



TAG Annual Report Template

ChelonianTAG Annual Report

Date: 3/8/2024

*** Please note that Annual Reports must be digitally submitted to the AZA Conservation, Management, and Welfare Sciences Department (animalprograms@aza.org) and the TAG's APM Committee Liaison no later than **March 1**

*** Please adjust the tables as necessary to accommodate complete answers.

*** This template is available in a digitized Word form at <https://www.aza.org/resource-documents>

- Please provide a list of the most current TAG Steering Committee members, Advisors and APM liaison. Example:

Name	Position	Facility	Email	Phone
Michael Ogle	Chair	Zoo Knoxville	mogle@zooknoxville.org	865-637-5331 x 1340
Andy Daneault	Vice Chair – Tortoises	Disney's Animal Kingdom	andre.j.daneault@disney.com	407-938-2368
Bill Hughes	Vice Chair – Freshwater Turtles	Tennessee Aquarium	bhh@tnaqua.org	423-785-4126
Tommy Owens	Secretary	Dallas Zoo	tommy.owensdallaszoo.com	469-554-7252
Dave Collins	Treasurer	Turtle Survival Alliance	dcollins@turtlesurvival.org	423-903-9540
Jeff Dawson	Steering Committee	Saint Louis Zoo	jdawson@stlzoo.org	314-646-4655
Kim Gray	Steering Committee	San Diego Zoo Wildlife Alliance	kgrav@sdzwa.org	619-557-3984
Lauren Gruny	Steering Committee	Saint Augustine Alligator Farm	laureng@alligatorfarm.com	904-824-3337
Nate Nelson	Steering Committee	Sedgwick County Zoo	nnelson@scz.org	316-266-8265
Ashley Ortega	Steering Committee	Glady's Porter Zoo	aortega@gpz.org	956-546-7187
Craig Pelke	Steering Committee	San Antonio Zoo	Craig.Pelke@sazoo.org	210-734-7184 x 1340
Christine Schmitz	Education Advisor	Utah's Hogle Zoo	cschmitz@hoglezoo.org	801-584-1714
Rick Hudson	Field Advisor	Turtle Survival Alliance	rhudson@turtlesurvival.org	817-759-7177
Dwight Lawson	General Advisor	Oklahoma City Zoo	dlawson@okczoo.org	405-425-0230

Joe Flanagan, DVM	Veterinary Advisor	Houston Zoo	jflanagan@houstonzoo.org	713-533-6628
Gina Ferri	SPMAG Advisor	Disney's Animal Kingdom	Gina.M.Ferrie@disney.com	407-222-0124
Rachel Bladow	SPMAG Advisor	Lincoln Park Zoo	rbladow@lpzoo.org	312-742-7745
Lisa Peterson	APM Liaison	San Diego Zoo Wildlife Alliance	lpeterson@sdzwa.org	760-738-5011

Name	Position	Facility	Email	Phone
Lauren Augustine	Indochinese Box Turtle SSP Coordinator/Studbook Keeper Bourret's Box Turtle and Southern Vietnamese Box Turtle Studbook Keeper	Philadelphia Zoo	augustine.lauren@phillyzoo.org	215-243-5206
Trent Barnhart	Coahulian Box Turtle SSP Coordinator and Studbook Keeper	Santa Barbara Zoo	TBarnhart@sbzoo.org	805-962-5339 x178
Dave Collins	Spotted Turtle SSP Coordinator and North American Turtle SAFE Coordinator	Turtle Survival Alliance	dcollins@turtlesurvival.org	423-903-9540
Andy Daneault	Burmese Black Mountain Tortoise, Burmese Brown Mountain Tortoise, and Pancake Tortoise SSP Coordinator and Studbook Keeper	Disney's Animal Kingdom	Andre.J.Daneault@disney.com	407-938-2368
Charlie Darby	Sulawesi Forest Turtle Studbook Keeper	Memphis Zoo	cdarby@memphiszoo.org	904-333-8372
Jeff Dawson	Black-breasted Leaf Turtle SSP Coordinator and Studbook Keeper and McCord's Box Turtle SSP Coordinator	Saint Louis Zoo	jdawson@stlzoo.org	314-646-4655
Matt Evans	Burmese Star Tortoise SSP Coordinator and Studbook Keeper	National Zoological Park	evansmj@si.edu	202-633-3252
Sarah Foote	Blanding's Turtle SSP Coordinator and Studbook Keeper	Potter Park Zoo	sfoote@ingham.org	517-342-2703
Lauren Gruny	Malaysian Giant River Turtle SSP Coordinator and Studbook Keeper	Saint Augustine Alligator Farm	laureng@alligatorfarm.com	904-824-3337
Cris Hagen	Pan's Box Turtle SSP Coordinator and Studbook Keeper	Turtle Survival Alliance	chagen@turtlesurvival.org	843-753-2159

Name	Position	Facility	Email	Phone
Bill Hughes	Spiny Hill Turtle SSP Coordinator and Studbook Keeper, Arakan Forest Turtle Studbook Keeper and Four-eyed Turtle Studbook Keeper	Tennessee Aquarium	bhh@tnaqua.org	423-785-4126
Jeff Jundt	McCord's Box Turtle Studbook Keeper	Detroit Zoo	jjundt@dzs.org	248-336-5859
Michael Ogle	Common Spider Tortoise, Madagascar Flat-tailed Tortoise, Northern Spider Tortoise SSP Coordinator and Studbook Keeper, Radiated Tortoise SSP Coordinator, and Bog Turtle Studbook Keeper	Zoo Knoxville	mogle@zooknoxville.org	865-637-5331 x 1210
Charlie Olson	Painted Terrapin Studbook Keeper	Tennessee Aquarium	CharlieOlson@tnaqua.org	423-785-4126
Ashley Ortega	Volcan Darwin Giant Tortoise SSP Coordinator and Studbook Keeper, Volcan Wolf Giant Tortoise, and Galapagos Hybrid Giant Tortoise Studbook Keeper	Glady's Porter Zoo	aortega@gpz.org	956-546-7187
Lou Perrotti	Wood Turtle Studbook Keeper	Roger Williams Park Zoo	lperrotti@rwpzoo.org	401-785-3510 x335
Samantha Sammons	Northwestern and Southwestern Pond Turtle Studbook Keeper	Oakland Zoo	ssammons@oaklandzoo.org	510-632-9525 x 238
Avi Shuter	Rote Island Snake-necked Turtle SSP Coordinator and Studbook Keeper	Bronx Zoo	ashuter@wcs.org	718-220-5042
Laura Wandel	Forsten's Tortoise Studbook Keeper	Dallas Zoo	Laura.wandel@dallaszoo.com	469-554-7342
Vacant	Ploughshare Tortoise Studbook	Vacant	Vacant	Vacant
Vacant	Impressed Tortoise Studbook	Vacant	Vacant	Vacant

- Please list any new or revised statements or guidelines that the TAG has adopted in the past year (*note that new or revised Policies, Position Statements, White Papers, and Guidelines must be approved by the AZA Board of Directors*). Not applicable
- Please share the date of the upcoming annual check-in meeting with the SSP leadership. Will it be virtual or in person? If in person, will it be in conjunction with a conference or larger meeting? This meeting will occur virtually between mid-May through mid-June, still working to finalize the date. We had hoped to meet in person at the annual Herp TAG conference in late April but unfortunately not all of our program leaders are able to attend the meeting.
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- Please attach an updated, Animal Programs Summary Table (See RCP Template Tables 2 and 5)

Sample Animal Programs Summary Table

Common name (<i>Scientific name</i>)	SSP Designation ¹	Date of Most Recent B&T Plan	Census Population Size - N (M.F.U) in AZA and Source (e.g. ZIMS Studbook ² , BTP, other)	Number of Participating AZA Member Facilities on census date	Commitment Population Trend (CPT _{DATE}) (Grow, Decline, Stable) or Size (CPS _{DATE}) and date by when it should be achieved ³	Target Population Size (TPS _{DATE}) and date by when it should be achieved ⁴	Recent Five-Year Population Growth Rate (λ) and/or Trend (increasing, decreasing, or stable) if growth rate not available, and date span across which it was calculated ⁵
Radiated tortoise (<i>Astrochelys radiata</i>)	Provisional	1/11/2024	464 (142.144.178) ZIMS Studbook	67	TBD 2027	465 by 2025	1.012 (increasing) 2019-2024
Rote Island Snake-necked Turtle (<i>Chelodina mccordi</i>)	Signature	9/8/23	240 (41.38.161) on 2/11/24 BTP	23	TBD	TBD	Increasing (2018-2023)
Volcan Darwin Giant Tortoise (<i>Chelonoidis microphyes</i>)	Signature	7/26/23	88	16	TBD	TBD	Increasing 1.007
Spotted turtle (<i>Clemmys guttata</i>)	Signature	11/2/2022	340 (123.122.95) on 11/2/2022 from BTP	73	TBD	TBD	Increasing (2017-2022) Growth rate 1.06
Indochinese Box Turtle (<i>Cuora galbinifrons</i>)	Provisional	03/22/2022	99 (25.49.25) on 2/14/2024 from ZIMS Studbook	12	TBD	TBD	Increasing (2022-2025)
Black-breasted Leaf Turtle (<i>Geoemyda spengleri</i>)	Signature	04/29/2022	219 (82.102.35) on 12/31/2023 from ZIMS Studbook	31	TBD	TBD	1.012 (2019-2023)

Common name (<i>Scientific name</i>)	SSP Designation ¹	Date of Most Recent B&T Plan	Census Population Size - N (M.F.U) in AZA and Source (e.g. ZIMS Studbook ² , BTP, other)	Number of Participating AZA Member Facilities on census date	Commitment Population Trend (CPT _{DATE}) (Grow, Decline, Stable) or Size (CPS _{DATE}) and date by when it should be achieved ³	Target Population Size (TPS _{DATE}) and date by when it should be achieved ⁴	Recent Five-Year Population Growth Rate (λ) and/or Trend (increasing, decreasing, or stable) if growth rate not available, and date span across which it was calculated ⁵
Pan's Box Turtle (<i>Cuora pan</i>)	Signature	02/15/2019	85 (15.34.36) on 2/15/2024 from ZIMS Studbook	17	TBD	TBD	Decreasing (2018-2023)
Burmese Star Tortoise (<i>Geochelone platynota</i>)	Signature	05/26/2022	152 (53.44.55) on 12/31/2023 from ZIMS Studbook	19	TBD	TBD	Increasing ($\lambda = 1.000$) (2019-current)
Malaysian Giant pond turtle (<i>Orlitia borneensis</i>)	Provisional	12/7/2023	47(16.21.10) Zims Studbook	16	TBD	TBD	Decreasing
Spiny turtle (<i>Heosemys spinosa</i>)	Provisional	2 Dec 2021	78 (23.22.33) from ZIMS studbook	14	TBD	TBD	1.00 (stable) last five years
Pancake Tortoise (<i>Malacochersus tornieri</i>)	Provisional	03/01/2024	288 (130.109.49)	75	Grow by 2027	305 by 2027	Decline (2019-2024)
Burmese Brown Mountain Tortoise (<i>Manouria e. emys</i>)	Signature	01/22/2024	65 (15.33.17)	20	Remain stable	90 by 2026	Increasing (2019-2024)

Common name (<i>Scientific name</i>)	SSP Designation ¹	Date of Most Recent B&T Plan	Census Population Size - N (M.F.U) in AZA and Source (e.g. ZIMS Studbook ² , BTP, other)	Number of Participating AZA Member Facilities on census date	Commitment Population Trend (CPT _{DATE}) (Grow, Decline, Stable) or Size (CPS _{DATE}) and date by when it should be achieved ³	Target Population Size (TPS _{DATE}) and date by when it should be achieved ⁴	Recent Five-Year Population Growth Rate (λ) and/or Trend (increasing, decreasing, or stable) if growth rate not available, and date span across which it was calculated ⁵
Burmese Black Tortoise (<i>Manouria e. phayrei</i>)	Provisional	10/20/2023	73 (25.29.19)	16	Remain stable	TBD	Decline (2018-2023)
Common Spider Tortoise (<i>Pyxis a. arachnoides</i>)	Signature	10/13/2022	127 (47.35.45)	23	TBD	TBD	Increase 1.011
Northern Spider Tortoise (<i>Pyxis a. brygooi</i>)	Signature	10/13/2022	117 (45.36.36)	17	TBD	TBD	Increase 1.020
Madagascar Flat-tailed Tortoise (<i>Pyxis planicauda</i>)	Signature	12/20/2022	96 (44.29.23)	15	TBD	TBD	Increase 1.012
Coahuila Box Turtle (<i>Terrapene coahuila</i>)	Provisional	5/16/2022	56 (23.32.1)	15	TBD	TBD	Decline 0.973
Egyptian Tortoise (<i>Testudo kleinmanni</i>)	Signature	4/1/2021	94 (38.43.13) on 2/21/2024	100	TBD	TBD	Stable

Common name (<i>Scientific name</i>)	SSP Designation ¹	Date of Most Recent B&T Plan	Census Population Size - N (M.F.U) in AZA and Source (e.g. ZIMS Studbook ² , BTP, other)	Number of Participating AZA Member Facilities on census date	Commitment Population Trend (CPT _{DATE}) (Grow, Decline, Stable) or Size (CPS _{DATE}) and date by when it should be achieved ³	Target Population Size (TPS _{DATE}) and date by when it should be achieved ⁴	Recent Five-Year Population Growth Rate (λ) and/or Trend (increasing, decreasing, or stable) if growth rate not available, and date span across which it was calculated ⁵
Blanding's turtle (<i>Emydoidea blandingii</i>)	Provisional	12/19/2023	252 (111.121.20) on 12/31/2023 from ZIMS Studbook (76 (38.25.13) excluding head start turtles)	29	TBD	TBD	Decreasing (2018-2023) (Stable if excluding head start turtles)
Painted Terrapin (<i>Batagur borneoensis</i>)	Studbook	4/1/2019	88 (31.27.30) ZIMS Studbook	15	NA	NA	1.055 (increasing)
Arakan Forest Turtle (<i>Heosemys depressa</i>)	Studbook	12/2/2021	33 (9.17.7) from ZIMS studbook	6	N/A	N/A	1.00 (stable) last 5 years
Four-eyed turtle (<i>Sacalia quadriocellata</i>)	Studbook	4/2/2020	71 (19.15.37) from ZIMS studbook	9	N/A	N/A	1.080 (increasing) last 5 years
Bog Turtle (<i>Glyptemys muhlenbergii</i>)	Studbook	11/1/2019	39 (19.13.7)	11	N/A	N/A	0.962 Decline last five years
North American Wood Turtle (<i>Glyptemys insculpta</i>)	Studbook	6/08/2020	As of 31/Dec/2023: AZA 171 (28.28.115)	27	N/A	N/A	2019-2023 Ave λ = 1.0713 Increasing Ave λ = 0.9366 - decreasing

Common name (Scientific name)	SSP Designation ¹	Date of Most Recent B&T Plan	Census Population Size - N (M.F.U) in AZA and Source (e.g. ZIMS Studbook2, BTP, other)	Number of Participating AZA Member Facilities on census date	Commitment Population Trend (CPTDATE) (Grow, Decline, Stable) or Size (CPSPDATE) and date by when it should be achieved ³	Target Population Size (TPSPDATE) and date by when it should be achieved ⁴	Recent Five-Year Population Growth Rate (λ) and/or Trend (increasing, decreasing, or stable) if growth rate not available, and date span across which it was calculated ⁵
Ploughshare Tortoise (<i>Astrochelys yniphora</i>)	Studbook	8/15/2017	30 (1.3.26)	4	N/A	N/A	Stable (0.00)
Impressed Tortoise (<i>Manouria impressa</i>)	Studbook	N/A	26 (6.12.8)	6	N/A	N/A	Decline (0.908)
Pacific Pond Turtle (<i>Actinemys marmorata</i>)	Studbook	1/28/2020	65 (27.17.21)	18	N/A	N/A	Decline (0.956)
Southern Pacific Pond Turtle (<i>Actinemys pallida</i>)	Studbook	1/28/2020	9 (8.1)	5	N/A	N/A	Decline (0.938)
Sulawesi Forest Turtle (<i>Leucocephalon yuwonoi</i>)	Studbook	6/26/2019	102 (33.40.29)	11	N/A	N/A	Increase (1.023)
Forsten's Tortoise (<i>Indotestudo forstenii</i>)	Studbook	5/28/2020	93 (37.39.17)	11	N/A	N/A	Decrease (0.943)

¹SSP designation options: Signature or Provisional

²To obtain this number from ZIMS, run a Census Report, which will default to 31 Dec of the year prior to this report. Set the Institution filter to "AZA" and check the box on the bottom of the screen to "Include animals with undetermined transaction dates" then Generate Raw Data.

³The CPT or CPS and date by which it should be achieved will be found in the most recent RCP for the TAG. This information may not be included in RCPs produced before 2023. Enter TBD with the scheduled date for the next RCP completion.

⁴The TPS and date by which it should be achieved will be found in the most recent BTP for the program. This information may not be included in BTPs produced before 2024 or, if included, may be outdated in BTPs produced in 2023 and earlier. Please pull from a 2024 or later BTP. If none exists enter TBD with the scheduled date for the next RCP completion.

⁵The five-year population growth rate (λ) can be obtained from the ZIMS Studbook, by running the Census Report as described above, referring to column named "Geometric Mean) and using number from cell labeled "last 5 years".

- Please attach an updated Animal Program Summary Table with Roles, Goals, and Essential Action items. (see the RCP Template Table 7). Please provide the action steps the TAG/SSP is taking, or intends to take, in order to achieve each identified goal, and indicate an approximate timeline for these actions.

Sample Animal Program Roles, Goals Table

Common Name (Scientific Name)	Rote Island Snake-necked Turtle (<i>Chelodina mccordi</i>)
Program Designation	Signature
Program Role	Assurance/Exhibit
SMAART Goal #1	Begin sending turtles to Indonesia for release into the wild by fall of 2023.
Progress towards Goal #1	There are now nearly 40 AZA-produced turtles at the Kupang facility (the final stop before release into the wild). There are currently just over 100 turtles at the Bronx Zoo for which shipments are being planned in the near future.
SMAART Goal #2	Establish additional bio-secure holding facilities for AZA-produced turtles to be raised prior to shipment for release by spring of 2024.
Progress towards Goal #2	No progress has been made towards these goals at this time.
SMAART Goal #3	Establish shipment schedule with European EEP to allow for alternating shipments year to year of turtles to Indonesia to build the new wild population from the broadest possible gene pool.
Progress towards Goal #3	The European EEP is still organizing its studbook, and this goal cannot be met until that process is completed.

Common Name (Scientific Name)	Home's Hinge-backed Tortoise (<i>Kinixys homeana</i>)
Program Designation	Signature
Program Role	Exhibit
SMAART Goal #1	Compile incubation temperatures to determine Temperature Sex Determination parameters in participating facilities by fall of 2023
Progress towards Goal #1	I have reached out to institutions who have hatched K. homeana in the past 3 years to ask about incubation temperatures and resulting sexes. I have heard back from three institutions. Will continue trying to compile this information.

SMAART Goal #2	Increase AZA interest in the species, including willingness to act as holding facilities for unsexed juveniles, increase holding by two institutions by fall of 2023.
Progress towards Goal #2	Success! We have two new institutions holding Kinixys
SMAART Goal #3	Find three institutions to create pairs of animals for better parental identification as opposed to MULT parent breeding groups
Progress towards Goal #3	In progress. We have requested Waco to pair up individuals instead of using the mult

Common Name (Scientific Name)	Pan's Box turtle (Cuora pani)
Program Designation	Signature SSP
Program Role	Assurance/Education
SMAART Goal #1	Research nestbox design. Contact participating facilities and investigate which nestboxes have proved most successful. Produce recommendation for breeding facilities from results gathered prior to next breeding season (June 1).
Progress towards Goal #1	Updated 2015 Breeding & Transfer Plan with new breeding facilities. Begun to track institutions with successful nestbox designs.
SMAART Goal #2	Increase participating facilities - add one new facility within 12 months. Send out species information on listservs and ask for recommendations from current institutions. Email and call potential new holders.
Progress towards Goal #2	Added 5 new participating facilities.
SMAART Goal #3	Investigate supporting in situ projects. Contact IUCN Specialist Group to find more information. Compile all data and present it to TAG and participating facilities within next 12 months.
Progress towards Goal #3	No progress to date.

Common Name (Scientific Name)	Volcan Darwin Giant Tortoise (<i>Chelonoidis microphyes</i>)
Program Designation	Signature
Program Role	Assurance/Education/Exhibit
SMAART Goal #1	Continue to supply zoos with young animals for exhibit/education purposes until we need them for breeding.
Progress towards Goal #1	Juveniles are available
SMAART Goal #2	Genetically test recent offspring so that we know which founder and founder pairings to focus on by 2023.
Progress towards Goal #2	Still ongoing
SMAART Goal #3	Recruit 1-3 new institutions by 2023
Progress towards Goal #3	Brought on one new AZA institution since 2022

Common Name (Scientific Name)	Malaysian Giant River Turtle (<i>Orlitia borneensis</i>)
Program Designation	Provisional
Program Role	Assurance
SMAART Goal #1	Work with a nutritionist to create a balanced diet for zoo housed turtles by summer of 2022
Progress towards Goal #1	Diet was created, however, wasn't very cost-effective. Will create and disperse a survey to holding facilities to see if other zoos are dispersing similar diets, and if any adjustments could be implemented.
SMAART Goal #2	Assisting with the movement of surplus animals to EAZA by October 2023
Progress towards Goal #2	Startup communications now that the most updated B&T is done, and there is a better idea of what is surplus to the population.
SMAART Goal #3	Encourage some of the recommended breeding/hatching to take place in 2022
Progress towards Goal #3	Lack of holding space/facilities created some issues with this, but with the new transfer recommendations, there should be space available for holding offspring of recommended breeders.

Common Name (Scientific Name)	Egyptian Tortoise (<i>Testudo kleinmanni</i>)
Program Designation	Signature
Program Role	Education
SMAART Goal #1	Increase breeding facilities by two by the winter of 2026
Progress towards Goal #1	Working with Woodland Park Zoo to share their knowledge and breeding success with other AZA facilities.
SMAART Goal #2	Work with the Chelonian TAG to create ACM
Progress towards Goal #2	Will lead the subgroup on small tortoises in the creation of the ACM for the Chelonian TAG
SMAART Goal #3	Establish ambassador guidelines for this species
Progress towards Goal #3	Working with Ambassador SAG on how to create this with a publishing goal of spring 2025

Common Name (Scientific Name)	Black-breasted Leaf Turtle (<i>Geoemyda spengerli</i>)
Program Designation	Signature
Program Role	Education/Exhibit
SMAART Goal #1	Increase the number of participating AZA-accredited facilities by adding at least 1 new facility by the end of December 2022.
Progress towards Goal #1	Completed. Added one new AZA-accredited facility.

SMAART Goal #2	When the Breeding & Transfer plan is completed, use the recommendations to provide breeding opportunities for at least one pair of turtles with the goal of getting at least one pair to successfully produce a hatchling before the end of December 2022.
Progress towards Goal #2	Completed. Seven offspring hatched in 2022 and two in 2023.
SMAART Goal #3	Locate all of the Hainan form of <i>spengleri</i> in the studbook so we can manage that locality separately from the rest of the population by fall of 2022.
Progress towards Goal #3	In progress, mostly completed. All Hainan specimens have been identified using UDF in the studbook. Waiting on confirmation from one facility that some Hainan offspring were transferred to other institutions.

Common Name (Scientific Name)	McCord's Box Turtle (<i>Cuora mccordi</i>)
Program Designation	Provisional
Program Role	Assurance/Education
SMAART Goal #1	Increase the number of AZA facilities working with this species by at least one new facility by June of 2023.
Progress towards Goal #1	Not completed by deadline, but currently in progress. One new facility has expressed interest in acquiring this species.
SMAART Goal #2	When the Breeding and Transfer plan is completed, use the recommendations to provide breeding opportunities for at least one pair of turtles to produce a successful clutch by fall of 2023.
Progress towards Goal #2	Completed. Five offspring from several clutches were hatched in 2023.
SMAART Goal #3	Establish a connection with Dr. Bill McCord, a private turtle keeper, by spring of 2023 for a bloodline swap. Dr. McCord maintains the largest founder population of this species outside of China and it would benefit our population to bring in unrelated animals.
Progress towards Goal #3	No progress to date

Common Name (Scientific Name)	Pancake Tortoise (<i>Malacochersus tornieri</i>)
Program Designation	Provisional SSP
Program Role	Education/Exhibit
SMAART Goal #1	Ensure six new TSA tortoise bloodlines are included in the 2022 SSP breeding and transfer plan. Continue throughout the year to partner with the TSA animal management committee to identify other tortoises for future plans.
Progress towards Goal #1	In progress, 3 new blood lines included in 2024 SSP BTP and will continuing to work with TSA to identify other bloodlines.

SMAART Goal #2	During the draft 2022 SSP plan continue to work with AZA institutions to identify gender of genetically valuable tortoises that can be included into the final 2022 SSP plan.
Progress towards Goal #2	Genetically valuable tortoises identified in the 2024 SSP BTP. Coordinator will work directly with select institutions on gender identification.
SMAART Goal #3	Solicit institutions that have produced multiple offspring and gather information on artificial incubation techniques. Compile information in a shared document by year end.
Progress towards Goal #3	Did not complete and will rollover to year 2024

Common Name (Scientific Name)	Burmese Brown Mountain Tortoise (<i>Manouria e. emys</i>)
Program Designation	Signature Program
Program Role	Education/Exhibit
SMAART Goal #1	By fall of 2022, solicit the Turtle Survival Alliance and Turtle and Tortoise Preservation private members to identify genetically valuable tortoises for potential inclusion into AZA facilities.
Progress towards Goal #1	2 private holders with founder adults have been identified, need to establish an acquiring institution willing to purchase in raise offspring from 2024 breeding season
SMAART Goal #2	Throughout the year solicit AZA institutions to participate in the SSP program. By year end identify two new AZA institutions to be added to the SSP program.
Progress towards Goal #2	In progress, one new AZA holder Identified post BTP
SMAART Goal #3	By year end develop plan for importing (overseas) new specimens into the SSP with partnering AZA institutions.
Progress towards Goal #3	Did not complete and will rollover to year 2024

Common Name (Scientific Name)	Burmese Black Mountain Tortoise (<i>Manouria e. phayrei</i>)
Program Designation	Provisional
Program Role	Assurance/Exhibit
SMAART Goal #1	By fall of 2022, solicit the Turtle Survival Alliance and Turtle and Tortoise Preservation private members to identify genetically valuable tortoises for potential inclusion into AZA facilities.
Progress towards Goal #1	1 private holder with founder adults have been identified, need to establish an acquiring institution willing to purchase in raise offspring from 2024 breeding season
SMAART Goal #2	Throughout the year solicit AZA institutions to participate in the SSP program. By year end identify two new AZA institutions to be added to the SSP program.
Progress towards Goal #2	In progress, to date no new AZA institutions have been added to the SSP program.
SMAART Goal #3	By year end develop plan for importing (overseas) new specimens into the SSP with partnering AZA institutions.
Progress towards Goal #3	Did not complete and will rollover to year 2024

Common Name (Scientific Name)	Blanding's turtle / <i>Emydoidea blandingii</i>
Program Designation	Provisional SSP
Program Role	Exhibit species; head start program
SMAART Goal #1	Develop a husbandry survey asking for specific husbandry details including housing type, percent of land to water, temperature and light cycle, diet, etc. Photos of set-ups will be requested. The survey will be sent to all current SSP IRs by March 2024 and close by July 2024.
Progress towards Goal #1	Care for hatchling turtles, as well as incubation information has been collected from several zoos. Survey is in development, with a planned distribution in June 2024.
SMAART Goal #2	Consult with zoos that have a long history of housing Blanding's (Brookfield Zoo, Toronto Zoo, Toledo Zoo, etc.), as well as the TAG chair and other knowledgeable sources to vet survey data. Additional information gathering will be completed by October 2024
Progress towards Goal #2	Current sources are the long-term holders of the species. As of now, the survey has not gone out to other holders.
SMAART Goal #3	Using data obtained from the husbandry survey, as well as that received from reputable sources, develop a framework for an official SSP husbandry recommendation. The majority of this data will be usable for the eventual development of an Animal Care Manual. Prior to publication, the document will be sent to the Chelonian TAG for edits. A complete husbandry document will be available by January 2025.

Common Name (Scientific Name)	Burmese Star Tortoise (<i>Geochelone platynota</i>)
Program Designation	Signature
Program Role	Education / Exhibit
SMAART Goal #1	Work with two AZA facilities by spring of 2023 to create closed chambered rearing enclosures for hatchling tortoises to improve hatchling shell growth to better mimic their wild counterparts.
Progress towards Goal #1	Still in progress
SMAART Goal #2	Increase AZA interest in this species, include willingness to act as holding facilities for unsexed juveniles. Increase holding by two institutions by fall of 2023.
Progress towards Goal #2	Completed
SMAART Goal #3	Work with member veterinarians as well as the AZA ChAG Vet advisor to establish guidelines for managing mycoplasma positive tortoises by spring 2023.
Progress towards Goal #3	Still in progress- basic guidelines not accepted by all institutional veterinarians

Common Name (Scientific Name)	Spiny turtle / <i>Heosemys spinosa</i>
Program Designation	Provisional SSP
Program Role	Education / Assurance
SMAART Goal #1	Increase the number of AZA facilities working with this species by at least two by the end of 2022. An email was sent to the AZA Chelonian listserv in late 2021; consequently, several institutions expressed interest. I plan to directly communicate with the potentially interested facilities (by the second quarter of 2022) and convince them to work with this species.
Progress towards Goal #1	Increased by 1 institution (Dallas) and 1 additional institution (Sedgewick) is scheduled to acquire animals soon. However, another current institution (Steinhart) has indicated that they no longer wish to work with this species.
SMAART Goal #2	Dr. Daniel Gaillard of Dalton State College wants to perform genetic analysis for this species – spurred in part by earlier work done a decade ago that indicated the presence of different clades in the AZA population. The goal (to be finished by the end of 2022) is to work with him to formulate a comprehensive action plan to identify all the myriad pieces (such as but not limited to: Identify potential animals to sample and willingness of facilities to participate, look at funding sources (in-house or external, possibly a CGF, TCF, or ChTAG grant), identify reference specimens with known locality, etc.). This plan would be in the form of a document with as many actionable pieces (along with timeframes) as possible identified.
Progress towards Goal #2	Dr. Gaillard has continued to express interest but nothing concrete has been produced to date.
SMAART Goal #3	Following up on the previous goal, one of characteristics for this species that was noted during the earlier work was variability in iris color. By the end of 2022, generate a document with photos of various iris colors and send this out to facilities to generate a list for as many studbook animals as possible. Incorporate this information into the studbook using a UDF.
Progress towards Goal #3	Iris photos have been acquired from two institutions.

Common Name (Scientific Name)	Spotted turtle/ <i>Clemmys guttata</i>
Program Designation	Signature SSP
Program Role	Education/Exhibit
SMAART Goal #1	Determine provenance of spotted turtles from four confiscations.
Progress towards Goal #1	The genetic assignment of origin was completed by the Dyer Genetics Lab at Virginia Commonwealth University in November 2023. A total of 112 confiscated spotted turtles held by seven institutions were assigned to 15 states. All states have been contacted to determine

	their interest and ability to accept the return of turtles to their state for release or other conservation placement. Transfer of turtles is planned for spring 2024
SMAART Goal #2	Zoos interested in engaging in regional spotted turtle conservation efforts will have access to genetically appropriate animals
Progress towards Goal #2	A significant number of spotted turtle assigned by the Dyer lab have been identified for transfer to the Cleveland Metroparks Zoo for a multi-agency population restoration project. These turtles will be supplemented by an additional group of offspring from those individuals to provide approximately 90 spotted turtles for this project. The first releases are planned for 2024.
SMAART Goal #3	Expand populations of known provenance spotted turtles in SSP institutional collections.
Progress towards Goal #3	The BTP completed in November 2022 provided information on founder animal in the population, however this group was not surveyed to determine individuals of known or unknown origin. With the delay of the completion of the genetic database and assignments by the Dyer Lab and the absence of funding, this project was deferred

Common Name (Scientific Name)	Indochinese Box Turtle (<i>Cuora galbinifrons</i>)
Program Designation	Provisional SSP
Program Role	Assurance
SMAART Goal #1	Increase the number of AZA facilities working with this species by at least three new facilities by June of 2022.
Progress towards Goal #1	Philadelphia Zoo is a new facility with this species, however temporarily lost Bronx Zoo. Need to identify and move F1 animal from TSC to new institutions. In progress.
SMAART Goal #2	Write and submit paper on genetic evaluation by the end of 2022. With the goal of it being published and distributed to studbook participants in 2023. International collaborators are the challenge to completing this goal- genetics work was completed in 2019
Progress towards Goal #2	Paper published and disseminated in 2023
SMAART Goal #3	Develop a 3-year plan with the TSA and the ATP to utilize new WildCare program resources in the field by the end of 2023- develop field projects aimed at filling gaps in natural history and health of wild and captive populations, provide support staff to help with confiscations and animal care in Vietnam.
Progress towards Goal #3	Conservation Nation grant awarded to continue this support. Supplies and field support provided in 2023.

Common Name (Scientific Name)	Common Spider Tortoise (<i>Pyxis a. arachnoides</i>)
Program Designation	Signature SSP
Program Role	Exhibit/Education

SMAART Goal #1	Add two private collections to the studbook by spring of 2024, so that we can work to swap bloodlines for increased diversity in the managed population. AZA maintains the only significant ex-situ population across the various regions outside of Madagascar.
Progress towards Goal #1	Collections have been added, but still working on bloodline swaps.
SMAART Goal #2	As the Radiated Tortoise SAFE program works to add the two Pyxis species of tortoise to its program, we need to add one additional funder to support the work in Madagascar by fall of 2023.
Progress towards Goal #2	Pyxis were not officially added to this SAFE program, but they do continue to work with them through the Turtle Survival Alliance. An additional funder was secured through the private sector to help the TSA with their efforts.
SMAART Goal #3	Work with the Lizard TAG to create a mix exhibit list of Malagasy lizards that could include this species by fall of 2022. This would help breeding facilities lessen their holding capacity by freeing up space.
Progress towards Goal #3	Remains a project that we are working on. We have had success finding AZA facilities that will mix them with Malagasy lizards but haven't created the official list to date.

Common Name (Scientific Name)	Northern Spider Tortoise (<i>Pyxis a. brygooi</i>)
Program Designation	Signature SSP
Program Role	Exhibit/Education
SMAART Goal #1	Add two private collections to the studbook by spring of 2024, so that we can work to swap bloodlines for increased diversity in the managed population. AZA maintains the only significant ex-situ population across the various regions outside of Madagascar.
Progress towards Goal #1	Collections have been added, but still working on bloodline swaps.
SMAART Goal #2	Work with the Lizard TAG to create a mix exhibit list of Malagasy lizards that could include this species by fall of 2022. This would help breeding facilities lessen their holding capacity by freeing up space.
Progress towards Goal #2	Remains a project that we are working on. We have had success finding AZA facilities that will mix them with Malagasy lizards but haven't created the official list to date.
SMAART Goal #3	Compile incubation data from all facilities that have hatched this subspecies and compare the results with what we have observed at Knoxville by spring of 2025.
Progress towards Goal #3	New goal, no progress to date.

Common Name (Scientific Name)	Madagascar Flat-tailed Tortoise (<i>Pyxis planicauda</i>)
Program Designation	Signature SSP
Program Role	Assurance

SMAART Goal #1	Locate two new facilities to join the SSP by fall of 2023. Facilities that focus on holding juvenile tortoises are needed.
Progress towards Goal #1	No progress to date on this goal, will keep trying
SMAART Goal #2	Work with two AZA facilities by spring of 2023 to create closed chamber rearing enclosures for hatchling tortoises to allow shell growth to better mirror what is seen in wild tortoises.
Progress towards Goal #2	Have made 50% progress on this goal
SMAART Goal #3	Add two private collections to the studbook by spring of 2024, so that we can work to swap bloodlines for increased diversity in the managed population. The situation in the wild is dire due to increased burning of the remaining habitat for corn production. AZA maintains on the only significant ex-situ population across the various regions outside of Madagascar.
Progress towards Goal #3	Have succeeded in adding those private collections, but have not swapped animals yet, so it remains a work in progress.

Common Name (Scientific Name)	Radiated Tortoise (<i>Astrochelys radiata</i>)
Program Designation	Provisional SSP
Program Role	Exhibit/Education
SMAART Goal #1	Work with two AZA facilities by spring of 2023 to create closed chamber rearing enclosures for hatchling tortoises to allow shell growth to better mirror what is seen in wild tortoises.
Progress towards Goal #1	50% there as we have brought one facility on board with creating these enclosures.
SMAART Goal #2	Assist the Radiated Tortoise SAFE program with recruiting three AZA members to attend the spring 2023 annual health assessment at the TSA center in Madagascar.
Progress towards Goal #2	Partial success with having two new facilities attend the assessment, will aim to help them add a third by the next trip.
SMAART Goal #3	Work with member facilities after the next SSP is published in fall of 2022 to increase breeding at a minimum of two institutions by fall of 2023 to increase growth and become a signature SSP program.
Progress towards Goal #3	Still working towards this goal.

Common Name (Scientific Name)	Coahuila Box Turtle (<i>Terrapene coahuila</i>)
Program Designation	Provisional SSP
Program Role	Assurance/Education
SMAART Goal #1	Survey institutions for husbandry practices especially regarding breeding practices by spring of 2023.
Progress towards Goal #1	Process is nearing completion
SMAART Goal #2	Continue to partner with SAFE American Turtle program and find AZA member to house any <i>T. coahuila</i> that become available through confiscation programs.
Progress towards Goal #2	Remains active

SMAART Goal #3	Find two new AZA facilities to add this species to their collection by spring of 2023
Progress towards Goal #3	One new member has been found, but still working on the second at this time.

Animal Care Manual Table

- Please complete an updated Animal Care Manual table. List each SSP under the TAG's purview and provide information for each.

The Chelonian TAG has no ACM's at this time. We have requested to be a part of the new process once the template has been created by that committee. Our goal is to create an ACM that will cover husbandry of all program species along with general guidelines for other routinely kept species maintained with AZA.

- ☒ I have conducted an annual review of all SSP Sustainability Reports under my purview.

River Terrapin may be removed as we aren't monitoring that species. Egyptian tortoise needs to update to include ESA listing and how that would affect international transfers. Home's hinge-backed tortoise needs to be completed by the new program leader. Please remove Robert Hill as the SSP coordinator for Impressed tortoise, as that program is no longer an SSP. Remove James Liu as SSP coordinator for the Ploughshare tortoise, as that program is no longer an SSP. Blanding's turtle is being updated. Please remove Lauren Augustine as SSP coordinator for Bourret's box turtle, as that program is no longer an SSP. Please remove Jeff Dawson as SSP coordinator for Chinese three-striped box turtle, as that program is no longer an SSP. Malaysian giant river turtle template needs to be completed by the coordinator. Please remove Yellow-blotched map turtle and yellow-headed temple turtle as those are no longer managed programs.

Should we add studbook keeper contact info for those interested in adding those species to their collections?

- ☒ I have attached the Animal Program Deadlines and Planning Details Report from PMCTrack.
- Optional: Please list any field conservation, research projects, and/or special accomplishments that have been supported and/or conducted by the TAG in the past year. The first annual ChAG husbandry course was hosted by the Turtle Survival Alliance this past September at their center in Cross, SC. We had over a dozen participants from across AZA institutions, plus one from EAZA. The course will be offered again this fall, 1-7 September.