· This newly described Hawaiian endemic, reported as *R. rugulosus* in earlier publications, is best recognized by the dark spot at the top of the abdominal hump. The complex pattern of double lines (varying from grayish or bluish green to red) may be interspersed with conspicuous white dots and lines. It inhabits rocky substrate from 1 to at least 50 ft., and is occasionally found in the coral environment. The name honors American zoologist Mary J. Rathbun (1860-1943), who described crabs and other crustaceans from Hawai`i and the Pacific around the turn of the century. Rathbun examined the first scientific specimen of this shrimp, suggesting it might be new. To about 3 in., apparently growing largest in very shallow protected waters. Photo: "Hale`iwa Trench," O`ahu. 10 ft.

p. 240 DEBELIUS' REEF LOBSTER
-Replace entire species account:
· This splendid reef lobster is covered with red or purple spots; the two pincers are solid purple, banded with orange at the ends. The first scientific specimen was collected in 1981 off Makapu`u, O`ahu, in coral rubble at night at a depth of 70 ft. by underwater naturalist Alex Kerstitch (1945-2001); it has been reported in the Islands only three times since. Linda Bail found a fresh molt during a night dive off south Kaua`i and later saw a live one, and Ray Farm spotted a specimen in a head of Antler Coral while diving in Kona. More common in the Western Pacific, it occasionally enters the aquarium trade from Indonesia and the Philippines. The name honors German author and underwater photographer Helmut Debelius, who originally discovered the species off Bali. To about 4 in. total length. Indo-Pacific. Photo: Helmut Debelius. Aquarium.

p. 242 SPINY LOBSTERS line 9: Replace "~~during June, July and August~~" with "in May, June, July and August"

p. 248 BORRADAILE'S GHOST SHRIMP
8th line from bottom: Add sentence after "seaweed." The classification of this species is in controversy; one specialist proposes *Glypturus coutierei* as more correct.

p. 250 HERMIT CRABS. FAMILIES....
-8th line Replace "~~H~~ermit crabs leave their shells..." to "Generally, hermit crabs leave their shells..."

p. 250 Photo caption:
Pylopaguropsis ~~zebra~~ lewinsohni

p. 251 2nd paragraph
-bottom line. Replace "1~~7~~ are described here" with "19 are described here"

p. 251 HOPPER'S HERMIT CRAB
-bottom line: Replace ~~Known to date only from the Hawaiian Islands~~ with Hawai`i, Marquesas, and Line Islands.

p. 253 ARGUS HERMIT CRAB
-3rd line from bottom: Replace ~~Known from Guam, the Mariana Islands and Hawai`i~~ with Indo-Pacific.

p. 253 ELEGANT HERMIT CRAB.
-Replace entire species account with:
HAWAIIAN ELEGANT HERMIT CRAB
Calcinus c.f. *elegans* (H. Milne Edwards, 1836)
Family Diogenidae
· This colorful hermit is found from tide pools to depths of at least 30 ft. with larger individuals often occurring at the deeper end of the range. The walking legs are dark brown with bright orange bands and the last segments are bright orange with black spots. The two almost equal-size claws are brownish speckled with white and have white tips. The eyes and eyestalks are bright blue, the antennae orange, the back white. Although morphologically identical to *Calcinus elegans* found elsewhere in the Indo-Pacific (which has turquoise blue instead of orange bands on the legs), recent DNA studies by Gustav Paulay and Machel Malay show the Hawaiian population to be distinct. To about 3/4 in. carapace length. Endemic. Photo: Hekili Point, Maui. 3 ft. (in triton shell)

p.254 GUAM HERMIT CRAB
-2nd line from bottom: Replace ~~Known from Guam, the Mariana Islands, Hawai`i and the Marquesas~~ with Indo-Pacific.

p. 255 HAZLETT'S HERMIT CRAB
- 1st line: "Living well below the intertidal zone, this ~~is one of several Hawaiian hermit crabs that remained unnoticed by scientists until the 1970s. It~~ hermit often occurs in heads of branching coral (genus *Pocillopora*)."
-2nd line from bottom: "Known ~~only from the Hawaiian Islands~~ from Hawai`i, the Bonin Islands and the northern Mariana Islands, but genetically distinct in Hawai`i. Photo: Kahe Point, O`ahu. 20 ft."

· Living well below the intertidal zone, this hermit often occurs in heads of branching coral (genus *Pocillopora*). At the slightest threat it releases its hold, dropping deep between the branches where it is safe from predators (a tactic common to many hermit crabs). Its legs are reddish brown except for the terminal segments (dactyls), which are almost all white. The claws are white, the segments above the claws dark reddish brown. The eyes are black with white spots, the eyestalks dark orange-red with a broad white band next to the eye, and the carapace magenta flecked with white. This is a very common crab off the Wai`anae coast of O`ahu at depths of 20 to 50 ft. or more, frequently inhabiting the Prickly Horn Shell *(Cerithium mutatum)*. At night dozens of these little crabs are sometimes found together, perhaps congregating both to feed and exchange shells. The name honors Brian Hazlett, who discovered this species (and *C. laurentae*, below) while studying the shell-fighting and mating behaviors of Hawaiian hermit crabs. Carapace length to about 1/5 in. Known from Hawai`i, the Bonin Islands and the northern Mariana Islands, but genetically distinct in Hawai`i. Photo: Kahe Point, O`ahu. 20 ft.

p. 260 BLOODY HERMIT CRAB
3rd line from bottom: Replace "...Marquesas Islands and possibly the Marshall Islands." with "...Marquesas Islands and possibly the Marshall and Mariana Islands.

p. 261 NOMURA'S HERMIT CRAB
-2nd line from bottom:
~~Known to date only from Hawai`i and Japan's Ryukyu and Izu Islands.~~ Western and Central Pacific.

p. 265: SPONGE CRABS. FAMILY DROMIIDAE
- 2nd line: Replace "two hindmost legs" with "two hindmost pairs of legs"

p.265 SLEEPY SPONGE CRAB
last line: after "20 ft." add "(See also p. ix.)"

p. 266 SHAGGY SPONGE CRAB
-Replace ~~*Cryptodromiopsis*~~ *plumosa* with *Stebbingdromia plumosa*
-2nd line from bottom: Replace "New Caledonia and Hawai`i" with "New Caledonia, Guam and Hawai`i"

p. 267 SMOOTH BOX CRAB
-Replace all text except last 3 lines with:
· These large box crabs are not often encountered in Hawai`i. The smooth, domed carapace of some are attractively patterned with orange or dark spots of varying sizes; others have no spots. (These may actually be two separate species.) The rear edge forms a beautiful unbroken curve, paralleled on the carapace surface by low, linelike ridges. These crabs occur on sandy bottoms from the shallows to depths of 50 ft. or more. They are under study by Dr. Peter Ng of the National University of Singapore. To about 6 in. carapace width. Indo-Pacific. Photo: Ron Holcom. Kahe Point, O`ahu. 50 ft. (with *Terebra strigilata*)

p. 269 HILO COLLECTOR CRAB
-5th line from top Replace *Anthelia edmondsoni* with *Sarcothelia edmondsoni*

p. 270. SEA URCHIN CRAB:
5th line from top: Replace "almost every Banded Urchin" with "almost every mature Banded Urchin"
6th line from top: Replace "The tiny dark males live among..." with "The tiny dark males and immature females live among..."
6th line from bottom: Replace "The few Banded Urchins that do not host crabs may contain one or more White-Stripe Urchin Shrimps.... occur together." with "The few Banded Urchins that do not host a large female can be identified by the presence of an intact anal sac, a balloon-like organ over the anus which the crab destroys."

p. 271 FLAT ELBOW CRAB:
-3rd line from bottom: Replace "Endemic. (Similar species occur...Indo-Pacific.)" with "Central and Western Pacific."

p. 271 bottom: Replace Horrid Elbow Crab with

HOLCOM'S ELBOW CRAB
Daldorfia sp.
Family Parthenopidae
· This perfectly camouflaged, slow-moving crab exactly resembles the rubble in which it lives. The lumpy, knobby carapace and pincer-bearing limbs may be overgrown with a thin layer of pinkish coralline algae. It occurs from about 10 to at least 100 ft. and resembles the very much larger *Daldorfia horrida* (rare in Hawai`i). As yet undescribed, it was first collected by O`ahu diver/photographer Ron Holcom. To about 1 1/2 in. carapace width. Known to date only from Hawai`i. Photos: a) Magic Island, O`ahu. 15 ft.; b) *Furtipodia* sp. (probably *F. petrosa*), a similar and amazingly camouflaged crab (missing its left pincer). Hālona Blowhole, O`ahu. 15 ft.

-Middle photo: replace caption Horrid Elbow Crab (a) with Holcom's Elbow Crab (a)
-Bottom photo: replace caption Horrid Elbow Crab (b) with Petrified Elbow Crab (b)

p. 272 THORNY ELBOW CRAB
Lambracheus should be *Lambrachaeus*
also fix in Index.

p. 272 HAIRY ELBOW CRAB
Replace *Parthenope* sp. with *Aulacolambrus hoplonotus* (Adams & White, 1849)
6th line from bottom: Delete sentence: Although this crab was.....is probably undescribed.

p. 275 LONG-EYED SWIMMING CRAB
-Replace "*Podophthalmus vigil* (Weber, 1795) with *Podophthalmus vigil* (Fabricius, 1798)
-bottom line: Replace "Photo: John E. Randall, Maumere, Flores, Indonesia" with "This photo, by John E. Randall, is of a similar species from Indonesia, probably *P. minabensis* or *P. nacreus*.
-make a caption in small type under the photo on right side. *Podophthalmus* sp. (Indonesia)

p. 276. BLOOD-SPOTTED SWIMMING CRAB
-Add "HAWAIIAN" in front of "BLOOD-SPOTTED"
-Replace *Portunus sanguinolentus* Herbst, 1783 with *Portunus sanguinolentus hawaiiensis* Stephenson, 1968
-2nd line from bottom: Replace "Indo-Pacific" with "Endemic to Hawai`i at the subspecies level."

p. 277: UNIDENTIFIED SWIMMING CRAB
-Replace entire species account with:

NIPPON SWIMMING CRAB
Laleonectes nipponensis (Sakai, 1938)
Family Portunidae
· This swimming crab is seen at night, usually in caves and crevices. The legs and claws tips are banded red and white. *Portunus oahuensis* Edmondson 1957 is a synonym. To about 2 1/2 in. carapace width. Indo-Pacific. Photo: Mākaha Caves, O`ahu. 20 ft.

p. 277 SAMOAN CRAB
-2nd line: Replace "The carapace is smooth and brown" with "The smooth carapace is entirely brown or grayish green."
-add at end: Sometimes called Mangrove Crab or Mud Crab.

p. 277: XANTHID CRABS.
-Replace "XANTHID CRABS. FAMILY XANTHIDAE" with XANTHID CRABS AND CARPILIID CRABS. FAMILIES XANTHIDAE AND CARPILIIDAE

-line 3: "never drawn to point" should be "never drawn to **a** point"
-2nd line from bottom: Replace "~~Seven~~teen of the largest..." with "Thirteen of the largest..."
-bottom line: Add at end: Two crabs of the similar family Carpiliidae are also included in this section.

p. 278: CONVEX CRAB
Replace Family ~~Xanthidae~~ with Family Carpiliidae

p. 278: SEVEN-ELEVEN CRAB
Replace Family ~~Xanthidae~~ with Family Carpiliidae

p. 280 BEARDED CRAB
-Replace ~~*Lophozozymus*~~ *intonsus* with *Juxtaxanthias intonsus*
2nd line from bottom: After "width." add "Formerly *Lophozozymus intonsus*."

p. 282 RED-EYED XANTHID CRAB
-Delete final "i" from *Platypodia eydouxii* -- should be *Platypodia eydouxi*
-5th line from bottom: Replace "~~ee~~-dew-eye" with "ay-dew-eye"

p. 283 CORAL GUARD CRABS.
-bottom line. Add after "in the Indo-Pacific." One Hawaiian species, *Trapezia rufopunctata*, is not illustrated here.

p. 284 RUSTY GUARD CRAB
-Replace: *Trapezia ~~ferruginea~~* ~~Latreille, 1823~~ with *Trapezia bidentata* (Forsskål 1775)
-5th line from bottom: Add sentence after "Antler Coral." *Trapezia ferruginea* is a synonym.

p. 285 RED-SPOTTED GUARD CRAB.
-bottom. Add another line at end. The similar *Trapezia rufopunctata*, rare in Hawai`i, is cream with red spots.

p. 287 SCALY ROCK CRAB
-Replace *Plagusia ~~depressa tuberculata~~* ~~(Lamarck, 1818)~~ with *Plagusia squamosa* (Herbst, 1790)
-3rd line from top. Replace 2 sentences "The subspecies tuberculata....tropical Atlantic subspecies." with "Native to the Indo-Pacific, this crab has spread to warm waters worldwide by attaching to floating timber and ship hulls. *Plagusia depressa tuberculata* is a synonym."

p. 287 bottom: BUTTON CRAB: Replace species account with

BUTTON CRAB
Exopalicus maculatus (Edmondson 1930)
Family Palicidae
· This little crab has a rough, domed carapace; the three pairs of walking legs are fringed with hair, enabling it to swim short distances when disturbed. The hindmost pair of legs is reduced. Although not uncommon in rocky habitat, this animal is seen only at night. The specimen pictured was crawling on Rice Coral *(Montipora capitata)*. The Indo-Pacific species of the family Palicidae were recently revised placing this crab in a new genus. Previously it was *Cymapolia medipacifica*. To about 1/2 in. carapace width. Photo: Magic Island boat channel, O`ahu. 15 ft.

p. 288 PALLID GHOST CRAB
4th line from top: Replace "~~Night Ghost~~ Crab" with "Horn-Eyed Ghost Crab"

p. 289 CORAL GALL CRAB:
5th line from bottom: Delete sentence "~~This photo shows two exceptionally large galls in Antler Coral *(Pocillopora exydouxi)*~~."

p. 292.
-Replace top photo with Sclerasterias_euplecta_rc.TIF
-Replace caption with "A rarely seen deep-water starfish, *Sclerasterias euplecta*. Hanauma Bay, O`ahu. 45 ft."

p. 294 DWARF STAR
-Replace ~~*Asterina*~~ *anomala* Clark 1921 with *Aquilonastra anomala* (Clark 1921)
-3rd line from bottom. Add after "tip of each arm." Formerly *Asterina anomala*.

p. 295 MAGNIFICENT STAR
-Replace bottom photo with Luidia_magnifica_w_inset_rc.TIF
-bottom line: Replace "has only eight arms. Photo: Kahe..." with "has only eight arms (see inset). Photos: Kahe..."

p. 296 FISHER'S STAR
-Replace photo with Mithrodia_fisheri_w_inset_rc.PSD
-Replace entire text with:
· The surface of this star is covered with a coarse mesh of ridges, bumps and projections. Its arms, round in cross-section, are likely to be of unequal length, and the edges usually bear a row of long, blunt lateral spines. Color varies from almost white, tan or cinnamon-brown to orange-red, often with darker bands on the arms. Smaller specimens are typically seen on cave ceilings at night where they probably feed on sponges, bryozoans or other sessile animals. Larger specimens are active on reef tops by day, usually at depths of 70 ft. or more. Named for American zoologist Walter K. Fisher

(1878-1953), who pioneered the study of Hawaiian sea stars and sea cucumbers in the early 1900s. To about 20 in. Although similar to *M. bradleyi* of the Eastern Pacific and *M. clavigera* of the Indo-Pacific. it is probably endemic to Hawai`i. Photos: Mākua, O`ahu. 20 ft. (in cave at night). Inset: 80 ft. (on reef)

p. 298
-Replace top photo with Linckia_guildingi_rc.TIF
p. 298 GREEN LINCKIA
-bottom line: delete ~~(See also p. 292)~~
-2nd line from bottom: after "1733." Add: "The species is named for the Rev. Lansdown Guilding (1797-1831) of the island of St. Vincent, who studied the flora and fauna of the Caribbean."

p. 302 BRITTLE STARS
-5th line from top. Replace: ~~Keenly s~~ensitive to light. with Sensitive to light

p. 303
RECROP photo to make room for new paragraph. Use Ophiocoma_pica1_rc.TIF
-Add above 2nd paragraph
Brittle stars are keenly sensitive to light but have no obvious eyes. They can also change color, usually becoming lighter at night. These facts were something of a mystery until scientists discovered that the arms and bodies of these animals are covered with tiny transparent calcite crystals which focus light onto light-sensitive tissues underneath. These "retinas" appear to be linked together in a sophisticated array that works as a single eye! Chromatophores under each lens function like an iris, admitting more light at night and less during the day. Their expansion and contraction under the transparent crystals causes the color change.

p. 308 2nd paragraph
-4th line from top: Replace Hawaiian ~~Domino D~~amselfish with Hawaiian Dascyllus damselfish

p. 309 ROUGH SPINED URCHIN
-2nd line from bottom: Replace "~~Known only from Hawaii and New Caledonia.~~" with "Western and Central Pacific."

p. 311 FAMILY DIADEMATIDAE
-3rd line from top: Replace "the long spines ~~bear no~~ venom." with " the long spines have never been shown to bear venom."
-4th line from top: Delete "~~(genera Echinothrix and Leptodiadema only).~~"

p. 311 BLUE SPOTTED URCHIN
1st line: Replace "at about ~~100~~ ft." with "at about 50 ft."

p. 315 FINE SPINED URCHIN
-2nd line from bottom. "occurs also in the Marshall Islands and Guam."

p. 316 ROCK BORING URCHIN
2nd line from top: Replace "~~usually limestone or tuff~~" with "including hard black basalt"

p. 316 OBLONG URCHIN
-3rd line from top: Replace "bore into ~~softer rocks such as limestone or volcanic tuff~~" with "solid rock"

p. 329 DIFFICULT SEA CUCUMBER
-Replace *dificilis* with *diffficilis* (just add another "f")

p.331 LEOPARD SEA CUCUMBER
-Replace text with:
· This is the most common of three Hawaiian cucumbers with a double row of dark spots. (The others are *Holothuria arenicola* [p. 332], and *H. lineata* [not illustrated].) Of the three it has the largest spots, but they become indistinct when the animal fully expands or contracts. The body is light tan and firm to the touch. This animal occurs under stones from near shore down to at least 50 ft. It does not eject sticky threads. To about 4 in. Indo-Pacific and Eastern Pacific. Photo: Kewalo Beach Park, O`ahu. 3 ft.

p. 333 HAWAIIAN YELLOW-TIP SEA CUCUMBER
-2nd line from bottom: Delete Dr. Gustav Paulay ~~of the University of Guam~~.
-2nd line from bottom: Replace "To about 4 in." with "To about 10 in."

p. 343. Add in space at bottom of page

PHOTO: Pyrosoma_atlanticum_rc.tif
PRICKLY PYROSOMA
Pyrosoma atlanticum Péron, 1804
Family Pyrosomidae
· These strange drifting creatures look gelatinous but are actually rigid and surprisingly hard to the touch. Each consists of a colony of hundreds of tiny tunicates which form a tube or cone, closed at one end and open at the other, and covered with short, slender, pointed projections or papillae. A tiny reddish organ is visible inside the translucent body of each tunicate. The animals take water in from outside the tube, filter out microscopic phytoplankton,

then expel the water inside the tube where it exits at the open end, propelling the colony. *Pyrosoma* means "fire body" and at night these animals can light up brightly when disturbed. There are a number of species of pyrosomes, some growing up to 30 ft. (Try searching the internet for rare images of huge pyrosomes and divers.) This colony was about 4-5 in. long, though the species can apparently attain several feet. It occurs in temperate and tropical waters worldwide but is rarely seen in Hawai`i. Photo: Pūpūkea, O`ahu. 65 ft. (identification not confirmed)

p. 346 CRABS
-Add, above "Samoan Crab" Carapace must be at least 6 in. wide.

p. 346 bottom DIVISION OF AQUATIC RESOURCE
-Add URL at bottom or side http://www.hawaii.gov/dlnr/dar/fish_regs/marinverts.htm

p. 347. Introduction to Bibliography
-first line: Replace: "preparation of this book" with "preparation of the first edition of this book
-first line: Replace sentence: "~~This is by no means....invertebrates~~." with "(References for the revised edition are available online at http://hawaiisfishes.com.)"

p. 349 Bibliography
-14th line from top: "Anemones, tube anemones and zoanthids" should be upper case. ANEMONES, TUBE ANEMONES AND ZOANTHIDS Move the line one space down (as in STONY CORALS, below)
-19th line from top. Replace ~~(Describes anemones, corallimorpharians and cerianthids from the Hawaiian Islands.)~~ with (Anemones, corallimorpharians, cerianthids)
-12th line from bottom. Replace: ~~(Describes all known zoanthids from the Hawaiian Islands. However the species presented have changed significantly in light of recent research.)~~ with (Zoanthids)
-9th line from bottom: Replace "~~Coles, Steve.....106 p~~." with:
Fiene, Pauline. 1998. **A note on synchronous spawning in the reef coral *Pocillopora meandrina* at Molokini Islet, Hawai'i**. University of Hawai'i. Hawai'i Institute of Marine Biology Technical Report No. 42.