Recent Records of Turtles and Tortoises from Laos, Cambodia, and Vietnam

BRYAN L. STUART^{1,2,3,4,*} AND STEVEN G. PLATT^{4,5}

¹Field Museum of Natural History, Department of Zoology, Division of Amphibians & Reptiles, 1400 S. Lake Shore Drive, Chicago, Illinois 60605 USA. E-mail: bstuart@fieldmuseum.org *Corresponding author and address

²University of Illinois at Chicago, Department of Biological Sciences (M/C 066), 845 W. Taylor, Chicago, Illinois 60607 USA

³Wildlife Conservation Society, P.O Box 6712, Vientiane, Lao PDR

⁴Wildlife Conservation Society, P.O. Box 1620, Phnom Penh, Cambodia

⁵Present address: Department of Math and Science, Oglala Lakota College, P.O. Box 490, Kyle, South Dakota 57752-0490 USA

Abstract. - The chelonian fauna of Laos, Cambodia, and Vietnam remains poorly known and is currently threatened by widespread and intensive exploitation for food and traditional Chinese medicine. The distributions of many species are uncertain owing to a paucity of records. Because turtles are so extensively traded in the region, most records now come from animals in trade. We emphasize that authors must be explicit about how their records were obtained to allow other workers the ability to critically evaluate the accuracy of the distribution record. We here present detailed information on recent (1993-2002), vouchered records of 19 species of freshwater turtles, tortoises, and marine turtles collected in the field or obtained from hunters, abandoned hunting camps, villages, or markets in Laos, Cambodia, and Vietnam.

Key words. - Testudines, turtles, tortoises, Laos, Cambodia, Vietnam, distribution.

Introduction

Although mainland Southeast Asia has long been regarded as a hotspot of chelonian diversity (van Dijk et al., 2000), the turtle and tortoise fauna of Laos, Cambodia, and Vietnam (formerly known as French Indochina) remains poorly known. Biological investigation was limited prior to World War II, and since then decades of civil unrest, political instability, and military conflict have largely prevented fieldwork. Consequently few museum records exist (summarized by Iverson, 1992) and with the exceptions of Smith (1931) and Bourret (1941), little information is available on the occurrence and distribution of chelonians in former French Indochina. A recent photographic identification guide to the region (Stuart et al., 2001) and country reviews of Laos (Stuart and Timmins, 2000), Cambodia (Touch et al., 2000), and Vietnam (Hendrie, 2000) summarized information on chelonian distributions, but provided few details concerning new records on which these accounts are based.

Exploitation of chelonians for food and medicinal markets is widespread in Laos, Cambodia and Vietnam (Jenkins, 1995; Le Dien Duc and Broad, 1995; Lehr, 1997; Timmins and Khounboline, 1999; van Dijk et al., 2000; Ziegler, 2002; Holloway 2003). Hunters in rural villages capture turtles and tortoises for local consump-

tion or to sell to traders who periodically visit villages to purchase wildlife. Although turtles and tortoises are locally consumed and domestically traded in Laos, Cambodia, and Vietnam, most are exported to markets in southern China (Stuart et al., 2000; van Dijk et al., 2000). Chelonians from Laos and Cambodia are usually transported to Vietnam, where they join with Vietnamese turtles on northward routes to China (Stuart et al., 2000). Because Laos and Cambodia are source rather than destination or transfer countries, specimens obtained from markets in Laos or Cambodia usually originated from that country. However, trade specimens in Vietnam may have originated from Vietnam, Laos, Cambodia, or beyond. The volume of this trade is believed to pose a serious threat to the continued viability of wild chelonian populations throughout Southeast Asia (van Dijk et al., 2000).

Because turtles and tortoises are extensively and visibly traded in Southeast Asia, most recent distribution records are based on animals observed in trade rather than collected from the wild. The geographic origin of many trade specimens can be difficult if not impossible to determine, especially those obtained in urban markets. Uncritical acceptance of these records by workers has led to inaccurate characterization of species distributions, with serious biological, conservation, legal, and regulatory implications. Additional confusion has result-

ed from the realization that some species of Asian turtles described during the last two decades were based on type specimens obtained from Hong Kong animal dealers who provided inaccurate or fabricated locality data, leaving the geographic origin of many in doubt (Dalton, 2003; Parham et al., 2001). Distribution records that explicitly state how the turtles were obtained are therefore clearly important, given the historical paucity of information, uncertainties in recent literature, and the serious conservation threats faced by these taxa.

We here report recent distribution records of chelonians from Laos, Cambodia, and Vietnam that can be verified with voucher specimens or photographs. These records were obtained by (1) us during herpetological surveys conducted from February 1998 through May 2001, (2) other workers in the region between 1993 and June 2002, and provided to us, or (3) other workers who deposited specimens at the Field Museum of Natural History, Chicago, USA since 1993. For each record we note whether the specimen was collected in the field, found in abandoned hunting camps, obtained from hunters or residents in rural villages, or purchased from markets.

It should be emphasized that our collecting activities had little if any detrimental impact on populations of wild chelonians. The number of collected specimens on which we report is insignificant when compared to the millions of chelonians annually consumed by the wildlife markets of southern China (Lau et al., 2000). Furthermore, the majority of specimens we and others collected in the field were shells of animals consumed by rural villagers. Chelonian shells are commonplace and easily obtained in villages; shells are retained by hunters as trophies, sold or kept for medicinal purposes, and used as food containers for domestic animals and rice scoops. Our collecting activities certainly provided no stimulus for the additional harvesting of wild chelonians. Finally, we believe that further scientific collecting is warranted in the region, as most species remain under-represented in museum collections, and taxonomic study can affect conservation priorities (Parham and Shi, 2001; Stuart and Thorbjarnarson, 2003).

Methods and Conventions

Measurements were taken to the nearest 0.1 cm with 80 cm sliding calipers. We use the following abbreviations: CL = maximum straight carapace length, including spines or projections (i.e. not necessarily the mid-line); CW = maximum carapace width, including spines or projections; PL = maximum plastron length, including spines or projections; BD = maximum depth of complete specimen (head and neck extended in trionychid specimens). Measurements were not reported if shell damage precluded accurate measurement.

Records are presented under each species account in the following format where applicable: Field Museum of Natural History (FMNH) or figure number, type of record, measurements (defined above), locality including coordinates if available, approximate elevation and brief habitat description if field-collected, circumstances of origin if not field-collected by collector or photographer, date specimen was collected or photographed, and name of collector or photographer. In the case of records obtained from hunters or villages, the name of collector refers to the person who preserved the specimen or provided the record to us rather than to the name of the person who actually captured it from the wild. In the same cases, the date of collection refers to the date the collector (as previously defined) obtained the specimen or took the photograph rather than to the date it was removed from the wild.

GPS coordinates are presented only if the original collector provided them, and in the same format as originally provided. Coordinates that we generated for the purposes of mapping the records are not presented. Marine turtle records are not mapped.

Species Accounts

Platysternidae

Platysternon megacephalum Gray, 1831 [Map 1]

Laos. - Fig. 1, photograph only, Huaphahn Province, Vieng Tong District, Ban Sa Kok Village, 20°11' N 103°12' E, captured by resident of Ban Sa Kok, 29 April 1998, B. L. Stuart. FMNH 258749, complete specimen, CL = 9.3, CW = 7.3, PL = 6.9, BD = 2.6, BolikhamxayProvince, Khamkeut District, Nape border area, stream in wet evergreen forest, 19 March 1997, D. Davenport. Fig. 2 (and Fig. 4 in Stuart and Timmins, 2000), photograph only, Khammouan Province, Nakai District, Nakai-Nam Theun National Biodiversity Conservation Area, Ban Xiangthong Village, 17° 54' 05" N 105° 23' 50" E, one of eleven individuals in the possession of a Vietnamese trader leaving Ban Xiangthong, 17 November 1998, B. L. Stuart. Fig. 3, photograph only, Xe Kong Province, Dakchung District, Ban Daklan Village, 15° 21.61' N 107° 01.70' E, captured by residents of Ban Daklan, D. Showler, December 1997. **Vietnam.** - FMNH 252164, complete specimen, CL = 15.5, CW = 11.6, PL = 12.7, BD = 5.2, Gia-Lai Province, Ankhe District, Buon Loi Village, 20 km northwest of Kannack town, Annamite Mountains, 14° 20' N 108° 36' E, 700-750 m, found in burrow under overhanging stream bank, 31 March 1995, I. Darevsky and N. L. Orlov.

Remarks. - Ziegler (2002) reported the species in local trade in Ha Tinh Province, Vietnam.

Geoemydidae

Batagur baska (Gray, 1831 "1830-35") [Map 2]

Cambodia. - Platt et al. (2003) reviewed the status of *B. baska* in Cambodia and reported on a breeding population in the Sre Ambel River System of Koh Kong Province.

Cuora amboinensis (Daudin, 1802) [Map 3]

Cambodia. - Fig. 4, photograph only, Battambang Province, Ek Phnom District, Koh Chivang Commune, Prek Toal Village on Tonle Sap Lake, 13°14' 28" N 103° 39' 32" E, captured by residents of Prek Toal, 27 August 1999, B. L. Stuart, J. Smith, and K. Davey. FMNH 259411, broken carapace and plastron, Kandal Province, Trayo Village, 11° 19' 02" N 105°09' 47" E, obtained from hunter in Trayo, 05 July 2000, S. G. Platt. Fig. 5, photograph only, two living turtles, CL = 19.3 and PL = 17.5, CL = 20.6 and PL = 18.9, Kampong Thom Province, Sary Village, 12° 48.48' N 104° 44.19' E, collected by Sary residents in Tonle Sap, 21 June 2000, S. G. Platt, Heng Sovannara, and Long Kheng. Fig. 6, photograph only, CL = 20.4 cm, PL = 18.5, Koh Kong Province, Sre Ambel Town, in house of wildlife trader, 11° 07.30' N; 103° 44.73' E, 27 August 2000, S. G. Platt, B. L. Stuart, and Vuthy Monyrath. Fig. 7, photograph only, CL = 11.6, PL = 11.0, Koh Kong Province, Koh Kong Town near municipal airport, 11° 37.11' N; 103° 00.98' E, crossing road in open grassland bordered by Melaleuca and Rhizophora swamp, 07 February 2001, S. G. Platt, Heng Sovannara, and Long Kheng.

Laos. - FMNH 255262, complete specimen, CL = 16.7, CW = 11.7, PL = 15.2, BD = 7.5, Champasak Province, Mounlapamok District, Dong Khanthung Proposed National Biodiversity Conservation Area, Ban Khiem Village, 14°14' N 105° 20' E, captured by residents of Ban Khiem for food, 24 July 1998, B. L. Stuart.

Vietnam. - **Fig. 8**, photograph only, Kien Giang Province, An Minh District, photographed in a reptile trade shop, 09° 45′ 04" N 104° 59′ 35" E, 31 October 2000, B. L. Stuart.

Cuora galbinifrons Bourret, 1939 [Map 4]

Laos. - **FMNH 256544**, complete specimen, CL = 16.6, CW = 12.2, PL = 16.2, BD = 8.0, Khammouan Province,

Nakai District, Nakai-Nam Theun National Biodiversity Conservation Area, 17° 50' N 105° 35' E, 900 m, wet evergreen forest, found under brush in leaf litter on hillside 500 m from nearest stream, 13 December 1998, B. L. Stuart. FMNH 255273, carapace only, CL = 18.1, CW = 12.9, Khammouan Province, Yommalat District, Khammouan Limestone (= Phou Hin Poun) National Biodiversity Conservation Area, Ban That Mouang Khai Village, 17° 32' N 105° 04' E, consumed by residents of Ban That Mouang Khai, 01 April 1998, B. L. Stuart. Vietnam. - FMNH 255694, complete specimen, CL = 19.2, CW = 13.0, PL = 18.0, BD = 8.5, Nghe AnProvince, Tuong Duong District, Pu Mat Nature Reserve, 19° 03' N 104° 37' E, 600 m, wet evergreen hill forest, in leaf litter along Khe Mat Stream, 14 September 1998, B. L. Stuart. FMNH 255695, complete specimen, repatriated to Vietnam before measurements could be taken, collecting information same as FMNH 255694.

Remarks. - The subspecies *C. galbinifrons galbinifrons* Bourret, 1939 is treated here as a full species following the recommendation of Stuart and Parham (2004). Ziegler (2002) reported the species in local trade in Ha Tinh Province, Vietnam, and Fritz et al. (2002) reported hybrids of *C. galbinifrons* and *C. bourreti* in local trade in Ha Tinh and Quang Binh Provinces, Vietnam.

Cuora mouhotii (Gray, 1862) [Map 5]

Laos. - FMNH 258880, carapace only, CL = 16.1, CW = 11.0, Khammouan Province, Boualapha District, Hin Nam No National Biodiversity Conservation Area, Ban Tasang Village, eaten by residents of Ban Tasang, 30 December 1995, R. J. Timmins. FMNH 258881, carapace only, CL = 17.3, CW = 13.0, collecting information same as FMNH 258880. FMNH 258887, plastron only, PL = 16.8, Bolikhamxay Province, Nam Kading National Biodiversity Conservation Area, eaten by villagers living in Nam Kading, 01 May 1995, R. J. Timmins.

Remarks. - The species *mouhotii* was previously placed in the monotypic genus *Pyxidea* Gray, 1863, but we allocate it to the genus *Cuora* following Honda et al. (2002) and Stuart and Parham (2004). Ziegler (2002) reported the species in local trade in Ha Tinh Province, Vietnam.

Cyclemys atripons Iverson and McCord, 1997 [Map 6]

Cambodia. - FMNH 259050, complete specimen, CL = 21.4, CW = 16.2, PL = 20.7, BD = 8.4, Mondolkiri Province, Pichrada District, Phnom Nam Lyr Wildlife

Sanctuary, near 12° 32' 16" N 107° 32' 00" E, 600-700 m, evergreen gallery forest, found on sand bank at base of large boulder 1.5 m from swift, shallow stream, 21 June 2000, B. L. Stuart. FMNH 259051, complete specimen, CL = 22.7, CW = 17.0, PL = 21.2, BD = 8.0, KohKong Province, Sre Ambel District, Sre Ambel Town, 11° 07' 20" N 103° 44' 45" E, obtained from turtle trader who reported specimen came from Sophat Village, downstream from Sre Ambel Town, 27 August 2000, B. L. Stuart and S. G. Platt. FMNH 259052, complete specimen, CL = 18.0, CW = 15.0, PL = 16.7, BD = 6.2, collecting information same as FMNH 259051. FMNH 259412, carapace and incomplete plastron, CL = 19.3, CW = 15.2, Koh Kong Province, Sre Ambel District, Boeung Tradok Pong Village, 11° 31′ 10″ N 103° 46′ 55″ E, obtained from hunter in Boeung Tradok Pong, 24 August 2000, B. L. Stuart and S. G. Platt. FMNH 259414, plastron only, PL = 16.5, collecting information same as FMNH 259412. **FMNH 259415**, plastron only, PL = 16.2, collecting information same as FMNH 259412. **FMNH 259416**, plastron only, PL = 14.9, Koh Kong Province, Sre Ambel District, Chaouethail Plous Village on Sre Ambel River, 11° 18' 03' N, 103° 44' 56"E, obtained from hunter in Chaouethail Plous, 21 August 2000, B. L. Stuart and S. G. Platt. FMNH **259417**, plastron only, PL = 19.2, collecting information same as FMNH 259416. FMNH 259422, plastron only, PL = 20.2, Koh Kong Province, Sre Ambel District, Chay Reap Village, west bank of Sre Ambel River, 11° 29' 10" N 103° 47' 00" E, <10 m, obtained from hunter in Chay Reap, 23 August 2000, B. L. Stuart and S. G. Platt. **Fig. 9**, photograph only, two living animals, CL = 13.7 cm and PL = 13.0 cm, CL = 20.8 cm and PL = 19.6cm, Koh Kong Province, Kaoh Pao River, 11° 44.46' N; 103° 04.80' E, surrounding hills covered in dense evergreen forest with some mangrove along shoreline, obtained from fishermen, taken in crab traps set in river, 10 May 2001, S. G. Platt, Heng Sovannara, and Long Kheng.

Remarks. - Fritz and Ziegler (1999) reviewed records of *Cyclemys* from the region. Species boundaries within the genus *Cyclemys* remain uncertain (Fritz and Ziegler, 1999; Guicking et al., 2002). The specimens we assigned to *C. atripons* have plastra that are largely yellow with densely pigmented bridges; complete specimens exhibit nearly immaculate chins. These characteristics are typical of both *C. atripons* and *C. pulchristriata* Fritz, Gaulke & Lehr, 1997, two species that were described almost concurrently in 1997. *Cyclemys atripons* and *C. pulchristriata* have been considered the same taxon (Iverson in Guicking et al., 2002). However, Fritz et al. (2001) concluded that *C. atripons* has more ventral neck stripes (7-8 light and 7-9 dark stripes when

counted from one mouth corner to the other) than C. pulchristriata (5-7 light and 5-7 dark stripes). FMNH 259050 has 8 dark and 7 light ventral neck stripes, FMNH 259051 has 10 dark and 9 light ventral neck stripes, but in FMNH 259052 the ventral side of the neck is nearly immaculate like the chin and completely lacks striping. These few samples demonstrate that ventral neck stripes are more variable than stated by Fritz et al. (2001). In a phylogenetic analysis of a 982 bp fragment of the mitochondrial cytochrome b gene, Guicking et al. (2002) recovered two clades in the atripons-pulchristriata complex that differed by up to 4.5% sequence divergence. Samples referred to atripons and pulchristriata appeared in both clades, but the authors assigned these names according to whether the sample originated from Cambodia (atripons) or Vietnam (pulchristriata), rather than based on their morphology. The findings of Guicking et al. (2002) suggest that more than one species of *Cyclemys* with mostly yellow plastra, densely pigmented bridges, and immaculate chins could exist, but it remains unclear whether the two clades correspond to what have been described as atripons and pulchristriata. We assign the name C. atripons rather than C. pulchristriata to our samples because the type locality of C. atripons is geographically closer to most of our samples than to that of *C. pulchristriata*. Clearly, further studies into the morphological and genetic variation in Cyclemys are warranted, particularly with samples of certain provenance.

Cyclemys tcheponensis (Bourret, 1939) [Map 7]

Laos. - Fig. 10 (and Fig. 7d in Stuart et al., 2001), photograph only, Bolikhamxay Province, Thaphabat District, Phou Khao Khouay National Biodiversity Conservation Area, near That Xay Waterfall, 18° 27' N 103° 10' E, 300 m, dry evergreen forest mixed with bamboo, sleeping on bottom of 4 x 4 m pool in forested stream, 26 June 1998, B. L. Stuart. FMNH 258870, complete specimen, CL = 9.7, CW = 8.0, PL = 8.7, BD= 3.6, Bolikhamxay Province, Khamkeut District, purchased in Lac Xao Market, 14 December 1996, D. Davenport. FMNH 258871, complete specimen, CL = 9.0, CW = 8.1, PL = 8.3, BD = 3.6, collecting information same as FMNH 258870. FMNH 258875, complete specimen, CL = 20.6, CW = 15.2, PL = 20.3, BD = 8.5, Khammouan Province, Nakai District, Houay Moey Stream (tributary of Nam Pheo River), Ban Na Meo Village, dry evergreen forest, 07 March 1997, D. Davenport and J. Chamberlain. FMNH 255263, complete specimen, CL = 17.1, CW = 13.6, PL = 16.1, BD = 6.5, Khammouan Province, Nakai District, Khammouan Limestone (= Phou Hin Poun) National Biodiversity

Conservation Area, 17° 53' N 104° 52' E, 570 m, dry evergreen forest mixed with deciduous trees and pine, caught on streambank by hunter using dog, 26 March 1998, B. L. Stuart and T. Chan-ard.

Remarks. - Species boundaries within the genus *Cyclemys* remain uncertain (Fritz and Ziegler, 1999; Guicking et al., 2002). The specimens we assigned to *C. tcheponensis* have dark radiating patterns of the plastra, pigmented chins, head and neck stripes, and dorsal spotting on the crown of the head, as illustrated by Fritz and Ziegler (1999) and Fritz et al. (1997). Fritz and Ziegler (1999) reviewed records of *Cyclemys* from the region, and Ziegler (2002) reported the species in local trade in Ha Tinh Province, Vietnam.

Cyclemys sp. [Map 8]

Cambodia. - FMNH 259418, carapace only, CL = 19.5, CW = 14.7, Kampong Speu Province, Koh Kong Samling Logging Concession, 11° 24' 15" N 103° 49' 47" E, 200 m, recovered from hunter's camp, mixed deciduous forest and grassland, 15 February 2000, J. Walston. FMNH 259419, carapace only, CL = 22.1, CW = 16.1, collecting information same as FMNH 259418. **FMNH 259420**, carapace only, CL = 19.1, CW = 15.9, collecting information same as FMNH 259418. FMNH 259421, plastron only, PL = 21.2, collecting information same as FMNH 259418. FMNH 259423, plastron only, PL = 21.0, Koh Kong Province, Sre Ambel District, Chay Reap Village, west bank of Prek Sre Ambel River, 11° 29' 10" N 103° 47' 00" E, <10 m, obtained from hunter in Chay Reap, 23 August 2000, B. L. Stuart and S. G. Platt.

Laos. - FMNH 258893, carapace only, CL = 21.8, CW = 16.6, Champasak Province, Pakxong District, Ban Latsasin Village, near Xe Nam Noy River, 800 m, eaten by residents of Ban Latsasin Village, 02 April 1995, T. D. Evans.

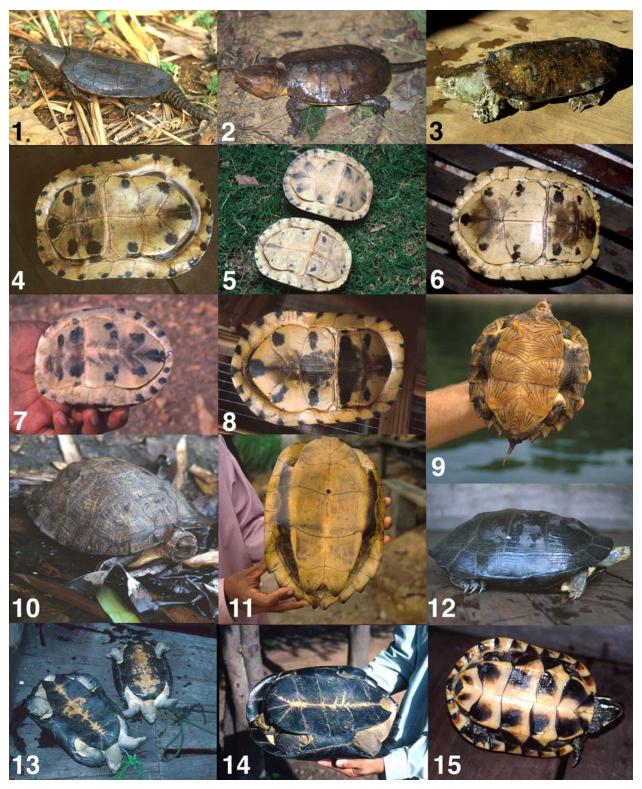
Remarks. - The condition of these shell fragments precludes identifying them to species. They are not necessarily a species different from *atripons* or *tcheponensis*.

Heosemys grandis (Gray, 1860) [Map 9]

Cambodia. - **FMNH 259409**, carapace only, CL = 30.5, CW = 22.6, Phnom Penh, Oreussay Market, purchased in market, 17 May 1999, S. G. Platt. **FMNH 259405**, plastron only, PL = 26.5, Koh Kong Province, Sre Ambel District, Boeung Tradok Pong Village, 11° 31' 10' N 103° 46' 55" E, obtained from hunter in Boeung

Tradok Pong, 24 August 2000, B. L. Stuart and S. G. Platt. **FMNH 259406**, plastron only, PL = 20.8, Koh Kong Province, Sre Ambel District, Chaouethail Plous Village on Sre Ambel River, 11° 18' 03" N 103° 44' 56" E, obtained from hunter in Chaouethail Plous, 21 August 2000, B. L. Stuart and S. G. Platt. **Fig. 11**, photograph only, CL = 31.8, PL = 28.6, Koh Kong Province, Thmor Andart Village along Stoeng Metoek River, 11° 49.23' N, 102° 53.62' E, captured by residents of Thmor Andart, 10 May 2001, S. G. Platt, Heng Sovannara, and Long Kheng. **FMNH 259407**, plastron only, PL = 19.4, collecting information same as FMNH 259406.

Laos. - **FMNH 255271**, carapace only, CL = 23.6, CW = 18.3, Khammouan Province, Thakhek District, Khammouan Limestone (= Phou Hin Poun) National Biodiversity Conservation Area, Ban Na Village, 17° 33' N, 104° 52' E, eaten by residents of Ban Na, 02 April 1998, B. L. Stuart. **FMNH 258885**, plastron only, PL = 27.0, Khammouan Province, Khammouan Limestone (= Phou Hin Poun) National Biodiversity Conservation Area, Ban Namphick Village, eaten by residents of Ban Namphick, 22 May 1994, R. J. Timmins. FMNH **258894**, carapace only, CL = 36.3, CW = 24.7, collecting information same as FMNH 258885. FMNH 258889, plastron only, PL = 13.9, Laos, Khammouan Province, Khammouan Limestone (= Phou Hin Poun) National Biodiversity Conservation Area, Chocksavang Village, eaten by residents of Ban Chocksavang, 22 May 1994, R. J. Timmins. FMNH **258882**, carapace only, CL = 23.2, CW = 19.1, Savannakhet Province, Thaphangthong District, Xe Bang Nouan National Biodiversity Conservation Area, Ban Houay Meun Village, eaten by residents of Ban Houay, 20 June 1994, R. J. Timmins. FMNH 258883, carapace (broken) and plastron only, PL = 36.6, collecting information same as FMNH 258882 except collected 19 June 1994. FMNH 258877, carapace only, CL = 34.1, CW = 24.2, Salavan Province, Toumlan District, Xe Bang Nouan National Biodiversity Conservation Area, Ban Nalan Village, eaten by residents of Ban Nalan, 15 June 1994, R. J. Timmins. FMNH 258878, intact shell only, CL = 36.8, CW = 25.8, PL = 35.3, BD= 14.7, Salavan Province, Xe Bang Nouan National Biodiversity Conservation Area, Ban Konglur Village, eaten by residents of Ban Konglur, 10 June 1994, R. J. Timmins. FMNH 258891, carapace only, CL = 17.3, CW = 15.1, Salavan Province, Xe Bang Nouan National Biodiversity Conservation Area, Ban Nasompeng Village, eaten by residents of Ban Nasompeng, 09 June 1994, R. J. Timmins. FMNH 258890, carapace (broken) only, CL = 19.4, Champasak Province, Pathoumphon District, Xe Pian National Biodiversity Conservation Area, Xe Pian River upstream from Ban Phonsaat Village, 100 m, discarded in camp along Xe Pian River



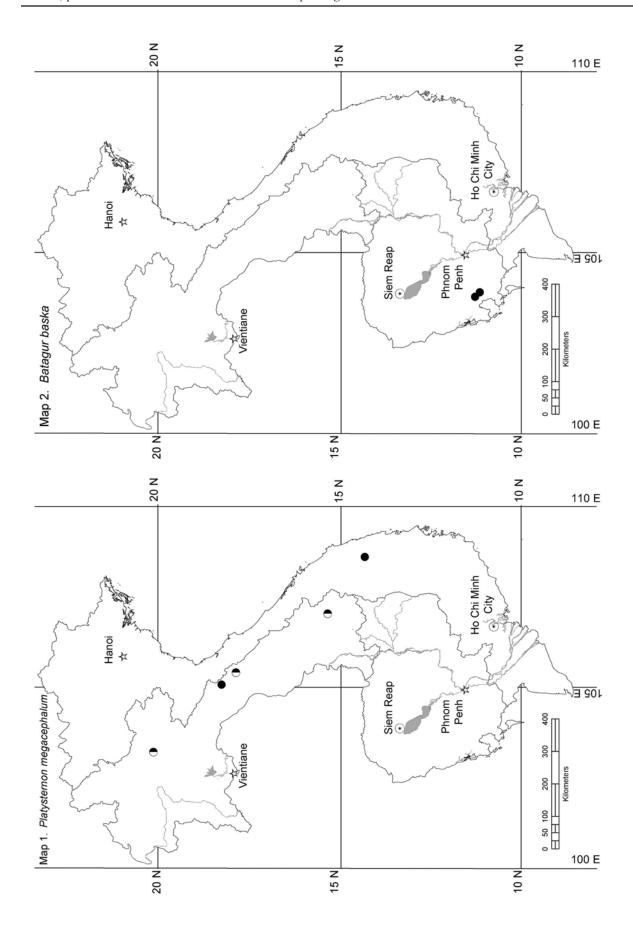
Figures 1-15. See text for locality details and circumstances of the record. 1. *Platysternon megacephalum* Huaphahn Province, Laos (photo B. L. Stuart); 2. *Platysternon megacephalum* Khammouan Province, Laos (photo B. L. Stuart); 3. *Platysternon megacephalum* Xe Kong Province, Laos (photo D. Showler); 4. *Cuora amboinensis* Battambang Province, Cambodia (photo B. L. Stuart); 5. *Cuora amboinensis* Kampong Thom Province, Cambodia (photo S. G. Platt); 6. *Cuora amboinensis* Koh Kong Province, Cambodia (photo S. G. Platt); 7. *Cuora amboinensis* Koh Kong Province, Cambodia (photo S. G. Platt); 8. *Cuora amboinensis* Kien Giang Province, Vietnam (photo B. L. Stuart); 9. *Cyclemys atripons* Koh Kong Province, Cambodia (photo S. G. Platt); 10. *Cyclemys tcheponensis* Bolikhamxay Province, Laos (photo B. L. Stuart); 11. *Heosemys grandis* Koh Kong Province, Cambodia (photo S. G. Platt); 12. *Hieremys annandalii* Battambang Province, Cambodia (photo B. L. Stuart); 13. *Hieremys annandalii* Siem Reap Province, Cambodia (photo S. G. Platt); 14. *Hieremys annandalii* Kampong Thom Province, Cambodia (photo S. G. Platt); 15. *Malayemys subtrijuga* Battambang Province, Cambodia (photo B. L. Stuart).

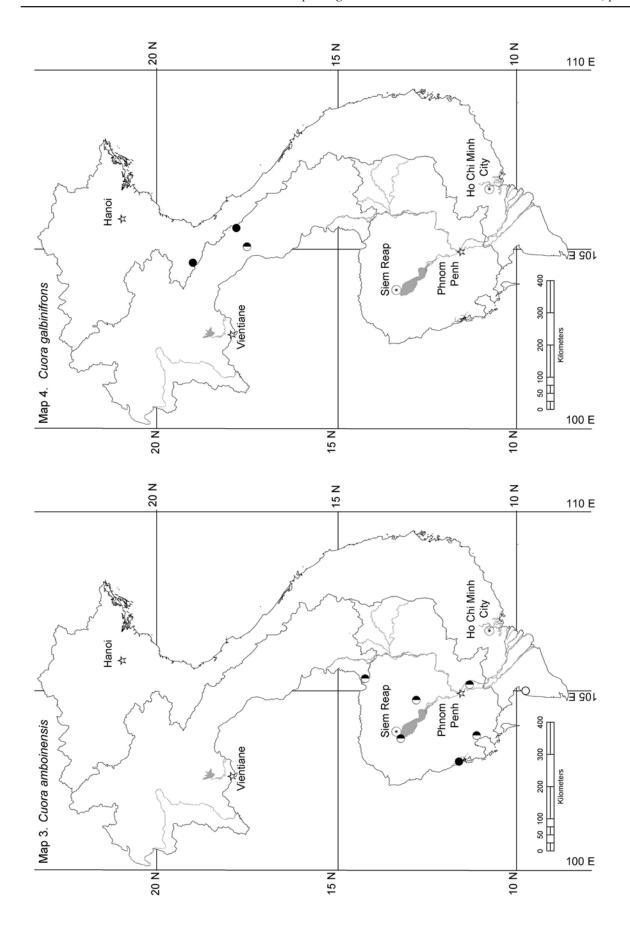


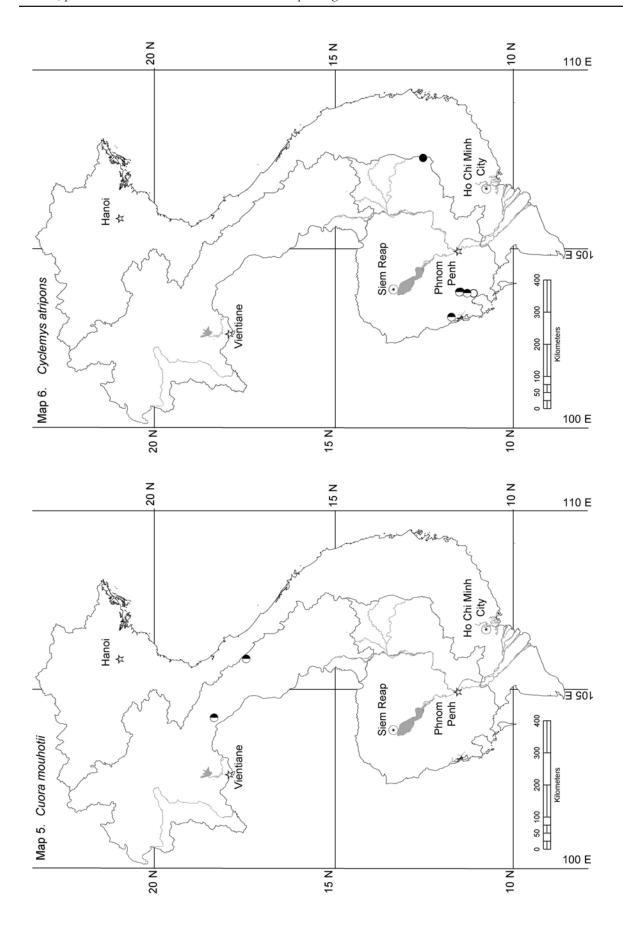
Figures 16-27. See text for locality details and circumstances of the record. 16. *Malayemys subtrijuga* Kampong Thom Province, Cambodia (photo S. G. Platt); 17. *Malayemys subtrijuga* Kandal Province, Cambodia (photo S. G. Platt); 18. *Malayemys subtrijuga* Vientiane, Laos (photo W. G. Robichaud). 19. *Manouria impressa* Koh Kong Province, Cambodia (photo S. G. Platt). 20. *Manouria impressa* Ratanakiri Province, Cambodia (photo Suon Phalla/TRAFFIC). 21. *Manouria impressa* Xe Kong Province, Laos (photo B. L. Stuart). 22. *Chelonia mydas* Kampong Speu Province, Cambodia (photo B. L. Stuart). 23. *Eretmochelys imbricata* Sihanoukville Province, Cambodia (photo S. G. Platt). 24. *Dermochelys coriacea* Gulf of Thailand, near Sihanoukville, Cambodia (photo Vanna Nhem). 25. *Amyda cartilaginea* Koh Kong Province, Cambodia (photo S. G. Platt). 26. *Amyda cartilaginea* Khammouan Province, Laos (photo B. L. Stuart). 27. *Pelochelys cantorii* Kratie Province, Cambodia (photo D. Gambade).

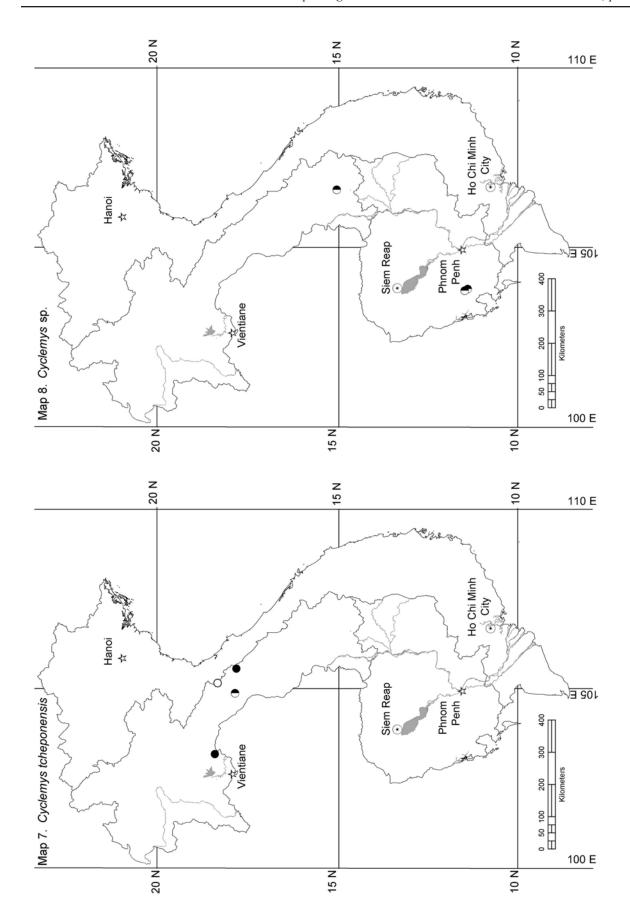
after being eaten by hunters, May 1995, T. D. Evans. **FMNH 255266**, complete specimen, CL = 7.5, CW = 6.4, PL = 6.2, BD = 2.5, Champasak Province, Mounlapamok District, Dong Khanthung Proposed National Biodiversity Conservation Area, 14° 07' N 105° 29' E, 60 m, grassland with dry dipterocarp and evergreen forest along Xe Lepou River, found in mud at bot-

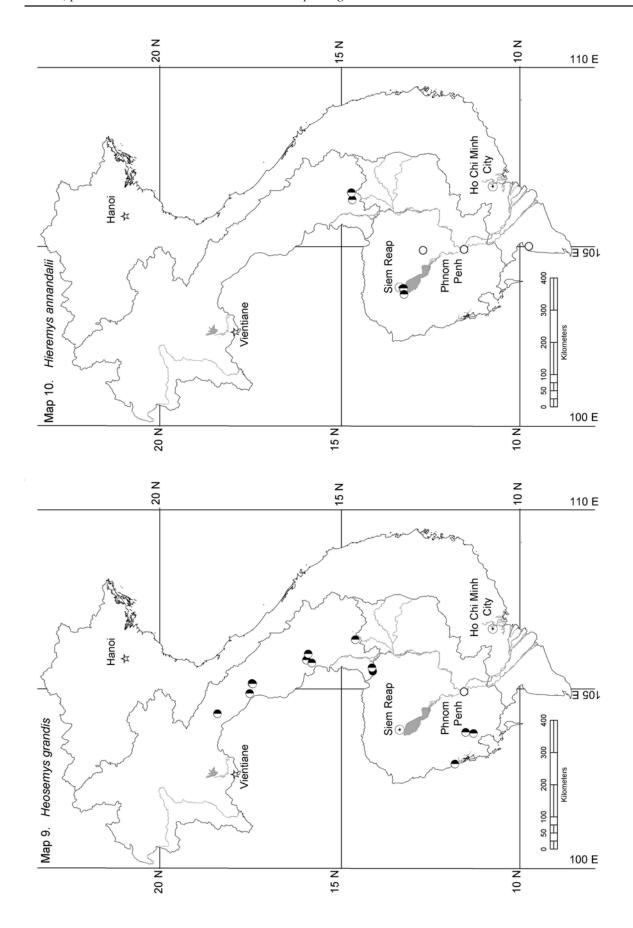
tom of flooded marsh, water depth about 15 cm, 11 July 1998, B. L. Stuart. **FMNH 255272**, carapace only, CL = 28.6, CW = 22.2, Champasak Province, Mounlapamok District, Dong Khanthung Proposed National Biodiversity Conservation Area, Ban Thahin Village, on Xe Lepou River, 14° 08' N 105° 35' E, 60 m, eaten by residents of Ban Thahin, 17 July 1998, B. L. Stuart.

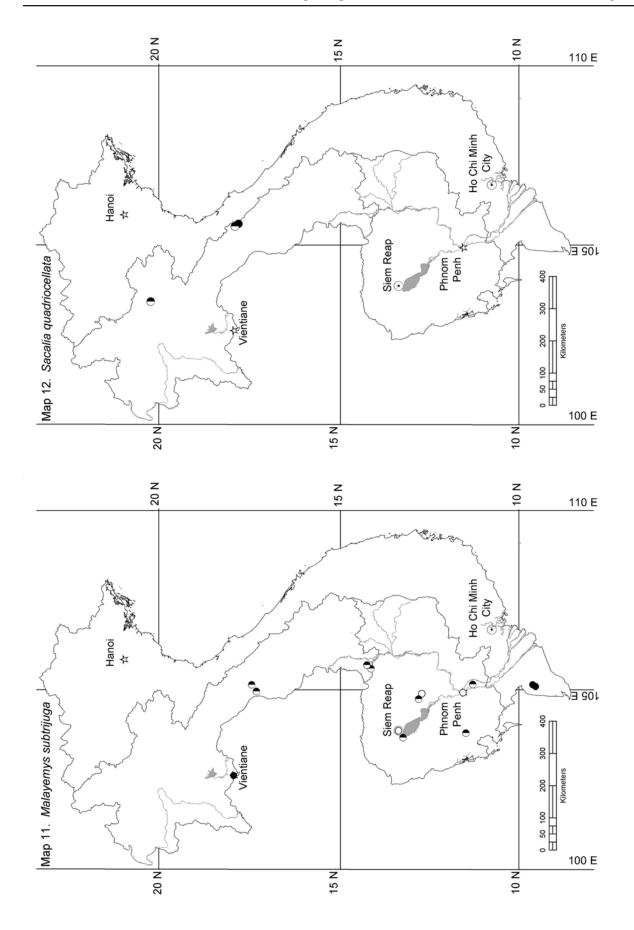


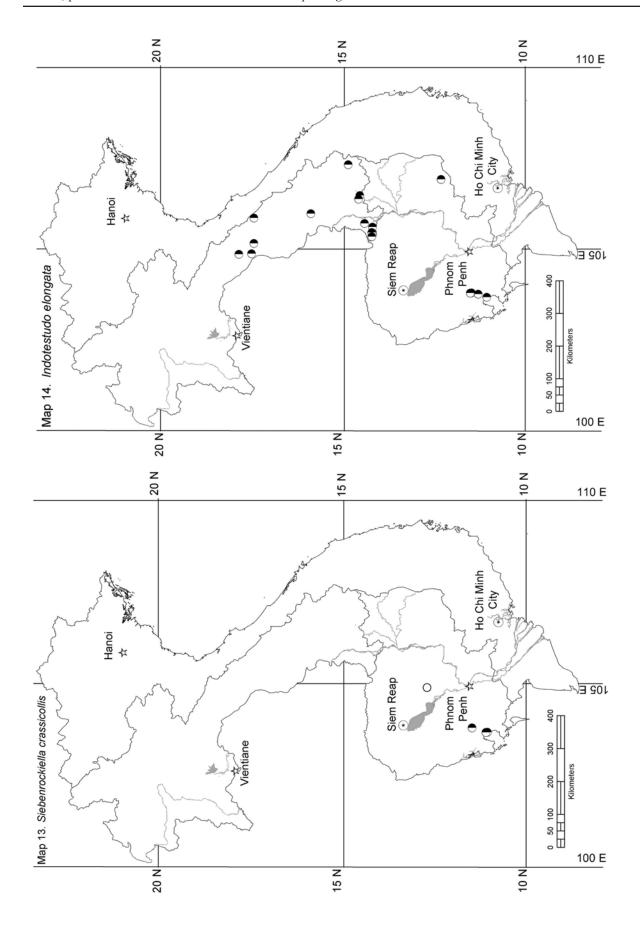


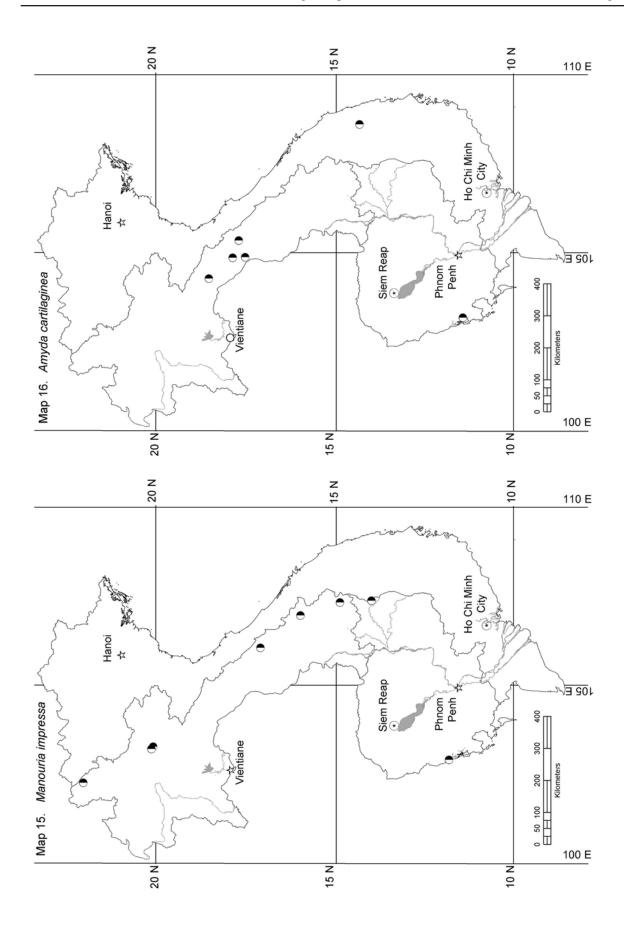


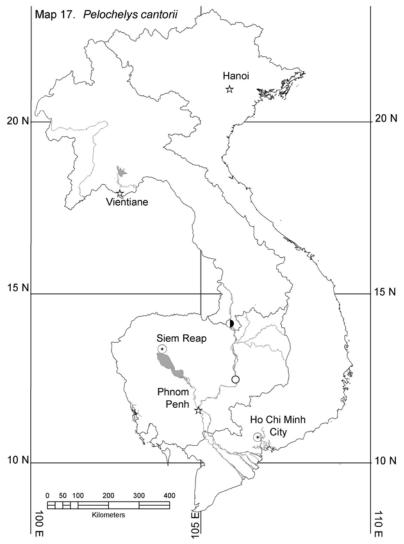












Maps 1-17 of records given in the text: shaded circles represent records collected in the field; half-shaded circles represent records obtained from hunters, abandoned hunting camps, or villages; unshaded circles represent records purchased from markets.

Hieremys annandalii (Boulenger, 1903) [Map 10]

Cambodia. - FMNH 259408, carapace only, CL = 32.3, CW = 24.8, Phnom Penh, Oreussay Market, purchased in market, 17 May 1999, S. G. Platt. FMNH 258876, carapace and plastron, CL = 40.3, CW = 26.9, PL = 35.5, Battambang Province, Ek Phnom District, Koh Chivang Commune, Prek Toal Village on Tonle Sap Lake, 13° 14' 28" N 103° 39' 32" E, <10 m, eaten by residents of Prek Toal who captured it from nearby flooded forest, 27 August 1999, B. L. Stuart, J. Smith, K. Davey. Fig. 12, photograph only, same collecting information as FMNH 258876 except not yet eaten. FMNH 259398, carapace only, CL = 37.4, CW = 26.7, Siem Reap Province, Siem Reap District, Choeng Khneas Port on Tonle Sap Lake, found in fisherman's house, 28 June 2000, B. L. Stuart

and S. G. Platt. **Fig. 13**, photograph only, two living animals, CL = 42.1 and PL = 34.7, CL = 33.4 and PL = 28.2, Siem Reap Province, Siem Reap District, Choeng Khneas Village, 13° 15.18' N; 103° 49.37' E, collected by residents of Choeng Khneas from Tonle Sap, 4 October 2000, S. G. Platt, Heng Sovannara, Long Kheng, and Vuthy Monyrath. **Fig. 14**, photograph only, CL = 37.2, PL = 28.4, Kampong Thom Province, Kampong Thom Town, 12° 42.69' N; 104° 53.31' E, photographed in market, 21 June 2000, S. G. Platt, Heng Sovannara, and Long Kheng.

Laos. - **FMNH 258879**, carapace and plastron only, CL = 33.3, CW = 23.0, PL = 31.3, Attapu Province, Sanamsai District, Xe Pian River Basin, Ban Chanto Village, 100-150 m, eaten by residents of Ban Chanto, 21 April 1995, T. D. Evans. **FMNH 259399**, carapace only, CL = 29.7, CW = 22.0, Attapu Province, Sanamxai

District, Ban Mai Village, 14° 42′ 30″ E 106° 29′ 50″ E, obtained from hunter in Ban Mai, 18 September 2000, B. L. Stuart and S. G. Platt.

Vietnam. - FMNH 259074, complete specimen, CL = 12.4, CW = 10.8, PL = 11.5, BD = 5.6, Kien Giang Province, An Minh District, Dong Hoa Town, 09° 45' 25" N 105° 00' 03" E, <10m, purchased from a reptile trade shop, 10 November 2000, B. L. Stuart.

Malayemys subtrijuga (Schlegel and Müller, 1844) [Map 11]

Cambodia. - FMNH 259404, carapace only, CL = 19.2, CW = 14.1, Phnom Penh, purchased in market, 07 July 2000, S. G. Platt. **FMNH 259403**, carapace only, CL = 21.5, CW = 16.9, Siem Reap Province, Siem Reap District, Siem Reap Town, purchased from turtle restaurant, 11 December 1999, S. G. Platt. Fig. 15, photograph only, Battambang Province, Ek Phnom District, Koh Chivang Commune, Prek Toal Village on Tonle Sap Lake, 13° 14' 28" N 103° 39' 32" E, captured by residents of Prek Toal, 27 August 1999, B. L. Stuart, J. Smith, K. Davey. FMNH 259402, plastron only, PL = 17.8, collecting information same as FMNH 259403. FMNH 259401, carapace (broken) and plastron, CL = 23.2, PL = 20.0, Kampong Thom Province, Kampong Thom Town, obtained from restaurant, 22 June 2000, S. G. Platt. Fig. 16, photograph only, CL = 21.3, PL = 17.5, Kampong Thom Province, Sary Village, 12° 48.48' N 104° 44.19' E, collected by residents of Sary in Tonle Sap, 21 June 2000, S. G. Platt, Heng Sovannara, and Long Kheng. Fig. 17, photograph only, CL = 19.8, PL = 16.6, Kandal Province, Bassac Marshes, Prasat Village, 11° 17.72' N, 105° 08.61' E, captured by residents of Prasat, 5 July 2000, S. G. Platt, Heng Sovannara, and Long Kheng. FMNH 259400, plastron only, PL = 12.6, Koh Kong Province, Sre Ambel District, Chay Reap Village, west bank of Sre Ambel River, 11° 29' 10" N 103° 47' 00" E, <10 m, obtained from hunter in Chay Reap, 23° August 2000, B. L. Stuart and S. G. Platt. Laos. - Fig. 18, photograph only, Vientiane Municipality, Vientiane, crossing road near culvert, May 1999, W. G. Robichaud. FMNH 258868, complete specimen, CL = 8.4, CW = 6.9, PL = 7.3, BD = 3.6, Vientiane Municipality, Vientiane, purchased in That Luang Fresh Food Market, 27 February 2000, B. L. Stuart. FMNH **255269**, carapace only, CL = 15.9, CW = 12.9, Khammouan Province, Yommalat District, Khammouan Limestone (= Phou Hin Poun) National Biodiversity Conservation Area, Ban Vieng Village, 17° 20' N, 104° 57' E, eaten by residents of Ban Vieng, 30 March 1998, B. L. Stuart. **FMNH 258888**, plastron only, PL = 12.8, Khammouan Province, Khammouan Limestone (= Phou

Hin Poun) National Biodiversity Conservation Area,

Ban Chocksavang Village, eaten by residents of Ban Chocksavang, 22 May 1994, R. J. Timmins. FMNH 259653 plastron (broken) only, collecting information same as FMNH 258888. FMNH 259654, plastron only, PL = 12.5, collecting information same as FMNH 258888. **FMNH 255268**, intact shell, CL = 10.9, CW = 8.8, PL = 9.2, BD = 4.8, Champasak Province, Mounlapamok District, Dong Khanthung Proposed National Biodiversity Conservation Area, Ban Thahin Village, on Xe Lepou River, 14° 08' N 105° 35' E, 60 m, eaten by residents of Ban Thahin, 17 July 1998, B. L. Stuart. FMNH 255267, complete specimen, CL = 10.9, CW = 8.4, PL = 9.3, BD = 4.7, Champasak Province, Mounlapamok District, Dong Khanthung Proposed National Biodiversity Conservation Area, Ban Tap Seng Village, 14° 15' N 105° 41' E, mixed deciduous forest, captured by resident of Ban Tap Seng for food, 25 July 1998, B. L. Stuart.

Vietnam. - **FMNH 259075**, complete specimen, CL = 5.3, CW = 4.3, PL = 4.4, BD = 2.7, Kien Giang Province, Vinh Thuang District, U Minh Thuong Nature Reserve, 09° 32' 40" N 105° 05' 11" E, <10m, flooded grassland and agricultural fields, caught in fishing net set in canal, 02 November 2000, B. L. Stuart. **FMNH 259394**, complete specimen, CL = 4.8, CW = 3.8, PL = 3.9, BD = 2.4, Kien Giang Province, An Minh District, U Minh Thuong Nature Reserve, 09° 37' 29" N 105° 07' 59" E, <10m, flooded grassland and agricultural fields, taken in fishing net, 16 November 2000, B. L. Stuart.

Sacalia quadriocellata (Siebenrock, 1903) [Map 12]

Laos. - **FMNH 255270**, carapace only, CL = 13.8, CW = 10.6, Huaphahn Province, Vieng Tong District, Nam Et National Biodiversity Conservation Area, Nam Peun River, 20° 17' N 103° 25' E, 985 m, found in hunter's camp, 01 April 1998, P. Davidson. FMNH 256542, complete specimen, CL = 14.2, CW = 10.3, PL = 12.5, BD = 4.5, Khammouan Province, Nakai District, Nakai-Nam Theun National Biodiversity Conservation Area, Annamite Mountains, 17° 50' N 105° 35' E, 600 m, wet evergreen forest along Houay Dreng Stream, found 1 m deep in pool with sandy substrate, 01 December 1999, B. L. Stuart. FMNH 256543, complete specimen, CL = 7.2, CW = 6.7, PL = 5.9, BD = 2.8, Khammouan Province, Nakai District, Nakai-Nam Theun National Biodiversity Conservation Area, Annamite Mountains, 17° 56' N 105° 31' E, 600 m, Houay Maka-Noi Stream near Ban Maka Village, collected by resident of Ban Maka, 15 November 1999, B. L. Stuart.

Remarks. - Ziegler (2002) field-collected and reported the species in local trade in Ha Tinh Province, Vietnam.

Siebenrockiella crassicollis (Gray, 1831) [Map 13]

Cambodia. - FMNH 259054, complete specimen, CL = 14.3, CW = 10.5, PL = 11.7, BD = 5.8, Khampong Thom Province, Khampong Thom Town, 12° 42' N 104° 53' E, purchased from turtle trader in Khampong Thom Town, 21 June 2000, S. G. Platt. FMNH 259053, whole specimen, CL = 15.9, CW = 12.0, PL = 13.7, BD = 6.8, Koh Kong Province, Sre Ambel District, Chay Reap Village, west bank of Sre Ambel River, 11° 29' 10" N 103° 47' 00" E, <10 m, captured by residents of Chay Reap, 24 August 2000, B. L. Stuart and S. G. Platt. FMNH **259396,** intact shell, CL = 16.4, CW = 12.1, PL = 13.7, BD = 6.6, Koh Kong Province, Sre Ambel District, Chay Reap Village, west bank of Sre Ambel River, 11° 29' 10" N, 103° 47' 00" E, <10 m, obtained from hunter in Chay Reap, 24 August 2000, B. L. Stuart and S. G. Platt. FMNH 259397, plastron only, PL = 16.1, Koh Kong Province, Sre Ambel District, Kohriem Village on Sre Ambel River, obtained from hunter in Kohriem, 27 August 2000, B. L. Stuart and S. G. Platt. FMNH **259055**, complete specimen, CL = 16.2, CW = 11.5, PL = 12.8, BD = 5.9, Koh Kong Province, Sre Ambel District, Prek Kroch River (tributary of Sre Ambel River), 11° 06' 20" N, 103° 39' 35" E, <10 m, flooded paddy at edge of mangrove and Melaleuca forest, captured by fisherman in bamboo fish trap set at that location, 27 August 2000, B. L. Stuart and S. G. Platt.

Remarks. - FMNH 259053 has a pale streak extending from the ear to the lower jaw, but the heads of FMNH 259054-55 are entirely dark, with no pale markings.

Testudinidae

Indotestudo elongata (Blyth, 1853) [Map 14]

Cambodia: FMNH 262316, carapace only, CL = 14.7, CW = 10.0, Mondolkiri Province, Keo S'Marr District, Samling Logging Concession, 200 m, mixed deciduous forest and grassland, found in hunter's camp, 13 May 2000, J. Walston. FMNH 262315, plastron only, PL = 19.8, Koh Kong Province, Sre Ambel District, Chay Reap Village, west bank of Sre Ambel River, 11° 29' 10" N, 103° 47' 00" E, <10 m, obtained from hunter in Chay Reap, 23 August 2000, B. L. Stuart and S. G. Platt. TC001 (held in the Field Museum of Natural History, Division of Amphibians & Reptiles), blood sample only, collecting information same as FMNH 262315, obtained from hunter in Chay Reap and released after taking blood sample, 23 August 2000, B. L. Stuart and S. G. Platt. FMNH 262312, plastron only, PL = 18.2, collect-

ing information same as FMNH 262315. FMNH **262307**, carapace only, CL = 25.6, CW = 15.1, collecting information same as FMNH 262315. FMNH **262297**, carapace only, CL = 24.7, CW = 14.6, Koh Kong Province, Sre Ambel District, Boeung Tradok Pong Village, 11° 31' 10" N, 103° 46' 55" E, obtained from hunter in Boeung Tradok Pong, 24 August 2000, B. L. Stuart and S. G. Platt. FMNH 262313, plastron only, PL = 19.4, collecting information same as FMNH 262297. **FMNH 262314**, plastron only, PL = 18.2, collecting information same as FMNH 262297. FMNH **262302**, carapace and plastron, CL = 19.5, CW = 13.0, PL = 16.5, Koh Kong Province, Sre Ambel District, Kohriem Village on Sre Ambel River, obtained from hunter in Kohriem, 27 August 2000, B. L. Stuart and S. G. Platt. **FMNH 262311**, plastron only, PL = 15.4, Koh Kong Province, Sre Ambel District, Chaouethail Plous Village on Sre Ambel River, 11° 18' 03" N, 103° 44' 56" E, obtained from hunter in Chaouethail Plous, 21 August 2000, B. L. Stuart and S. G. Platt. FMNH 262310, plastron only, PL = 14.8, collecting information same as FMNH 262311.

Laos. - FMNH 262294, carapace only, CL = 22.8, CW = 14.0, Khammouan Province, Boualapha District, Hin Nam No National Biodiversity Conservation Area, Ban Tasang Village, eaten by residents of Ban Tasang, 30 December 1995, R. J. Timmins. FMNH 259056, complete specimen, CL = 17.0, CW = 10.9, PL = 14.8, BD = 7.4, Khammouan Province, Nakai District, Khammouan Limestone (= Phou Hin Poun) National Biodiversity Conservation Area, Ban Na Bon Village, limestone karst with dry evergreen/mixed deciduous forest, 17° 54' N 104° 51' E, captured by residents of Ban Na Bon for food, 22 March 1998, B. L. Stuart and T. Chan-ard. **FMNH 262304**, carapace only, CL = 17.9, CW = 12.4, Khammouan Province, Thakhek District, Khammouan Limestone (= Phou Hin Poun) National Biodiversity Conservation Area, Ban Na Village, 17° 33' N, 104° 52' E, eaten by residents of Ban Na, 02 April 1998, B. L. Stuart. FMNH 262299, carapace only, CL = 24.2, CW = 15.4, Khammouan Province, Khammouan Limestone (= Phou Hin Poun) National Biodiversity Conservation Area, Ban Namphick Village, eaten by residents of Ban Namphick, 22 May 1994, R. J. Timmins. FMNH **262295**, carapace only, CL = 25.2, CW = 15.1, collecting information same as FMNH 262299. FMNH **262296**, carapace only, CL = 26.9, CW = 16.7, Salavan Province, Xe Bang Nouan National Biodiversity Conservation Area, Ban Konglur Village, eaten by residents of Ban Konglur, 10 June 1994, R. J. Timmins. **FMNH 262301**, carapace only, CL = 29.0, CW = 18.1, Attapu Province, Xe Nam Noy River, Ban Mun Houa Muang Village, 300 m, eaten by residents of Ban Mun Houa Muang, April 1995, D. Showler. FMNH 262303,



Figure 28. See text for locality details and circumstances of the record. *Pelochelys cantorii* Champasak Province, Laos (photo I. G. Baird).

carapace only, CL = 23.3, CW = 14.4, Attapu Province, Sanamsai District, Xe Kong River, near Ban Sompoy Village and Cambodian border, 90 m, discarded carapace found in camp after being eaten by hunters, May 1995, T. D. Evans. **FMNH 262298**, carapace only, CL = 22.3, CW = 14.3, Champasak Province, Pathoumphon District, Xe Pian National Biodiversity Conservation Area. Xe Pian River upstream from Ban Phonsaat Village, 100 m, discarded carapace found in camp along Xe Pian River after being eaten by hunters, May 1995, T. D. Evans. **FMNH 262308**, carapace only, CL = 17.7, CW = 11.4, Champasak Province, Mounlapamok Dong Khanthung Proposed National District, Biodiversity Conservation Area, found in hunter's camp near Nong Sathevada Wetland, 14° 13' N 105° 36' E, 100 m, 04 March 1998, C. Francis. FMNH 262306, carapace only, CL = 18.9, CW = 12.0, Champasak Province, Mounlapamok District, Dong Khanthung Proposed National Biodiversity Conservation Area, Ban Baw Village, 14° 14' N, 105° 27' E, eaten by residents of Ban Baw, 18 July 1998, B. L. Stuart. FMNH 262305, carapace only, CL = 26.6, CW = 15.9, Champasak Province, Mounlapamok District, Dong Khanthung Proposed National Biodiversity Conservation Area, Ban Khiem Village, 14° 14' N, 105° 20' E, eaten by residents of Ban Khiem, 24 July 1998, B. L. Stuart. FMNH 262300, carapace only, CL = 24.9, CW = 14.7, Champasak Province, Mounlapamok District, Dong Khanthung Proposed National Biodiversity Conservation Area, Ban Kadian Village, 14° 26' N, 105° 42' E, eaten by residents of Ban Kadian, 29 July 1998, B. L. Stuart.

Remarks. - Ziegler (2002) reported the species in local trade in Ha Tinh Province, Vietnam.

Manouria impressa (Günther, 1882) [Map 15]

Cambodia. - Fig. 19, photograph only of two intact shells, CL = 26.6 and PL = 23.8, CL = 22.8 and PL = 19.9, Koh Kong Province, Thmor Andart Village, along Stoeng Metoek River, 11° 49.23' N, 102° 53.62' E, collected by residents of Thmor Andart, 10 May 2001, S. G. Platt, Heng Sovannara, and Long Kheng. Fig. 20, photograph only, Ratanakiri Province, Oyadao District, found in house of Vietnamese wildlife trader on Cambodian side of Oyadao border checkpoint, Suon Phalla/TRAFFIC, 16 June 2002.

Laos. - **FMNH 262321**, carapace only, CL = 23.7, CW = 17.3, Phongsaly Province, Phongsaly District, Phou Dendin National Biodiversity Conservation Area, Ban Sopkang Village, 22° 05′ 51″ N, 102° 15′ 02″ E, eaten by residents of Ban Sopkang, 17 October 1999, B. L. Stuart and H. F. Heatwole. FMNH 262317, carapace only, CL = 27.7, CW = 19.9, collecting information same as FMNH 262321. **FMNH 262324**, carapace only, CL = 28.6, CW = 20.2, Huaphahn Province, Vieng Tong District, Phou Louey National **Biodiversity** Conservation Area, Ban Sa Kok Village, 20° 11" N, 103° 12" E, eaten by residents of Ban Sa Kok, 30 April 1998, B. L. Stuart. **FMNH 262319**, carapace only, CL = 27.0, CW = 19.9, collecting information same as FMNH 262324. FMNH 262323, carapace and plastron, CL = 20.8, CW = 16.3, PL = 19.4, collecting information same as FMNH 26234. **FMNH 262318**, carapace only, CL = 25.0, CW = 19.2, Huaphahn Province, Vieng Tong District, Phou Louey National **Biodiversity** Conservation Area, Ban Phone Xong Village, eaten by residents of Ban Phone Xong, 04 May 1998, D. Showler. FMNH 262322, plastron only, PL = 21.1, Khammouan Province, Hin Nam No National Biodiversity Conservation Area, Ban Katok Village, eaten by residents of Ban Katok, 12 January 1996, R. J. Timmins. Fig. 21, photograph only, Xe Kong Province, Kaleum District, Ban Talouy-Ngai Village, 15° 59' 50" N, 106° 57' 22" E, captured by residents of Ban Talouy-Ngai, 27 June 1999, B. L. Stuart. FMNH 262320, carapace only, CL = 27.6, CW = 20.6, Attapu Province, Xe Nam Noy River, Ban Taot Village, 800 m, eaten by residents of Ban Taot, April 1995, D. Showler.

Remarks. - Lehr and Holloway (2000) obtained a single carapace of *M. impressa* from a hunter in Ratanakiri Province, Cambodia, who claimed to have captured the turtle in mountains north of Siem Pang, Stung Treng Province.

Cheloniidae

Chelonia mydas (Linnaeus, 1758)

Cambodia. - Fig. 22, photograph only, Kampong Speu Province, Phnom Srouch District, Srei Khlong Market, 07 June 2000, B. L. Stuart.

Eretmochelys imbricata (Linnaeus, 1766)

Cambodia. - **Fig. 23**, photograph only, Sihanoukville Province, Mitta Pheap District, Koh Rong Island, Bagnu Village, obtained from fisherman in Bagnu, 01 January 2000, F. Goes.

Dermochelyidae

Dermochelys coriacea (Vandelli, 1761)

Cambodia. - Fig. 24, photograph only. Stuart et al. (2002) discussed in detail this record from offshore of the southern point of Koh Sra Mauch Island in the Gulf of Thailand, near Sihanoukville.

Trionychidae

Amyda cartilaginea (Boddaert, 1770) [Map 16]

Cambodia. - **Fig. 25**, photograph only, CL = 7.4, Koh Kong Province, Koh Kong Knong Village, 11° 25.97' N; 103° 09.77' E, captured locally by villager in Stoeng Kep River, 11 May 2001, S. G. Platt, Heng Sovannara, and Long Kheng.

Laos. - FMNH 258869, complete specimen, CL = 7.4, CW = 6.8, PL = 2.1, BD = 5.7, Vientiane Municipality, Vientiane, purchased in That Luang Fresh Food Market, 27 February 2000, B. L. Stuart. FMNH 258874, complete specimen, CL = 29.5, CW = 26.0, PL = 20.6, BD = 9.5, Bolikhamxay Province, Northern Extension Proposed National Biodiversity Conservation Area, Ban Chom-Tong Village, near Nam Mouan River, captured by hunters in Nam Mouan River, 18 March 1995, R. J. Timmins. Fig. 26, photograph only, Khammouan Province, Nakai District, Nakai-Nam Theun National Biodiversity Conservation Area, Ban Kao-Oy Village, 17° 43' 39" N 105° 20' 05" E, captured by resident of Ban Kao-Oy, 03 November 1998, B. L. Stuart. FMNH **255264**, complete specimen, CL = 18.2, CW = 16.4, PL = 13.8, BD = 4.5, Khammouan Province, Thakhek District, Khammouan Limestone (= Phou Hin Poun) National Biodiversity Conservation Area, 17° 33' N, 104° 52' E, obtained from villager who captured it while fishing, 01 April 1998, B. L. Stuart. FMNH 255265,

complete specimen, CL = 18.7, CW = 16.7, PL = 15.2, BD = 4.9, Khammouan Province, Nakai District, Khammouan Limestone (= Phou Hin Poun) National Biodiversity Conservation Area, 17° 54' N, 104° 51' E, obtained from villager who caught it in the Nam Thon River, 28 March 1998, B. L. Stuart.

Vietnam. - FMNH 252163, whole specimen, CL = 12.5, CW = 10.7, PL = 10.4, BD = 3.8, Gia-Lai Province, Ankhe District, Buon Loi Village, 20 km northwest of Kannack Town, Annamite Mountains, 14° 20' N, 108° 36' E, 700-750 m, Daklest River in the village, 07 May 1995, I. Darevsky and N. L. Orlov.

Remarks. - Farkas and Ziegler (2002) reviewed records of *A. cartilaginea* from Vietnam, Laos, and Cambodia.

Pelochelys cantorii Gray, 1864 [Map 17]

Cambodia. - Fig. 27, photograph only, Kratie Province, Kratie District, Kratie Town, purchased from fisherman in a Kratie market and released in the Mekong River after being photographed, September 2000, D. Gambade.

Laos. - **Fig. 28**, photograph only, Champasak Province, Khong District, Ban Hang Khone Village, captured by residents of Ban Hang Khone in the Mekong River, I. G. Baird.

Acknowledgments

We thank Ian Baird, James Chamberlain, Ilya Darevsky, David Davenport, Peter Davidson, Thomas Evans, Charles Francis, Heng Sovannara, Long Kheng, Denis Gambade, Troy Hansel, Frederic Goes, Nikolai Orlov, William Robichaud, Sergei Ryabov, Shi Haitao, David Showler, Suon Phalla/TRAFFIC, and Robert Timmins for providing us their specimens or photographs. We thank An Dara, Bui Huu Manh, Tanya Chan-ard, Benjamin Hayes, Harold Heatwole, Heng Sovannara, Khamkoun Khounboline, Long Kheng, Nguyen Van Cuong, Augustus McCrae, William Robichaud, Philip Round, Suon Phalla, Bee Thaovanseng, and Vuthy Monyrath for assistance with collecting specimens in the field. The opportunity for BLS to work in Laos was made possible by the Wildlife Conservation Society / Division of Forest Resource Conservation Cooperative Program, and in Vietnam by Fauna & Flora International, CARE International in Vietnam, and the staff of Pu Mat and U Minh Thuong Nature Reserves. The opportunity for BLS and SGP to work in Cambodia was made possible by the Wildlife Conservation Society /Ministry of Agriculture, Forestry and Fisheries/

Ministry of Environment Collaborative Program. Financial support was provided by the National Geographic Society (Grant no. 6247-98 with Harold Heatwole), the Wildlife Conservation Society, and The John D. and Catherine T. MacArthur Foundation. Harold Voris, Alan Resetar, and Jamie Ladonski facilitated examining specimens at the Field Museum of Natural History. Sean Bober constructed the maps. Two anonymous reviewers improved the manuscript.

Literature Cited

- Bourret, R. 1941. Les tortues de l'Indochine. Institut Océanographique de l'Indochine 38:1-235.
- Dalton, R. 2003. Mock turtles. Nature 423:219-220.
- Farkas, B. and T. Ziegler. 2002. A note on the distribution of *Amyda cartilaginea* (Boddaert, 1770) in Vietnam. Hamadryad 27(1):149-154.
- Fritz, U., M. Gaulke, and E. Lehr. 1997. Revision der südostasiatischen Dornschildkröten-Gattung *Cyclemys* Bell, 1834, mit Beschreibung einer neuen Art. Salamandra 33(3):183-212.
- Fritz, U. and T. Ziegler. 1999. Contribution to the knowledge of *Cyclemys tcheponensis* (Bourret, 1939) and the distribution of *Cyclemys* in the Indochinese region (Reptilia: Testudines: Bataguridae). Revue française de Aquariologie 26(1-2):71-78.
- Fritz, U., D. Guicking, M. Wink, and E. Lehr. 2001. Sind *Cyclemys atripons* Iverson & McCord, 1997 und *Cyclemys pulchristriata* Fritz, Gaulke & Lehr, 1997 identisch? Sauria 23(2):33-38.
- Fritz, U., Ziegler, T., Herrmann, H.-W., and Lehr, E. 2002. Intergradation between subspecies of *Cuora galbinifrons* Bourret, 1939 and *Pyxidea mouhotii* (Gray, 1862) in southern North Vietnam (Reptilia: Testudines: Geoemydidae). Faunistische Abhandlungen Staatliches Museum für Tierkunde Dresden 23(3):59-74.
- Guicking, D., U. Fritz, M. Wink, and E. Lehr. 2002. New data on the diversity of the Southeast Asian leaf turtle genus *Cyclemys* Bell, 1834. Molecular results (Reptilia: Testudines: Geoemydidae*). Faunistische Abhandlungen Staatliches Museum für Tierkunde Dresden 23(4): 75-86.
- Hendrie, D. B. 2000. Status and conservation of tortoises and freshwater turtles in Vietnam. Pp. 63-73. In

- P. P. Van Dijk, B. L. Stuart, and A. G. J. Rhodin (eds)., Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia. Chelonian Research Monographs, No. 2. Chelonian Research Foundation, Lunenburg, MA.
- Holloway, R. H. P. 2003. Domestic trade of tortoises and freshwater turtles in Cambodia. Linnaeus Fund Research Report. Chelonian Conservation and Biology 4(3):733-734.
- Honda, M., Y. Yasukawa, R. Hirayama and H. Ota. 2002. Phylogenetic relationships of the Asian box turtles of the genus *Cuora sensu lato* (Reptilia: Bataguridae) inferred from mitochondrial DNA sequences. Zoological Science 19(11):1305-1312.
- Iverson, J. B. 1992. A Revised Checklist with Distribution Maps of the Turtles of the World. Green Nature Books, Homestead, Florida. 363 pp.
- Jenkins, M. D. 1995. Tortoises and Freshwater Turtles: The Trade in Southeast Asia. TRAFFIC International, United Kingdom. 48 pp.
- Lau, M., B. Chan, P. Crow, and G. Ades. 2000. Trade and conservation of turtles and tortoises in the Hong Kong Special Administrative Region, People's Republic of China. Pp. 39-44. In P. P. Van Dijk, B. L. Stuart, and A. G. J. Rhodin (eds)., Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia. Chelonian Research Monographs, No. 2. Chelonian Research Foundation, Lunenburg, MA.
- Le Dien Duc and S. Broad. 1995. Investigations into Tortoise and Freshwater Turtle Trade in Vietnam. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK. 34 pp.
- Lehr, E. 1997. Untersuchungen zum Schildkrötenhandel in Vietnam zwischen 1993 und 1996. Zoologische Gesellschaft für Arten- und Populationsschutz 13(2):12-19.
- Lehr, E. and R. Holloway. 2000. Geographic distribution: *Manouria impressa* (Impressed tortoise). Herpetological Review 31(2):111.
- Parham, J. F. and H. Shi. 2001. The discovery of *Mauremys iversoni*-like turtles at a turtle farm in Hainan Province, China: the counterfeit golden coin. Asiatic Herpetological Research 9: 71-76.

- Parham, J. F., W. B. Simison, K. H. Kozak, C. R. Feldman, and H. Shi. 2001. New Chinese turtles: endangered or invalid? A reassessment of two species using mitochondrial DNA, allozyme electrophoresis and known-locality specimens. Animal Conservation 2001(4):357-367.
- Platt, S. G., B. L. Stuart, Heng Sovannara, Long Kheng, Kalyar, and Heng Kimchay. 2003. Rediscovery of the critically endangered river terrapin, *Batagur baska*, in Cambodia, with notes on occurrence, reproduction, and conservation status. Chelonian Conservation and Biology 4(3):691-695.
- Smith, M. A. 1931. The Fauna of British India, including Ceylon and Burma. Reptilia and Amphibia. Vol. 1. Loricata, Testudines. Taylor and Francis, London. 185 pp.
- Stuart, B. L. and J. F. Parham. 2004. Molecular phylogeny of the critically endangered Indochinese box turtle (*Cuora galbinifrons*). Molecular Phylogenetics and Evolution 31:164-177.
- Stuart, B. L. and J. Thorbjarnarson. 2003. Biological prioritization of Asian countries for turtle conservation. Chelonian Conservation and Biology 4(3):642-647.
- Stuart, B. L., D. An, and P. P. van Dijk. 2002. A record of the leatherback sea turtle *Dermochelys coriacea* from Cambodia. Marine Turtle Newsletter 96:22.
- Stuart, B. L. and R. J. Timmins. 2000. Conservation status and trade of turtles in Laos. Pp. 58-62. In P. P. Van Dijk, B. L. Stuart, and A. G. J. Rhodin (eds)., Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia. Chelonian Research Monographs, No. 2. Chelonian Research Foundation, Lunenburg, MA.
- Stuart, B. L., R. J. Timmins, D. B. Hendrie, S. Lieng, S. Chun, P. Hout, K. Heng, T. S. Touch, H. L. Prak, T. Chul, J. Compton, and R. Holloway. 2000. Turtle trade in Indochina: regional summary (Cambodia, Laos, and Vietnam). Pp. 74-76. In P. P. Van Dijk, B. L. Stuart, and A. G. J. Rhodin (eds)., Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia. Chelonian Research Monographs, No. 2. Chelonian Research Foundation, Lunenburg, MA.

- Stuart, B. L., P. P. van Dijk, D. B. Hendrie. 2001. Photographic Guide to the Turtles of Thailand, Laos, Vietnam and Cambodia. Wildlife Conservation Society, New York. 84 pp. [In four bilingual versions: English/Thai, English/Lao, English/Vietnamese, English/Khmer].
- Timmins, R. J. and K. Khounboline. 1999. Occurrence and trade of the Golden Turtle, *Cuora trifasciata*, in Laos. Chelonian Conservation and Biology 3(3):441-447.
- Touch, T. S., H. L. Prak, T. Chul, S. Lieng, S. Chun, P. Hout, and K. Heng. 2000. Overview of the turtle trade in Cambodia. Pp. 55-57. In P. P. Van Dijk, B. L. Stuart, and A. G. J. Rhodin (eds)., Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia. Chelonian Research Monographs, No. 2. Chelonian Research Foundation, Lunenburg, MA.
- van Dijk, P. P., B. L. Stuart, and A. G. J. Rhodin (editors). 2000. Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia. Chelonian Research Monographs, No. 2. Chelonian Research Foundation, Lunenburg, MA.
- Ziegler, T. 2002. Die Amphibien und Reptilien eines Tieflandfeuchtwald-Schutzgebietes in Vietnam. Natur & Tier - Verlag, Münster. 342 pp.