

### Contributions to the Hawaii Biological Survey (1992–1994)

The following represent the reports and publications of the staff and affiliates of the Hawaii Biological Survey, including those documents that were coauthored with non-Hawaii Biological Survey staff.

#### 1992

- 1992-001 Cowie, R.H. 1992. Identification and analysis of land snail shells recovered from sink hole deposits in the West Beach area of Oahu, Hawaiian Islands. *Bishop Museum Report to Paul H. Rosenthal, Ph.D., Inc.* 10 p.
- 1992-002 Mehrhoff, L.A. 1992. Draft recovery plan for the Hawaiian gardenia (*Gardenia brighamii*). *U.S. Fish and Wildlife Service*.
- 1992-003 Nishida, G.M. 1992. Biological information on rare plants, animals and natural communities of the Humuula Saddle proposed line area. *Bishop Museum Report to HECO/HELCO*.
- 1992-004 Polhemus, D. 1992. A preliminary survey of the aquatic insect fauna of Waikolu Stream, Molokai, Hawaii. *Bishop Museum Report to Hawaii DLNR*.
- 1992-005 Swift, S.F. 1992. Acarine (mite) communities associated with 'Ohi'a, *Metrosideros polymorpha*, at Hono O Na Pali and Kuia Natural Area Reserves on Kaua'i Island. *Bishop Museum Report to the State of Hawaii Natural Area Reserves System Commission*.
- 1992-006 Herbst, D.R. 1992. Endangered and threatened wildlife and plants; determination of endangered status for *Wilksia hobdyi* (dwarf iliau), a Hawaiian plant. *Federal Register* 57(120): 27859–27863.
- 1992-007 Herbst, D.R. 1992. Endangered and threatened wildlife and plants; determination of endangered status for *Marsilea villosa* (TihiTihi). *Federal Register* 57(120): 27863–27867.
- 1992-008 Herbst, D.R. *et al.* 1992. Endangered and threatened wildlife and plants; determination of endangered status for 16 plants on the island of Molokai, HI. *Federal Register* 57(196): 46325–46340.
- 1992-009 Herbst, D.R. & Wagner, W.L. 1992. Alien plants on the Northwestern Hawaiian Islands, p. 189–224. *In: Alien plant invasions in native ecosystems of Hawaii: management and research*. University of Hawaii, Honolulu.
- 1992-010 Herbst, D.R. 1992. Endangered and threatened wildlife and plants; proposed endangered status for three plants from the Waianae Mountains, Island of Oahu, HI. *Federal Register* 57(240): 59066–59071.
- 1992-011 Nishida, G.M. ed. 1992. Hawaiian terrestrial arthropod checklist. *Bishop Museum Technical Report* 1, viii + 262 p.
- 1992-012 Polhemus, D. 1992. Baseline survey of aquatic insects in selected units of the Hawaii Natural Area Reserves System (NARS). *Bishop Museum Technical Report*.
- 1992-013 Polhemus, D. 1992. A preliminary assessment of the impact of Hurricane Iniki on the aquatic insect faunas of streams in the Na Pali coast, Kauai, Hawaii. *Bishop Museum Technical Report*.
- 1992-014 Howarth, F.G. & Mull, W.P. 1992. *Hawaiian insects and their kin*. University of Hawaii Press, Honolulu. 160 p.
- 1992-015 Howarth, F.G. & Polhemus, D. 1992. A review of the Hawaiian stream insect fauna, p. 40–50. *In: New directions in research, management and conservation of Hawaiian freshwater stream ecosystems. Proceedings of the 1990 Symposium on Freshwater Stream Biology and Fisheries Management*. Hawaii DLNR, Honolulu.
- 1992-016 Stone, F.D. & Howarth, F.G. 1992. Status report on the biological resources in Kalua

- O Lapa Lava Tube at Ahihi Kinau Natural Area Reserve, Island of Maui. *Bishop Museum Report to the Natural Area Reserves System Commission, DLNR*.
- 1992-017 Chan, J., Howarth, F.G. & Stone, F.D. 1992. Reconnaissance survey of cave resources within the Manuka Natural Area Reserve, S. Kona, Island of Hawaii. *Bishop Museum Report to the Natural Area Reserve System Commission, DLNR*.
- 1992-018 Nishida, G.M. 1992. Preliminary report on rare natural resources in the Keamuku-Keahole and Keahole-Kailua proposed 138KV transmission line corridor. *Bishop Museum Report to CH2M HILL*.
- 1992-019 Nishida, G.M. & Tenorio, J.M. 1992. *What bit me? Identifying Hawaii's stinging and biting insects and their kin*. University of Hawaii Press, Honolulu. 80 p.
- 1992-020 Asquith, A. 1992. Attraction of Hawaiian ground litter invertebrates to protein hydrolysate bait. *Environmental Entomology* 21(5): 1022-1028.
- 1992-021 Asquith, A. & Messing, R.L. 1992. Annotated insect distribution records for the island of Kauai. *Proceedings of the Hawaiian Entomological Society* 31: 151-56.
- 1992-022 Gillespie, R.G. 1992. Hawaiian spiders of the genus *Tetragnatha* 2. Species from natural areas of windward east Maui. *Journal of Arachnology* 20(1): 1-17.
- 1992-023 Norris, R.E. & Abbott, I.A. 1992. New taxa of Ceramieae (Rhodophyta) from Hawaii. *Pacific Science* 46(4): 453-65.
- 1992-024 Olson, S.L. 1992. William T. Brigham's Hawaiian birds and a possible historical record of *Ciridops anna* (Aves: Drepanidini). *Pacific Science* 46(4): 495-500.
- 1992-025 Beardsley, J.W. 1992. Review of the genus *Nesodiranchis* Perkins, with descriptions of three new species (Hymenoptera: Cynipoidea: Eucoilidae). *Proceedings of the Hawaiian Entomological Society* 31: 109-18.
- 1992-026 Gettman, A.D., Mitchell, W.C., Lai, P.-Y. & Mau, R. 1992. A hot water treatment for control of the banana root borer, *Cosmopolites sordidus* (Germar) (Coleoptera: Curculionidae), in banana planting stock. *Proceedings of the Hawaiian Entomological Society* 31: 59-63.
- 1992-027 Reimer, N.J. & Beardsley, J.W. 1992. Epizootic of white halo fungus, *Verticillium lecanii* (Zimmerman), and effectiveness of insecticides on *Coccus viridis* (Green) (Homoptera: Coccidae) on coffee at Kona, Hawaii. *Proceedings of the Hawaiian Entomological Society* 31: 73-81.
- 1992-028 Uchida, G.K., Beardsley, J.W., Reimer, N.J. & Wheeler, R.A. 1992. Comparison of populations of *Heteropsylla cubana* Crawford (Homoptera: Psyllidae) and its parasitoids on seven accessions of *Leucaena* (Leguminosae: Mimosoideae) in Hawaii. *Proceedings of the Hawaiian Entomological Society* 31: 97-107.
- 1992-029 Beardsley, J.W. 1992. Review of the genus *Aspidogyrus* Yoshimoto, with descriptions of three new species (Hymenoptera: Cynipoidea: Eucoilidae). *Proceedings of the Hawaiian Entomological Society* 31: 139-50.
- 1992-030 Uchida, G.K. & Beardsley, J.W. 1992. The genus *Hemischizocranium* Tuthill (Homoptera: Psyllidae), with descriptions of immature stages. *Proceedings of the Hawaiian Entomological Society* 31: 183-96.
- 1992-031 Uchida, G.K. & Beardsley, J.W. 1992. The *Kuwayama ventralis* group; three new species of Hawaiian Psyllidae (Homoptera), with descriptions of adults and immature stages. *Proceedings of the Hawaiian Entomological Society* 31: 197-211.
- 1992-032 Uchida, G.K. & Beardsley, J.W. 1992. *Megatrioza zanthoxyli*, n. sp. (Homoptera: Psyllidae), with descriptions of adult and immature stages. *Proceedings of the Hawaiian Entomological Society* 31: 213-18.
- 1992-033 Uchida, G.K. & Beardsley, J.W. 1992. Description of the immature stages of *Triozia uniuqua* (Caldwell) (Homoptera: Psyllidae). *Proceedings of the Hawaiian Entomological Society* 31: 219-26.
- 1992-034 Uchida, G.K. & Beardsley, J.W. 1992. The taxonomy of *Crawforda triopsyllina* Caldwell (Homoptera: Psyllidae) with descriptions of the immature stages.

- Proceedings of the Hawaiian Entomological Society* 31: 227–34.
- 1992-035 Ramadan, M.M. & Beardsley, J.W. 1992. Supernumerary molts in the first instar of *Diachasmimorpha tryoni* (Cameron) (Hymenoptera: Braconidae: Opiinae). *Proceedings of the Hawaiian Entomological Society* 31: 235–37.
- 1992-036 Beardsley, J.W. & Uchida, G.K. 1992. Mediterranean fruit fly, *Ceratitidis capitata* (Wiedemann), reared from fruit of *Prunus ilicifolia* (Nutt.) Walp. in Hawaii. *Proceedings of the Hawaiian Entomological Society* 31: 245–47.
- 1992-037 Beardsley, J.W. 1992. Notes on two species of Megaspilidae in Hawaii (Hymenoptera: Ceraphronoidea: Megaspilidae). *Proceedings of the Hawaiian Entomological Society* 31: 253–54.
- 1992-038 Christiansen, K. & Bellinger, P. 1992. Collembola. *Insects of Hawaii* 15, viii + 445 p.
- 1992-039 Liebherr, J.K. & Samuelson, G.A. 1992. The first endemic troglotic carabid beetles in Hawaiian lava tubes (Coleoptera: Carabidae). *Pan-Pacific Entomologist* 68(3): 157–68.
- 1992-040 Steenwyk, R.A. van, Kaneshiro, K.Y. & Hue, N.V. 1992. Rubidium as an internal physiological marker for Mediterranean fruit fly (Diptera: Tephritidae). *Journal of Economic Entomology* 85(6): 2357–2364.
- 1992-041 Cole, F.R., Medeiros, A.C. & Loope, L.L. 1992. Effects of the Argentine ant on arthropod fauna of Hawaiian high-elevated shrubland. *Ecology* 73(4): 1313–1322.
- 1992-042 Whittier, T.S., Kaneshiro, K.Y. & Prescott, L.D. 1992. Mating behavior of Mediterranean fruit flies (Diptera: Tephritidae) in a natural environment. *Annals of the Entomological Society of America* 85(2): 214–18.
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- 1993-001 Howarth, F.G. & Stone, F.D. 1993. Reconnaissance survey of the caves of the coastal lands of the Kiholo Bay Area, Island of Hawaii. *Bishop Museum Report to the Division of State Parks, DLNR*.
- 1993-002 Randall, J.E., Earle, J.L., Hayes, T., Pittman, C., Severns, M. & Smith, R.J.F. 1993. Eleven new records and validations of shore fishes from the Hawaiian Islands. *Pacific Science* 47(3): 222–239.
- 1993-003 Polhemus, D. & Englund, R. 1993. A survey of the fish and aquatic insect fauna of the Hanawi and Makamakaole streams, Maui, Hawaii. *Bishop Museum Technical Report*.
- 1993-004 Polhemus, D. & Englund, R. 1993. A survey of the fish and aquatic insect fauna of the Waikele/Kipapa streams, Oahu, Hawaii. *Bishop Museum Technical Report*.
- 1993-005 Howarth, F.G., Major, M. & Preston, D. 1993. Biological survey of subterranean habitats and cave resources inventory of the Kanaio Training Area, Maui, Hawaii. *In: Biological reconnaissance survey of the Kanaio Training Area, Maui, Hawaii. Heritage Report prepared for the Hawaii Army National Guard by the Hawaii Heritage Program, The Nature Conservancy of Hawaii*.
- 1993-006 Polhemus, D. 1993. A preliminary survey of the aquatic insect fauna of Waiahuakua Stream and nearby drainages, Na Pali coast, Kauai, Hawaii, with notes on the impact of Hurricane Iniki. *Bishop Museum Report to Natural Area Reserves System Commission, DLNR*.
- 1993-007 Cowie, R.H. & Nishida, G.M. 1993. Malacological inventory survey in the Multi-Purpose Range Complex study area of the Pohakuloa Training Area, Island of Hawaii. *Bishop Museum Report to The Nature Conservancy of Hawaii*. 56 p.
- 1993-008 Howarth, F.G. 1993. High-stress subterranean habitats and evolutionary change in cave-inhabiting arthropods. *American Naturalist* 142 (Supplement): S65–S77.
- 1993-009 Hoch, H. & Howarth, F.G. 1993. Evolutionary dynamics of behavioral divergence among populations of the Hawaiian cave-dwelling planthopper *Oliarus polyphemus* (Homoptera: Fulgoroidea). *Pacific Science* 47: 303–18.
- 1993-010 Evenhuis, N.L. & Polhemus, D. 1994. Review of the endemic Hawaiian genus *Sig-*

- matineurum* Parent (Diptera: Dolichopodidae). *Bishop Museum Occasional Paper* 37, 19 p.
- 1993-011 Cowie, R.H. 1995. Identity, distribution and impacts of introduced Ampullariidae and Viviparidae in the Hawaiian Islands. *Journal of Medical and Applied Malacology* 5: in press.
- 1993-012 Polhemus, D. 1994. Damsels in distress: a review of the conservation status of Hawaiian *Megalagrion* damselflies (Odonata: Coenagrionidae). *Aquatic Conservation: Marine and Freshwater Ecosystems* 3: 343–49.
- 1993-013 Randall, J.E., Earle, J.L., Pyle, Richard L., Parrish, J.D. & Hayes, T. 1993. Annotated checklist of the fishes of Midway Atoll, Northwestern Hawaiian Islands. *Pacific Science* 47(4): 356–400.
- 1993-014 Howarth, F.G. & Stone, F.D. 1993. Conservation of Hawaii's speleological resources. *Proceedings of the 4th International Symposium on Volcanospeleology* (Bend, Oregon) 1993: 124–26.
- 1993-015 Lebot, V., Aradhya, M., Manshardt, M. & Meilleur, B. 1993. Genetic relationships among cultivated bananas and plantains. *Euphytica* 67(3): 163–75.
- 1993-016 Asquith, A. & Messing, R.L. 1993. Contemporary Hawaiian insect fauna of a lowland agricultural area on Kaua'i: implications for local and island-wide fruit fly eradication programs. *Pacific Science* 47(1): 1–16.
- 1993-017 Asquith, A. 1993. A new species of *Cyrtopeltis* from coastal vegetation in the Hawaiian Islands (Heteroptera: Miridae: Dicyphinae). *Pacific Science* 47(1): 17–20.
- 1993-018 Beardsley, J.W. 1993. Exotic terrestrial arthropods in the Hawaiian Islands: origins and impacts. *Micronesica* (Suppl.) 4: 11–15.
- 1993-019 Gillespie, R.G. & Reimer, N. 1993. The effect of alien predatory ants (Hymenoptera: Formicidae) on Hawaiian endemic spiders (Araneae, Tetragnathidae). *Pacific Science* 47(1): 21–33.
- 1993-020 Abbott, I.A. 1993. New species of Ceramiaceae (Rhodophyta) from the Hawaiian Islands. *Phycologia* 32(6): 451.
- 1993-021 Riotte, C.J.E. 1993. A third larval form of *Agrius cingulatus* in Hawaii (Lepidoptera: Sphingidae). *Tropical Lepidoptera* 4: 82.
- 1993-022 Tompkins, L., McRobert, S.P. & Kaneshiro, K.Y. 1993. Chemical communication in Hawaiian *Drosophila*. *Evolution* 47(5): 1407–19.
- 1993-023 Hoikkala, A. & Kaneshiro, K.Y. 1993. Change in the signal-response sequence responsible for asymmetric isolation between *Drosophila planitibia* and *Drosophila silvestris*. *Proceedings of the National Academy of Science* 90(12): 5813–5817.
- 1993-024 Shelly, T.E., Whittier, T.S. & Kaneshiro, K.Y. 1993. Behavioral responses of Mediterranean fruit flies (Diptera: Tephritidae) to trimmed lure baits: can lures be created artificially? *Annals of the Entomological Society of America* 86(3): 341–51.
- 1993-025 Kaneshiro, K.Y. 1993. Introduction, colonization, and establishment of exotic insect populations: fruit flies in Hawaii and California. *American Entomologist* 39(1): 23–29.
- 1993-026 Medeiros, A.C., Hobdy, R.W. & Wagner, W.H., Jr. 1993. Notes on rediscovery, status and ecology of the very rare fern *Christella boydiae* (Thelypteridaceae). *American Fern Journal* 83(3): 86–89.
- 1993-027 Medeiros, A.C., Loope, L.L. & Anderson, S.J. 1993. Differential colonization by epiphytes on native (*Cibotium* spp.) and alien (*Cyathea cooperi*) tree ferns in a Hawaiian rain forest. *Selbyana* 14: 71–74.
- 1993-028 Taylor, C.M. & Lorence, D.H. 1993. On the status of *Randia armata* (Sw.) DC. (Rubiaceae: Gardenieae). *Taxon* 42(4): 865–67.
- 1993-029 Fancy, S.G., Pratt, T.K. & Lindsey, G.D. 1993. Identifying sex and age of Apapane and Iiwi on Hawaii. *Journal of Field Ornithology* 64(2): 262–69.
- 1993-030 Engilis, A., Jr. & Pratt, T.K. 1993. Status and population trends of Hawaii's native

- waterbirds, 1977–1987. *The Wilson Bulletin* 105(1): 142–58.
- 1993-031 Polhemus, D.A. 1993. A preliminary survey of the aquatic insect fauna of upper Kaluanui Stream, Oahu, Hawaii. *Bishop Museum report to the Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources*. 5 p.
- 1993-032 Polhemus, D.A. 1993. A survey of the aquatic insect fauna of lower Hanakapiai Stream, Kauai, Hawaii, thirteen months after Hurricane Iniki. *Bishop Museum report to the Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources*. 8 p., 8 pls.
- 1993-033 Polhemus, D.A. 1993. A survey of the aquatic insect fauna of lower Honopue Stream, Hawaii Island, Hawaii. *Bishop Museum report to the Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources*. 5 p.
- 1993-034 Polhemus, D.A. 1993. A survey of the aquatic insect fauna of lower Hakalau Stream, Hawaii Island, Hawaii. *Bishop Museum report to the Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources*. 12 p.
- 1993-035 Polhemus, D.A. 1993. A preliminary assessment of the impact of Hurricane Iniki on the aquatic insects faunas of streams on the Na Pali coast, Kauai, Hawaii, p. 59–88. *In: Devick, W.S., Assessments of the impact of Hurricane Iniki on stream biota and ecosystems on Kauai*. State of Hawaii. Department of Land and Natural Resources, Division of Aquatic Resources. 88 p.
- 1993-036 Holloway, J.D. 1993. The moths of Borneo: family Geometridae, subfamily Ennominae. *Malayan Nature Journal* 47: 1–309.
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- 1994-001 Howarth, F.G., Nishida, G.M. & Asquith, A. 1994. Insects of Hawaii. *In: Our living resources 1994*. National Biological Service, Washington, D.C.: in press.
- 1994-002 Howarth, F.G., Stone, F.D., Pearthree, E. & Lippert, J. 1994. Cave inventory and assessment survey for selected caves in Hawaii Volcanoes National Park. Report to Resources Management Division, Hawaii Volcanoes National Park. [Nine caves surveyed, each with separate pagination; plus appendix.]
- 1994-003 Polhemus, D.A., Howarth, F.G. & Miller, S.E., eds. 1995. Natural history of Halawa Valley. *In: Bishop Museum Report to Hawaii State Department of Transportation*. H-3 Project. 112 p.
- 1994-004 Nishida, G.M., ed. 1994. Hawaiian terrestrial arthropod checklist. Second edition. *Bishop Museum Technical Report*. 4, iv + 287 p.
- 1994-005 Cowie, R.H., Evenhuis, N.L. & Christensen, C.C. 1995. Catalog of the native land and freshwater molluscs of the Hawaiian Islands. *Bishop Museum Bulletin in Zoology*. 3: in press.
- 1994-006 Cowie, R.H., Nishida, G.M., Basset, Y. & Gon, S.M., III. 1995. Patterns of land snail distribution in a montane habitat on the island of Hawaii. *Malacologia* 36(1-2): 155–69.
- 1994-007 Polhemus, D.A. 1994. [Aquatic insect assessment]. *In: Environmental Technologies International, Pohakea Stream biological assessment, West Maui, Hawaii*. Prepared for Belt Collins, Ltd. 16 p. + figs. and appendices.
- 1994-008 Englund, R. & Polhemus, D.A. 1994. Maakua Stream biological assessment, Oahu, Hawaii. Prepared for Ogden Environmental Energy Services. 21 p. + appendix.
- 1994-009 Englund, R. & Polhemus, D.A. 1994. Hanamaulu Stream biological survey, Kauai, Hawaii. Prepared for AMFAC/JMB Hawaii, Inc. 33 p. + appendix.
- 1994-010 Cowie, R.H. 1994. Freshwater snail surveys in relation to eradication of apple snails with copper sulphate on Kauai. Report prepared for State of Hawaii, Department of Agriculture. *Bishop Museum Technical Report*. 5, 26 p.
- 1994-011 Evenhuis, N.L. & Cowie, R.H. 1994. A survey of the snails, insects and related arthropods in the grounds of the Tripler Army Medical Center, Honolulu, Hawaii. Report prepared for R.M. Towill Corporation. *Bishop Museum Technical Report* 3, 21 + [2] p.

- 1994-012 Cowie, R.H. 1994. Variation in species diversity and shell shape in Hawaiian land snails: *in situ* speciation and ecological relationships. *Evolution* 49: in press.
- 1994-013 Polhemus, D.A. 1994. Aquatic insect conservation: worldwide crisis or localized threats? *American Zoologist*. 33 (1993): 588-98.
- 1994-014 Randall, J.E., Ida, H. & Earle, J.L. 1994. *Ammodytoides pylei*, a new species of sand lance (Ammodytidae) from the Hawaiian Islands. *Pacific Science* 48(1): 80-89.
- 1994-015 Nishida, G.M. 1994. Reconnaissance and preliminary assessment of the terrestrial arthropods of Lualualei, Oahu, Hawaii. Report prepared for Nature Conservancy of Hawaii.
- 1994-016 Herbst, D.R., Mehrhoff, L.A., Bruegmann, M.M., Canfield, J.E., Ellshoff, Z. & Yoshioka, J. 1994. Endangered and threatened wildlife and plants; determination of endangered or threatened status for 24 plants from the island of Kauai, Hawaii. *Federal Register* 59(38): 9304-9329.
- 1994-017 Staples, G.W. & Medbury, S. 1994. *Moringa drouhardii*, a rare Madagascan endemic in the Honolulu Botanic Gardens, Hawaii. *Cactus and Succulents Journal* 66(3): 122-23.
- 1994-018 Herbst, D.R., Warren, S.D. & Aschmann, S.G. 1994. The plants of Kaho'olawe. *USACERL Special Report*.
- 1994-019 Asquith, A. 1994. An unparsimonious origin for the Hawaiian Metragini (Heteroptera: Lygaeidae). *Annals of the Entomological Society of America* 87(2): 207-13.
- 1994-020 Asquith, A. 1995. Evolution of the endemic Hawaiian plant bug genus *Sarona*: speciation on geographical and ecological islands. In: Wagner, W.L. & Funk, V., eds., *Speciation and biogeography of the Hawaiian biota*. Smithsonian Institution Press, Washington, DC.: in press.
- 1994-021 Asquith, A. 1994. Revision of the endemic Hawaiian genus *Sarona* Kirkaldy (Heteroptera: Miridae: Orthotylinae). *Bishop Museum Occasional Papers* 40: 1-83.
- 1994-022 Asquith, A. 1995. Seasonal phenology and distribution of *Scaptomyza (Bunostoma) anomala* Hardy (Diptera: Drosophilidae): a proposed representative species for monitoring the effects of protein bait sprays in Hawaii. *Proceedings of the Hawaiian Entomological Society* 32: in press.
- 1994-023 Asquith, A. & Kido, M. 1994. Native Hawaiian insects attracted to the semiochemical methyl eugenol, used for male annihilation of the oriental fruit fly (Diptera: Tephritidae). *Environmental Entomology*: in press.
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- 1994-026 Pyle, Richard L. & Chave, E.H. 1994. First record of the chaetodontid genus *Prognathodes* from the Hawaiian Islands. *Pacific Science* 48(1): 90-93
- 1994-027 Allison, A., Miller, S.E. & Nishida, G.M. 1994. Hawaii Biological Survey. In: *Our living resources 1994*. National Biological Service, Washington, D.C.: in press.
- 1994-028 Shelly, T.E., Whittier, T.S. & Kaneshiro, K.Y. 1994. Sterile insect releases and the natural mating system of the Mediterranean fruit fly, *Ceratitis capitata* (Diptera: Tephritidae). *Annals of the Entomological Society of America* 87(4): 470-81.
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- 1994-030 Wagner, W.L., Weller, S.G. & Sakai, A.K. 1994. Description of a rare new cliff-dwelling species from Kaula'i, *Schiedea attenuata* (Caryophyllaceae). *Novon* 4(2): 187-90.
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- 1994-032 Nishida, G.M. 1994. Taxonomic validation of candidate species of insects (and related arthropods) of the Hawaiian Islands. Report prepared for the National Biological Survey.
- 1994-033 Miller, S.E. 1994. Biosystematic centres statements: Bishop Museum, p. 31–32. In: Jones, T. & M.A. Cook, eds., *Proceedings of the first BioNET-INTERNATIONAL Consultation, London, June 1993*. CAB International, Wallingford. 81 p.

## List of New Taxonomic Changes Published in this Volume

### Lepidoptera: Noctuidae

- Automala* Walker, **new synonym** of *Nola* Leach  
*Idiocyttara* Turner, **new synonym** of *Nola* Leach  
*Manoba* Walker, **revived genus**  
*Necla* Walker, **new synonym** of *Nola* Leach  
*Neonola* Hampson, **new synonym** of *Nola* Leach  
*Pisara* Walker, **new synonym** of *Nola* Leach  
*Rhynchopalpus* Hampson, **revived genus**  
*Rhynchopalpus brunellus* Hampson, **resurrected combination**  
*Rhynchopalpus harthani* Holloway, **new combination**

### Coleoptera: Nitidulidae

- Eupetinus impressus dimidiatus* Sharp, **new synonym** of *Eupetinus impressus* Sharp

### Araneae: Philodromidae

- Pedinopistha aculeatus* (Simon), **new combination**  
*Pedinopistha longulus* (Simon), **new combination**  
*Pedinopistha schauinslandi* (Simon), **new combination**  
*Pedinopistha stigmaticus* (Simon), **new combination**  
*Proernus* Simon, **new synonym** of *Pedinopistha* Karsch  
*Proernus velox* Simon, **new synonym** of *Pedinopistha finschi* Karsch

### Araneae: Thomisidae

- Diaea vitellina* Simon, **new synonym** of *Misumenops kanakanus* (Karsch)