OMB Control No. 1018-0093
Expires 08/31/2023

IMPORT/EXPORT/RE-EXPORT OF BIOLOGICAL SPECIMENS (CITES/ESA) FOR SCIENTIFIC RESEARCH

■New ☐Reissue/Renew ☐Amendment

Complete Sections **A or B**, and C, D, and E of this application. U.S. address may be required in Section C.**

A. Complete if applying as an individual			
1.a. Last name	1.b. First name	1.c. Middle name or initial	1.d. Suffix

2 Date of birth (mm/dd/yyyy)	5.a. Telephone number	5.b. Alternate telephone number	6. E-mail address

B. Complete if applying on behalf of a business, corporation, public agency, Tribe, or institution			
1.a. Name of business, agency, Tribe, or institution: Archie Carr Center for Sea Turtle Research (State Agency)		1.b. Doing business as (dba): University of Florida	
2. Tax identification no.: 59-6002052	3.a. Description of business, agency, Tribe, or institution: Sea turtle research center at the University of Florida		3.b. Website URL (if applicable): https//accstr.ufl.edu/
4.a. Principal officer (P.O.) last name: Bjorndal	4.b. P.O. first name: Karen	4.c. P.O. middle initial: A.	4.b. P.O. Title: Director
5. Primary contact name: Karen A. Bjorndal		6. Primary e-mail address: bjorndal@ufl.edu	
7.a. Business telephone number: 352-317-4222	7.b. Alternate phone no.		8.a. Primary contact telephone no.: 352-317-4222

C. All applicants complete address information				
1.a. Physical address (Street address; Apartment #, Suite #, or Room #; no P.O. Boxes): ACCSTR, Department of Biology, University of Florida, 313 Carr Hall				
1.b. City: Gainesville	1.c. State: Florida	1.d. Zip code/Postal code: 32611	1.e. County/Province: Alachua	1.f. Country: USA
2.a. Mailing Address (include if different than physical address; include name of contact person if applicable): Karen A. Bjorndal, ACCSTR, Dept of Biology, Univ. of Florida, PO Box 118525				
2.b. City: Gainesville	2.c. State: Florida	2.d. Zip code/Postal code: 32611	2.e. County/Province: Alachua	2.f. Country: USA

D. All applicants MUST complete

1. Include a check or money order, payable to the U.S. FISH AND WILDLIFE SERVICE, **a nonrefundable processing fee** [50 CFR 13.11(d)(4)]. Federal, Tribal, State, and local government agencies, and those acting on behalf of such agencies, are exempt from the processing fee – ***attach documentation of fee exempt status as outlined in instructions.*** (50 CFR 13.11(d))

2. If you are requesting a reissue/renew/amendment, what is your permit/file number? 23US724540/9

3. Certification: I hereby certify that I have read and am familiar with the regulations contained in Title 50, Part 13 of the Code of Federal Regulations and the other applicable parts in subchapter B of Chapter I of Title 50, and I certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. 1001.

The individual/principal officer of the business must print and sign the application. (No photocopied or stamped signatures) Date (mm/dd/yyyy)

** Further instructions for the above application may be found on our ePermits website. See the last page for information on the Privacy Act, Paperwork Reduction Act, Estimated Burden, and Freedom of Information Act aspects of this application form.

Mail your application(s) to Division of Management Authority, Branch of Permits, MS:IA 5275 Leesburg Pike, Falls Church, VA 22041-3803.

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E. IMPORT/EXPORT/RE-EXPORT OF BIOLOGICAL SPECIMENS (CITES/ESA) FOR SCIENTIFIC RESEARCH

General Information

This application covers activities involving CITES and ESA-listed animal specimens used for scientific research, including any readily recognizable parts, products, or derivatives unless otherwise noted in the Appendices.

Review this application carefully and **provide complete answers to all of the questions**. If you are applying for multiple species, be sure to indicate which species you are addressing in each response. **If more space is needed, attach a separate sheet with your responses numbered according to the questions.**

Please allow at least 90 days for the application to be processed.

How do I determine whether the species is protected under CITES and/or the ESA?

CITES	ESA
To determine whether an animal species is protected under CITES, when the species was listed, or whether exemptions apply to your requested activity, see the list of CITES species	To determine whether an animal species is protected under the ESA, please review the list of ESA-listed species in the Code of Federal Regulations. Please be aware that any permit request involving an **ESA endangered species** must be published in the Federal Register for a required 30-day public comment period.

- If applying as an **individual or institution** please note that you will have to pay the appropriate permit fee.
- If applying as an **institution** that is (or is acting) on behalf of a Federal, Tribal, State, and/or local government agency, no permit fee is required. Provide fee exempt documentation with your application materials.
    - The individual signing the permit must have legal authority to do so if applying on behalf of the institution.

Questions

If you have any questions regarding an action you are requesting authorization for please contact the Division of Management Authority at managementauthority@fws.gov.

Please note: for renewal or amendment of a multi-use permit being requested **within the 5 year** Federal Register public notice period, use application 3-200-52

This form should NOT be used for:

- Captive Bred Wildlife Registration (use application 3-200-41)
- ESA Plants (use application 3-200-36)

Electronic Information Submission

Electronic submission of inventories, photographs, and receipts: For hard copy applications, if you wish to provide information electronically, please include a flash drive containing this information with your physical application.

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All Applicants Must Complete

1. Name and address where you wish the permit to be mailed, **if different from physical address**. If you would like expedited shipping, please enclose a self-addressed, pre-paid, computer-generated, courier service airway bill. If unspecified, all documents will be mailed via regular mail through the U.S. Postal Service.

   Please use physical address; I have included a FedEx airway bill. Although it is marked as "Paid by sender" it is charged to my FedEx account.

2. Point of contact if we have questions about the application (name, phone number, and email).

   Karen A. Bjorndal; 352-317-4222; bjorndal@ufl.edu

3. Have you or any of the owners of the business (if applying as a business, corporation, or institution), been assessed a civil penalty or convicted of any criminal provision of any statute or regulation relating to the activity for which the application is filed; been convicted, or entered a plea of guilty or nolo contendere, for a felony violation of the Lacey Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act; forfeited collateral; OR are currently under charges for any violation of the laws mentioned above?

   ☑ No ☐ Yes

   If you answered “Yes” to Question 3, provide: a) the individual’s name; b) date of charge; c) charge(s); d) location of incident; e) court, and f) action taken for each violation. Please be aware that a “Yes” response does not automatically disqualify you from getting a permit.

Proposed Activity

- ☒ Import
- ☐ Export
- ☐ Re-export (e.g. export of a specimen that was previously imported into the United States)

4. The **current** location of the samples (if different from the physical address provided):

   Name:
   Address:
   City:
   State/Province:
   Postal Code:
   Country:

   I am requesting a multi-use permit; samples for import have not yet been collected. I am requesting that samples of sea turtle tissues may be imported from many countries. All appropriate research and CITES export permits will be obtained from those countries.

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5. **Recipient/Sender:**

- If **export or re-export**, provide name and **physical address** of the recipient in the foreign country.
- If **import**, provide name and **physical address** of the exporter/re-exporter in the foreign country.

Name:
Address:
City:
State/Province:
Postal Code:
Country:

I am requesting a multi-use permit; samples for import have not yet been collected. I am requesting that samples of sea turtle tissues may be imported from many countries. All appropriate research and CITES export permits will be obtained from those countries.

6. Information on the type of **biological samples** involved in the import/export/re-export, provide for **each species** (you may use the table located below):
   a. Scientific name (genus, species, and, if applicable, subspecies);
   b. Common name;
   c. Number and type of sample(s) (e.g. 10 blood samples, ear clips, etc.)
   d. Source (wild or captive-born)
   e. Approximate date of collection (MM/YYYY)
   f. Description of packaging (vials, slides, envelopes, etc.)
   g. Total # of all samples in shipment.

a. Scientific name (genus, species, and, if applicable, subspecies)	b. Common Name	c. Number & type of sample/part	d. Wild or Captive born	e. Approximate date of collection (mm/yyyy)	f. Description of packaging (vials, slides, envelopes, etc)
EXAMPLE: *Pan troglodytes*	Chimpanzee	10 blood samples; 4 hair samples	W	08/2015	Vial Envelope
Chelonia mydas	green turtle	Unknown number. Bone, t	W	multiple imports, w	multiple imports, will vary
Caretta caretta	loggerhead turtl	Unknown number. Bone, t	W	multiple imports, w	multiple imports, will vary
Eretmochelys imbricata	hawksbill turtle	Unknown number. Bone, t	W	multiple imports, w	multiple imports, will vary
PLEASE SEE ATTACHED					
				g. TOTAL # of all samples in the shipment:	TBD

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Source of Specimen

7. For **each biological sample taken from a captive-born/captive hatched animal(s)**, provide a signed and dated statement from the breeder or appropriate documentation (e.g. Species 360 report) that includes the following:
    a. Scientific name (genus, species, and *if applicable*, subspecies),
    b. Common name,
    c. Name and address of the facility where the animal was bred and born;
    d. Birth/hatch date (mm/dd/yyyy),
    e. Identification information (studbook #, microchip, leg band, etc.),
    f. Name and address of facility where the parental stock is located; and
    g. A statement from the breeder that the animal was bred and born at the breeder's facility (including the facility's name and address), and
    h. If not the breeder, documentation demonstrating the history of transactions (e.g., chain of custody or ownership of the sample(s), *if applicable*).

8. **For each biological sample taken from an animal in the wild**, provide:
    a. Scientific name (genus, species, and *if applicable*, subspecies),
    b. Common name,
    c. Specific location (e.g., county, state, province, country) where the samples were taken from the wild,
    d. The name of the individual(s) who collected the animal/samples and their authorization to do so including (but not limited to) copies of foreign and domestic (Federal, State, and/or Tribal) government collecting permits, licenses, contracts, and/or agreements.
    e. Method of collection: sampling protocol, approximate length of time held in captivity, any injury and/or mortality experienced during collection, transport, or holding;
    f. Information related to any remuneration, either financial or in-kind, provided for acquiring the sample(s);
    g. Efforts to use captive specimens (e.g., captive-born, captive-held) in lieu of taking samples from wild animals.

9. For **each biological sample being re-exported** (e.g., exporting a specimen that was previously imported into the United States), provide:
    a. A copy of the **canceled** CITES export or re-export document issued by the appropriate CITES office in the country from which the wildlife was imported;
    b. A copy of your Declaration for Importation or Exportation of Fish or Wildlife (Form 3-177), **cleared** by USFWS Office of Law Enforcement.
    c. A copy of the ESA permit that authorized the original import.
    d. If you did not make the original import, please provide documentation outlining chain-of-ownership since import, including:
        i. A copy of the importer's CITES, ESA, and declaration documents (a, b, & c above) and,
        ii. Subsequent invoices (or other documentation) showing the history of transactions leading to your ownership of the sample(s) after import (provenance).

Description and Justification For Requested Activity

10. Describe the purpose of the scientific research and include:
    a. A copy of the research proposal (outlining the purpose, objectives, methods),
    b. How long the research has been (or will be) conducted,

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c. Detailed information on sampling methods including:
   i. who will be taking the samples
   ii. equipment and methods used
   iii. measures taken to prevent injuries and mortalities during collection
d. A copy of the study's Institutional Animal Care and Use Committee (IACUC) form (*if applicable*),
e. Peer-reviewed scientific papers published from this research (*if applicable*),
f. An explanation of whether similar research has already been conducted or is currently being conducted.

11. Please provide a detailed description on how the proposed activities will **enhance or benefit the wild population within its native range** (e.g., direct or indirect **conservation efforts**) and provide documentation (e.g., signed memorandums of understanding) demonstrating your commitment to supporting the program and how the program contributes directly to the species identified in your application.

Technical Expertise & Authorizations

12. CV or resume outlining the technical experience of the researchers and field technicians collecting the samples, as it relates to the proposed activities, including experience with other similar species.

Shipment Information

13. Please indicate if this is a one-time shipment or if you anticipate needing to import/export/re-export samples multiple times within one year or over multiple years.
14. How will the samples be imported or exported (e.g., personally carried or shipped)?
15. If personally carried, please specify the individual(s) who will be transporting the samples.

All international shipment(s) must be through a designated port. A list of designated ports (where an inspector is posted) is available. If you wish to use a port not listed, please contact the Office of Law Enforcement for a Designated Port Exemption Permit (form 3-200-2).

CITES Appendix I & Marine Mammal Species

- For **export** of a **CITES Appendix I-listed species**, provide a copy of the CITES import permit, or evidence one will be issued by the Management Authority of the country to which you plan to export the specimen(s). In accordance with Article III of the CITES treaty, it is required that import permits are issued before the corresponding export permit.
- For **import** of **CITES Appendix-I listed species**, provide information to show the import is not for primarily commercial purposes as outlined in Resolution Conf. 5.10 (Rev CoP15).
- For **import** of **CITES Appendix-I marine mammal samples**, please provide a copy of your FWS or NMFS Marine Mammal Protection Act (MMPA) permit or authorization.

Institutional Animal Care & Use Committee
Communicore Building Room C3-025

PO Box 100142
Gainesville, Florida 32610-0142
Phone: (352) 273-9535
iacuc@research.ufl.edu

APPROVAL OF SUBMISSION

August 28, 2023

Karen Bjorndal
DEPARTMENT OF BIOLOGY
GAINESVILLE, FL 32611-8525

3523921126
bjorndal@ufl.edu

Dear Karen Bjorndal:

On 8/28/2023, the IACUC reviewed the following submission:

Type of Review:	Amendment
Title of Protocol:	Amendment for IACUC202300000349
Investigator:	Karen Bjorndal
IACUC ID:	AMEND202300000591
Funding:	- Internal
Documents Reviewed:	Name: NMFS Sea Turtle Research Techniques Manual Name: Florida Sea Turtle Permit Name: CITES Import Permit

The protocol is approved from 8/28/2023 to 7/6/2026. Any change in this approved animal project must occur through an Amendment submission and be approved by the IACUC before instituting the change. The IACUC recommends submitting your triennial update at least 60 days before the expiration date of 7/5/2026 in order to obtain re-approval. Otherwise your study will automatically expire and you will no longer be able to work with these animals.

To request ACS facility access please go to the ACS website (https://acs.ufl.edu) and click on the Request Facility Access tab.

If this IACUC protocol pertains to a sponsored project, the IACUC protocol must be referenced in UFIRST (https://grants.research.ufl.edu). If this is a protocol for an award not yet made to UF, please load it into the UFIRST proposal or pending UFIRST award. If this is a protocol for an active award, please execute a UFIRST award modification to identify the protocol linked to the appropriate project.

Institutional Animal Care & Use Committee
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PO Box 100142
Gainesville, Florida 32610-0142
Phone: (352) 273-9535
iacuc@research.ufl.edu

Sincerely,

Kerri Omalley
Assistant Professor and IACUC Chair
komalley@ufl.edu

Karen Anne Bjorndal

Curriculum Vitae – January 2024

Academic Positions and Contact Information

Director, Archie Carr Center for Sea Turtle Research, University of Florida: 1987 to present
Distinguished Professor, Department of Biology, University of Florida: 2012 to present
Professor, Department of Biology/Zoology, University of Florida: 1996-2012
Associate Professor, Department of Zoology, University of Florida: 1992-1996
Assistant Professor, Department of Zoology, University of Florida: 1987-1992
Postdoctoral Fellow, Department of Animal Science, University of Florida: 1981-1987
Telephone: 352-317-4222 Email: bjorndal@ufl.edu Homepage: http://accstr.ufl.edu

Academic Degrees

1972 B.A. in Biology from Occidental College, Los Angeles, CA
1979 Ph.D. in Zoology from the University of Florida, Gainesville
Major professor: Archie Carr
Dissertation: Nutrition and grazing behavior of the green turtle, *Chelonia mydas*, a seagrass herbivore

Selected Appointments, Honors, and Awards

2022	Faculty Achievement Award, College of Liberal Arts & Sciences, UF
2021-2024	University of Florida Term Professorship
2017	Archie Carr Medal presented by the Florida Museum of Natural History for outstanding national and international contributions to the knowledge, understanding, and appreciation of our natural heritage
2017-2020	University of Florida Term Professorship
2012-present	Council member, Bahamas National Trust, representing UF
2011	Lifetime Achievement Award, International Sea Turtle Society
2010	Honorary Life Member, Comparative Nutrition Society for outstanding contributions to the field of comparative nutrition
2009-2010	Chair, Committee on the Review of Sea Turtle Population Assessment Methods, National Research Council of the National Academy of Sciences
2007-2009	President, Comparative Nutrition Society
2006-2009	Chair, Department of Zoology, University of Florida
2005-present	Distinguished University of Florida Alumni Professor
2004	UF International Educator of the Year Award
2002-2003	University of Florida Teacher/Scholar
1999-2002	University of Florida Research Foundation Professor
1998-1999	College of Liberal Arts & Sciences Archie Carr Commemorative Term Professor
1996-1998	Board of Directors of the Comparative Nutrition Society
1995-1996	Committee on Techniques for Removing Fixed Offshore Structures, National Research Council of the National Academy of Sciences
1990-1992	Division of Sponsored Research Achievement Awards (1990, 1991, 1992)
1989-1990	Committee on Sea Turtle Conservation, National Research Council of the

	National Academy of Sciences
1980-present	Tortoise and Freshwater Turtle Specialist Group, (SSC/IUCN), Switzerland
1978-present	Member [Chairman 1984-1996], Marine Turtle Specialist Group, International Union for the Conservation of Nature (SSC/IUCN), Switzerland

Graduate Student and Postdoc Mentoring

I have served as chair for 12 Masters students who have completed their degree, 21 PhD students who have completed their degree, and I now serve as chair for 4 PhD students. I have mentored 7 postdoctoral fellows.

Professional and Honor Societies

American Association for the Advancement of Science, American Society of Ichthyologists and Herpetologists (Life Member), Comparative Nutrition Society (Life Member), Ecological Society of America (Life Member), Herpetologists' League (Life Member), International Sea Turtle Society (Life Member), Phi Beta Kappa, Sigma Xi (Life Member), Society for the Study of Amphibians and Reptiles (Life Member)

Grants and Contracts

Since joining the faculty at the University of Florida in 1987, I have served as principal or co-principal investigator on grants, contracts and donations totaling more than 16 million dollars. Most of these projects have involved various aspects of the biology of sea turtles.

Books, Written or Edited

1. **Bjorndal, K.A.** (editor). 1982. Biology and conservation of sea turtles. Smithsonian Institution Press, Washington, D.C. 583 pages.

2. **Bjorndal, K.A.** and G.H. Balazs (editors). 1983. Manual of sea turtle research and conservation techniques. Center for Environmental Education, Washington, D.C. 126 pages.

3. National Research Council. 1990. Decline of the sea turtles: causes and prevention. National Academy Press, Washington, D.C. 259 pages. *Authors*: J.J. Magnuson (*chair*), **K.A. Bjorndal**, W.D. DuPaul, G.L. Graham, D.W. Owens, C.H. Peterson, P.C.H. Pritchard, J.I. Richardson, G.E. Saul, and C.W. West.

4. **Bjorndal, K.A.** (editor). 1995. Biology and conservation of sea turtles, revised edition. Smithsonian Institution Press, Washington, D.C. 615 pages.

5. National Research Council. 1996. An assessment of techniques for removing offshore structures. National Academy Press, Washington, D.C. 76 pages. *Authors*: F.P. Dunn (*chair*), **K.A. Bjorndal**, J.M. Coleman, W.E. Evans, R. Kasprzak, J.E. Kiesler, P. O'Connor, A. Powell, A.G. Pulsipher, D.J. Sullivan, J.P. VanDevender and P.K Vélez.

6. Eckert, K.L., **K.A. Bjorndal**, F.A. Abreu Grobois and M. Donnelly (editors). 1999.

Management and Research Techniques for the Conservation of Sea Turtles. IUCN, Gland, Switzerland. 235 pages. *Spanish translation published in 2001. Técnicas de Investigación y Manejo para la Conservación de las Tortugas Marinas. 270 pages.*

7. National Research Council. 2010. Assessment of sea-turtle status and trends: integrating demography and abundance. National Academies Press, Washington, DC. 162 pages. *Authors*: **K.A. Bjorndal** (*chair*), B.W. Bowen, M. Chaloupka, L.B. Crowder, S.S. Heppell, C.M. Jones, M.E. Lutcavage, D. Policansky, A.R. Solow, and B.E. Witherington.

Proceedings, Edited or Compiled

1. Bacon, P., F. Berry, **K. Bjorndal**, H. Hirth, L. Ogren, and M. Weber (editors). 1984. Proceedings of the Western Atlantic Turtle Symposium. 3 volumes. RSMAS Printing, Miami, Florida.

2. Ogren, L., F. Berry, **K. Bjorndal**, H. Kumpf, R. Mast, G. Medina, H. Reichart, and R. Witham (editors). 1989. Proceedings of the Second Western Atlantic Turtle Symposium (WATS II). NOAA Technical Memorandum NMFS-SEFC-226. 401 pages.

3. **Bjorndal, K.A.**, A.B. Bolten, D.A. Johnson, and P.J. Eliazar (compilers). 1994. Proceedings of the Fourteenth Annual Symposium on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS-SEFSC-351. 323 pages.

4. Bolten, A.B., H.R. Martins, and **K.A. Bjorndal** (editors). 2000. Proceedings of a workshop to design an experiment to determine the effects of longline gear modification on sea turtle bycatch rates [*Workshop para a elaboração de uma experiência que possa diminuir as capturas acidentais de tartarugas marinhas nos Açores*], 2-4 September 1998, Horta, Azores, Portugal. NOAA Technical Memorandum NMFS-OPR-19. 50 pages. Bilingual

5. **Bjorndal, K.A.** and A.B. Bolten (editors). 2000. Proceedings of a workshop on assessing abundance and trends for in-water sea turtle populations. NOAA Technical Memorandum NMFS-SEFSC-445. 83 pages.

Chapters in Books or Symposium Volumes

1. **Bjorndal, K.A.** 1982. The consequences of herbivory for the life history pattern of the Caribbean green turtle. Pages 111-116 in K.A. Bjorndal (ed.), Biology and conservation of sea turtles. Smithsonian Institution Press, Washington, D.C.

2. Moore, J.E., W.E. Kunkle, **K.A. Bjorndal**, R.S. Sand, C.G. Chambliss and P. Mislevy. 1984. Extension forage testing program utilizing near infrared reflectance spectroscopy. Proceedings of the Forage and Grassland Conference, pages 41-52. American Forage and Grassland Council, Houston, TX.

3. **Bjorndal, K.A.** and J.E. Moore. 1986. Prediction of fermentability of biomass feedstocks from chemical characteristics. Pages 447-454 in W.H. Smith (ed.), Biomass energy development. Plenum Publishing Corp., New York.

4. **Bjorndal, K.A.** and J.E. Moore. 1988. Chemical characteristics and their relation to fermentability of potential biomass feedstocks. Pages 355-365 in W.H. Smith and J.R. Frank (eds.), Methane from biomass: a systems approach. Elsevier Applied Science Publishers, London.

5. **Bjorndal, K.A.** and A.B. Bolten. 1990. Goals for sea turtle research in the Gulf of Mexico with respect to the oil and gas industries. Pages 47-58 in Sea turtles and marine mammals of the Gulf of Mexico. Minerals Management Service, U.S. Department of Interior, New Orleans.

6. **Bjorndal, K.A.** 1991. Preservation of sea turtles and international cooperation. Pages 11-14 in I. Uchida (ed.), Proceedings of the International Symposium on Sea Turtles '88. Himeji City Aquarium and Hiwasa Chelonian Museum, Japan.

7. Bolten, A.B., **K.A. Bjorndal** and H.R. Martins. 1994. Life history model for the loggerhead sea turtle (*Caretta caretta*) population in the Atlantic: Potential impacts of a longline fishery. Pages 48-55 in G.H. Balazs and S.G. Pooley (eds.), Research plan to assess marine turtle hooking mortality: Results of an expert workshop held in Honolulu, Hawaii November 16-18, 1993. NOAA Technical Memorandum NMFS-SWFSC-201.

8. **Bjorndal, K.A.** and G.R. Zug. 1995. Growth and age of sea turtles. Pages 599-600 in K.A. Bjorndal (ed.), Biology and conservation of sea turtles, revised edition. Smithsonian Institution Press, Washington, D.C.

9. Bolten, A.B., **K.A. Bjorndal** and H.R. Martins. 1995. Life history of the loggerhead sea turtle, *Caretta caretta* (Reptilia: Cheloniidae), in the Atlantic. In A. Domingo Abreu and M. Biscoito (eds.), Proceedings of the First Symposium Fauna and Flora of Atlantic Islands. Bol. Museu Municipal do Funchal, Madeira, Portugal, Sup. no. 4:115-122.

10. **Bjorndal, K.A.** 1997. Foraging ecology and nutrition of sea turtles. Pages 199-231 in P.L. Lutz and J.A. Musick (eds.), The biology of sea turtles. CRC Press, Boca Raton, Florida.

11. **Bjorndal, K.A.** 1997. Fermentation in reptiles and amphibians. Pages 199-230 in R.I. Mackie and B.A. White (eds.), Gastrointestinal microbiology, Vol. 1 Gastrointestinal ecosystems and fermentations. Chapman and Hall, New York.

12. **Bjorndal, K.A.** 1999. Priorities for research in foraging habitats. Pages 12-14 in K.L. Eckert, K.A. Bjorndal, F.A. Abreu Grobois and M. Donnelly (editors). Management and Research Techniques for the Conservation of Sea Turtles. IUCN, Gland, Switzerland.

13. **Bjorndal, K.A.** and A.B. Bolten. 2000. Green turtles at Conception Island Creek, Bahamas. Pages 75-76 in K.A. Bjorndal and A.B. Bolten (editors), Proceedings of a workshop on assessing abundance and trends for in-water sea turtle populations. NOAA Technical Memorandum NMFS-SEFSC-445.

14. **Bjorndal, K.A.** and J.B.C. Jackson. 2003. Roles of sea turtles in marine ecosystems:

reconstructing the past. Pages 259-273 in P.L. Lutz, J. Musick and J. Wyneken (editors), Biology of Sea Turtles, volume II. CRC Press, Boca Raton, FL.

15. **Bjorndal, K.A.** 2003. Roles of loggerhead sea turtles in marine ecosystems. Pages 235-254 in A.B. Bolten and B.E. Witherington (editors), Loggerhead sea turtles. Smithsonian Institution Press, Washington, D.C.

16. Bolten, A.B. and **K.A. Bjorndal**. 2003. Green turtles in the Caribbean: a shared resource. Pages 225-226 in G.C. Ray and J. McCormick-Ray. Coastal-Marine Conservation: Science and Policy. Blackwell Scientific, London. Case Study within a chapter on the Bahamas.

17. Bolten, A.B., H.R. Martins, E. Isidro, M. Santos, R. Ferreira, E. Bettencourt, A. Giga, A. Cruz, and **K.A. Bjorndal**. 2004. Experiment to evaluate gear modification on rates of sea turtle bycatch in the swordfish longline fishery in the Azores – Phase 1 and Phase 2. Pages 139-153 in K.J. Long and B.A. Schroeder (editors), Proceedings of the International Technical Expert Workshop on Marine Turtle Bycatch in Longline Fisheries, Seattle, Washington, 11-13 February 2003. NOAA Technical Memorandum NMFS-OPR-26.

18. Harrison, A.L. and **K.A. Bjorndal**. 2006. Connectivity and wide-ranging species in the ocean. Pages 213-232 in K.R. Crooks and M.A. Sanjayan (editors), Connectivity Conservation. Cambridge University Press, Cambridge.

19. Santos, M.A., A.B. Bolten, H.R. Martins, B. Riewald, and **K.A. Bjorndal**. 2007. Air-breathing visitors to seamounts: Section B: Sea turtles. Pages 239-244 in Pitcher, T.J., T. Morato, P.J.B. Hart, M.R. Clark, N. Haggan, and R.S. Santos, editors, Seamounts: ecology, fisheries and conservation. Blackwell Publishing, London.

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205. Parra, H., M. Machete, M. Santos, **K.A. Bjorndal**, and F. Vandeperre. In press. Incidental capture of sea turtles in the Northeast Atlantic Portuguese pelagic longline fishery. Fisheries Research.

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Non-Refereed Publications
This list does not include > 400 published abstracts from presentations

1. **Bjorndal, K.A.** 1977. Turtle grass, *Thalassia testudinum*. The Bahamas Naturalist 2:17-19.

2. **Bjorndal, K.A.** and A.B. Bolten. 1978. Union Creek–a look to the future. The Bahamas Naturalist 4:18-27.

3. **Bjorndal, K.A.** 1979. Cellulose digestion and volatile fatty acid production in the green turtle, *Chelonia mydas*. Comparative Biochemistry and Physiology 63A:127-133.

4. **Bjorndal, K.A.** 1979. Urine concentrations of ammonia, urea and uric acid in the green turtle, *Chelonia mydas*. Comparative Biochemistry and Physiology 63A:509-510.

5. Carr, A. and **K.A. Bjorndal**. 1979. Marine turtles of the Bahamas. The Bahamas Naturalist 4:17-20.

6. **Bjorndal, K.A.** 1982. Does turning green turtles on their backs affect subsequent reproductive performance? Marine Turtle Newsletter 22:15-16.

7. Carr, A., A. Meylan, J. Mortimer, **K. Bjorndal**, and T. Carr. 1982. Surveys of sea turtle populations and habitats in the western Atlantic. NOAA Technical Memorandum NMFS-SEFC-91, 91 pages.

8. Moore, J.E. and **K.A. Bjorndal**. 1983. Evaluation of near infrared reflectance spectroscopy for estimating the composition and quality of tropical grass hays. Beef Cattle Research Report, University of Florida 1983:87-93.

9. **Bjorndal, K.A.**, J.E. Moore, and G.W. Foster. 1987. Variability in composition and fermentability of potential biomass resources in Florida. Biomass Report, University of Florida, 53 pages.

10. Manzella, S., **K. Bjorndal**, and C. Lagueux. 1991. Head-started Kemp's ridley recaptured in Caribbean. Marine Turtle Newsletter 54:13-14.

11. Bolten, A.B., J.C. Santana, and **K.A. Bjorndal**. 1992. Transatlantic crossing by a loggerhead turtle. Marine Turtle Newsletter 59:7-8.

12. Bolten, A.B., H.R. Martins, **K.A. Bjorndal**, M. Cocco, and G. Gerosa. 1992. *Caretta*

caretta (loggerhead) pelagic movement and growth. Herpetological Review 23:116.

13. **Bjorndal, K.A.**, A.B. Bolten, J. Gordon, and J.A. Camiñas. 1994. *Caretta caretta* (loggerhead) growth and pelagic movement. Herpetological Review 25:23-24.

14. Bolten, A.B., **K.A. Bjorndal**, P.J. Eliazar, and L.F. Gregory. 1994. Seasonal abundance, size distribution, and blood biochemical values of loggerheads (*Caretta caretta*) in Port Canaveral Ship Channel, Florida. NOAA Technical Memorandum NMFS-SEFSC-353. 39 pages.

15. **Bjorndal, K.A.** and A.B. Bolten. 1998. Hawksbill tagged in The Bahamas recaptured in Cuba. Marine Turtle Newsletter 79:18-19.

16. Eliazar, P.J., **K.A. Bjorndal**, and A.B. Bolten. 2000. Early report of fibropapilloma from St. Croix, USVI. Marine Turtle Newsletter 89:16.

17. **Bjorndal, K.A.** 2003. Foreword to the book Sea Turtles of the World by Douglas Perrine, Voyageur Press, Stillwater, MN.

18. **Bjorndal, K.A.**, A.B. Bolten, A. Arenas, J. Zurita, A. D'Amiano, C. Calderón, J. Parsons, and J.A. Seminoff. 2003. Green turtle with living tag captured in the southern Bahamas. Marine Turtle Newsletter 101:26.

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20. Tiwari, M., R.R. Carthy, A. Silveira, and **K.A. Bjorndal**. 2003. *Caretta caretta* (loggerhead sea turtle). Nest architecture. Herpetological Review 34:138-139.

21. **Bjorndal, K.A.** 2005. Ciclo de vida longo, estudos a longo prazo [Long-lived sea turtles require long-term studies]. Revista do Tamar 10:4.

22. Bolten, A.B. and **K.A. Bjorndal**. 2006. Movements of an olive ridley sea turtle (*Lepidochelys olivacea*) in The Bahamas. The Bahamas Naturalist and Journal of Science 1:59-60.

23. **Bjorndal, K.A.**, T. Clovis, K.J. Reich, G. Alkins, P.J. Eliazar, and A.B. Bolten. 2008. Juvenile hawksbill tagged in The Bahamas nests in Tobago. Marine Turtle Newsletter 122:10-11.

24. **Bjorndal, K.A.** and A.B. Bolten. 2009. Policy changes protect sea turtles in The Bahamas: Long-term efforts rewarded. State of the World's Turtles 5:16-17.

25. **Bjorndal, K.A.** 2011. Introduction to the 2011 Reissue of the book *So Excellent a Fishe* by Archie Carr. University Press of Florida, Gainesville. Pages XI-XXI.

26. Shamblin, B.M., **K.A. Bjorndal**, A.B. Bolten, and C.J. Nairn. 2012. Natal homing by an adult male green turtle at Tortuguero, Costa Rica. Marine Turtle Newsletter 134:21-22.

27. Martins, H.R., **K.A. Bjorndal**, R.L. Ferreira, H. Parra, C.K. Pham, Y. Rodriguez, M.R. Santos, F. Vandeperre, and A.B. Bolten. 2018. Sea turtles: University of Florida – University of the Azores connection 1984 – present: A review. Arquipelago Life and Marine Sciences 35:85-94.

28. Garcia Cruz, M., C.L. Campbell, **K.A. Bjorndal**, L. Cardona, C.J. Lagueux, K.M. Rodriguez Clark, M. Lampo, C. Señaris, H. Vander Zanden, M. Fuentes, L. Pibernat, E. Solorzano, and A.B. Bolten. 2018. Solving the mysteries of male turtles in the Caribbean. State of the World's Sea Turtles (SWOT) 13:10-11.

29. Ceriani, S.A., J.B. Pfaller, N.E. Wildermann, L. Avens, **K.A. Bjorndal**, W. Dow Piniak, C.Y. Kot, J.A. Lasala, M.D. Lettrich, R. Lewison, A. Lolavar, M. Pajuelo, S. Piacenza, C.R. Sasso, B. Schroeder, D.J. Shaver, I. Silver-Gorges, B.A. Stacy, K. Stewart, B. Wallace, M. Ware, J. Wyneken, and M.M.P.B. Fuentes. 2020. Chapter 19: United States. Pages 285-368 in Nalovic M.A., Ceriani S.A., Fuentes M.M.P.B., Pfaller J.B., Wildermann N.E., Cuevas E. (Eds.). Sea Turtles in the North Atlantic & Wider Caribbean Region. MTSG Regional Report 2020. Report of the IUCN-SSC Marine Turtle Specialist Group, 2020.

30. **Bjorndal, K.A.** 2021. Tribute to Peter C. H. Pritchard. African Sea Turtle Newsletter 15:22.

31. Brooks A.M.L, E. Whitman, S. Connett, and **K.A. Bjorndal**. 2021. Bahamas. Pages 87-112 in: Nalovic, M.A., Ceriani, S.A., Fuentes, M.M.P.B., Pfaller, J.B., Wildermann, N.E., Uribe-Martínez, A., Cuevas, E. (eds.), Sea turtles in the North Atlantic & Wider Caribbean Region. MTSG Annual Regional Report 2021. IUCN SSC Marine Turtle Specialist Group. https://www.iucn-mtsg.org/regional-reports

Additional sheets for Form 3-200-37

6. Information on the type of **biological samples** involved in the import/export/re-export, provide for **each species** (***continued from online form***)

a. Scientific name (genus, species, and, if applicable, subspecies)	b.Common Name	c. Number & type of sample/part	d. Wild or Captive born	e. Approximate date of collection (mm/yyyy)	f. Description of packaging (vials, slides, envelopes, etc)
Lepidochelys kempii	Kemp's Ridley	Unknown number. Bone, blood, tissue, DNA, or stomach content samples	W	multiple imports, will vary	multiple imports, will vary
Lepidochelys olivacea	Olive Ridley	Unknown number. Bone, blood, tissue, DNA, or stomach content samples	W	multiple imports, will vary	multiple imports, will vary
Dermochelys coriacea	Leatherback turtle	Unknown number. Bone, blood, tissue, DNA, or stomach content samples	W	multiple imports, will vary	multiple imports, will vary

7. For **each biological sample taken from a captive-born/captive hatched animal(s)**, provide a signed and dated statement from the breeder or appropriate documentation (e.g. Species 360 report) that includes the following:
Not applicable to this permit application.

8. **For each biological sample taken from an animal in the wild**, provide:
Not possible until samples have been collected. I am requesting a multi-use permit; samples for import have not yet been collected. I am requesting that samples of sea turtle tissues may be imported from many countries. All appropriate research and CITES export permits will be obtained from those countries.

9.For **each biological sample being re-exported** (e.g., exporting a specimen that was previously imported into the United States), provide:
No samples will be re-exported.

10. Describe the purpose of the scientific research and include:

Scientific aims of research: We study sea turtles to improve our knowledge and ability to protect sea turtle populations. This study addresses five major types of information: sea turtle distributions, foraging ecology, demography, health status, and genetic connectivity of populations.
Duration of study: This research program has been underway since 1986 and will continue for at least 5 more years.

Research proposal modified from our IACUC proposal which was approved for 3 years in August 2023:

Sea turtle tissue samples provide valuable information that will contribute to our studies of sea turtle distributions, foraging, health status, and genetic connectivity of populations. Wild sea turtles for this study will be encountered on foraging grounds and nesting beaches around the world. All necessary collection, research and export permits will be obtained from the countries involved. We have a State of Florida permit that allows us to maintain and analyze the collected samples in Florida (MTP#016, renewed annually).

For our in-water studies, turtles are captured by hand by swimmers. No SCUBA is used. If we use boats (always small boats with outboard motors), we rent them from local people who also run the boats for us. All turtles will be measured (length of carapace [upper shell]) and tagged with standard sea turtle flipper tags. To obtain epidermis samples from sea turtles, we use a technique that has been approved for use by UF IACUC and used with no harmful effects on nesting, wild loggerhead sea turtles (IACUC #D093); nesting, wild leatherback sea turtles (IACUC #D588); captive juvenile loggerhead turtles (IACUC #Z094); and wild sea turtles of several species ranging from small juveniles to adults (IACUC #Z994; IACUC #201701985). The surface of the epidermis (either the "shoulder" area or the second lateral scute) is cleaned with 3 applications of isopropyl alcohol prior to sample collection, and a sterile 6-mm diameter biopsy punch designed for collecting epidermis samples from humans is used. The tissue sample that is removed is between 0.5 to 2 mm in thickness. This biopsy size is necessary for the amount of tissue required for analyses. Biopsy punches will be discarded after each use; biopsy punches will not be used on more than one turtle to prevent spread of disease. The biopsy site is not closed or treated post-biopsy. A small proportion of turtles is recaptured in later years; those turtles may be sampled again at intervals not less than 12 months. The samples are stored in ethanol, sodium chloride, or dried at 60 C. We are confident that this sampling protocol does not have a negative effect on the sea turtles we sample for three reasons. First, we have recaptured hundreds of wild green sea turtles and hawksbill sea turtles a year after having been sampled in this manner and in all cases the biopsy sites have completely healed leaving no trace of the location of the biopsy. Second, at our long-term study site in the southern Bahamas where we have studied green turtles and hawksbills for 45 years, we have demonstrated that sampling had no effect on turtle survival based on mark-recapture modeling (Bjorndal et al. 2003, Marine Ecology Progress Series 252: 273–281). Third, growth rates of young loggerheads held in captivity and sampled for blood and epidermis tissues at set intervals were compared with growth rates of control turtles that were held at the same time and under the same conditions but were not sampled. The results of this study, which was conducted under IACUC protocol #Z094, showed no significant difference in growth rates between sampled and unsampled turtles (Bjorndal et al. 2010, Diseases of Aquatic Organisms 88:271-273).

Blood will be used to assess the health status of individuals based on a panel of baseline blood values. Samples will be collected using the protocol approved by the US National Marine Fisheries Service, the federal agency responsible for protecting US sea turtle populations when they are in the ocean (see the NMFS Sea Turtle Research Techniques Manual). For nesting hard-shelled turtles, the first step is to dig sand out from under the turtle's head so that it is in a favorable position to expose the external jugular vein/dorsal cervical sinus (NMFS Southeast Fisheries Science Center 2008). The neck will be cleaned

with a 70% isopropyl alcohol swab prior to sampling. Approximately 7 mL of blood will be collected from turtles weighing between 80 and 120 kg using a syringe and 21-gauge needle. For leatherbacks, the site of collection is different. Blood will be collected from the femoral rete system aseptically using a 20-guage x 1.5 in Monoject (Sherwood Medical, St. Louis, MO, USA) venous collection needle fitted in a BD vacutainer tube holder. The venipuncture site will be cleaned with a 70% isopropyl alcohol swab before insertion of the pre-coated heparinized needle. Approximately 7 mL of blood will be collected from turtles weighing between 250 and 400 kg.

No animals will be removed from the wild. Turtles captured in water are released as soon as possible (usually less than 15 minutes, always less than 1 hour) at the site of capture. For nesting individuals, samples will be collected once egg deposition has commenced, and females can continue nesting activity through the sampling process.

Epidermis or blood samples will be analyzed using genetic and stable isotope analyses for studies of distributions, foraging, and genetic connectivity of populations, whereas a health status assessment requires blood to examine a panel of baseline blood samples.

We cannot set a specific sample size. Rather, we collect samples from as many sea turtles as possible. Recent improvements in the statistical methods used to determine the rookery sources of mixed stocks of sea turtles on their foraging grounds indicate that to generate estimates with acceptable confidence limits requires hundreds, or in some cases thousands, of turtles from each rookery and foraging ground. Three papers describing these results have been published (Bolker, B., T. Okuyama, K. Bjorndal and A. Bolten. 2003. Ecological Applications 13:763-775; Okuyama, T. and B. Bolker. 2005. Ecological Applications 15:315-325; Bolker, B., T. Okuyama, K. Bjorndal and A. Bolten. 2007. Molecular Ecology 16:685–695).

In addition to the above sampling, we collect samples from sea turtle carcasses that have either been killed legally (e.g., green turtle fishery in Nicaragua) or have died from natural causes (e.g., killed by jaguars in Tortuguero National Park, Costa Rica) or have stranded dead on shorelines.

d. A copy of the study's Institutional Animal Care and Use Committee (IACUC) form (*if applicable*),

I have attached the IACUC letter of approval for the above application.

e. Peer-reviewed scientific papers published from this research (*if applicable*),

A selected list of 33 studies that have resulted from samples imported into the U.S. under this permit in the past 15 years:

1. Bjorndal, K.A. and A.B. Bolten. 2008. Annual variation in source contributions to a mixed stock: implications for quantifying connectivity. Molecular Ecology 17:2185–2193.
2. Frick, M.G., K.L. Williams, A.B. Bolten, K.A. Bjorndal, and H.R. Martins. 2009. Foraging ecology of oceanic-stage loggerhead turtles (*Caretta caretta*). Endangered Species Research 9:91-97.

3. Roark, A.M., K.A. Bjorndal, and A.B. Bolten. 2009. Compensatory responses to food restriction in juvenile green turtles (*Chelonia mydas*). Ecology 90:2524–2534.
4. Roark, A.M., C. Leeuwenburgh, K.A. Bjorndal, and A.B. Bolten. 2009. Biochemical indices as correlates of recent growth in juvenile green turtles (*Chelonia mydas*). Journal of Experimental Marine Biology and Ecology 376:59–67.
5. Bjorndal, K.A. and A.B. Bolten. 2010. Hawksbill sea turtles in seagrass pastures: success in a peripheral habitat. Marine Biology 157:135-145.
6. Vander Zanden, H.B., K.A. Bjorndal, K.J. Reich, and A.B. Bolten. 2010. Individual specialists in a generalist population: results from a long-term stable isotope series. Biology Letters 6:711-714.
7. Pajuelo, M., K.A. Bjorndal, J. Alfaro-Shigueto, J.A. Seminoff, J.C. Mangel, and A.B. Bolten. 2010. Stable isotope variation in loggerhead turtles reveals Pacific-Atlantic oceanographic differences. Marine Ecology Progress Series 417:277-285.
8. Reis, E.C., L.S. Soares, S.M. Vargas, F.R. Santos, R.J. Young, K.A. Bjorndal, A.B. Bolten, and G. Lôbo-Hajdu. 2010. Genetic composition, population structure and phylogeography of the loggerhead sea turtle: colonization hypothesis for the Brazilian rookeries. Conservation Genetics 11:1467–1477.
9. Vander Zanden, H.B., K.A. Bjorndal, P.W. Inglett and A.B. Bolten. 2012. Marine-derived nutrients from green turtle nests subsidize terrestrial beach ecosystems. Biotropica 44:294-301.
10. Shamblin, B.M., K.A. Bjorndal, A.B. Bolten, Z.M. Hillis-Starr, I. Lundgren, E. Naro-Maciel, and C.J. Nairn. 2012. Mitogenomic sequences better resolve stock structure of southern Greater Caribbean green turtle rookeries. Molecular Ecology 21:2330-2340.
11. Vander Zanden, H.B, K.A. Bjorndal, W. Mustin, J.M. Ponciano, and A.B. Bolten. 2012. Inherent variation in stable isotope values and discrimination factors in two life stages of green turtles. Physiological and Biochemical Zoology 85:431–441.
12. Shamblin, B.M., A.B. Bolten, K.A. Bjorndal, P.H. Dutton, J.T. Nielsen, F.A. Abreu-Grobois, K.J. Reich, B.E. Witherington, D.A. Bagley, L.M. Ehrhart, A.D. Tucker, D.S. Addison, A. Arenas, C. Johnson, R.R. Carthy, M.M. Lamont, M.G. Dodd, M.S. Gaines, E. LaCasella, and C.J. Nairn. 2012. Expanded mitochondrial control region sequences increase resolution of stock structure among North Atlantic loggerhead turtle rookeries. Marine Ecology Progress Series 469: 45–160.
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f. An explanation of whether similar research has already been conducted or is currently being conducted.

There are research projects in these broad fields, but they do not duplicate our work.

11. Please provide a detailed description on how the proposed activities will **enhance or benefit the wild population within its native range** (e.g., direct or indirect **conservation efforts**) and provide documentation (e.g., signed memorandums of understanding) demonstrating your commitment to supporting the program and how the program contributes directly to the species identified in your application.

    To develop appropriate conservation policies, we must know where turtles are in all of their life stages, what are their diets, their normal blood parameters, and what types of habitats they occupy. Our knowledge of these aspects is limited for all species and thus impede development and implementation of successful conservation and management plans. Sea turtles from many nesting populations become mixed on foraging grounds. Identifying the source of these “mixed stocks” is critical for conservation and management. Because different nesting populations have different survival outlooks, protective measures need to be focused on those foraging areas that have higher proportions of immature turtles from more endangered nesting populations. The ONLY way that we now have to identify the

source nesting population for immature turtles is through the use of "genetic tags" or genetic sequences of mitochondrial DNA. We can also use naturally-occurring stable isotopes of elements (e.g., carbon, nitrogen, sulfur) and trace elements in several tissue types to evaluate the diet and habitat use of sea turtles. This information is also critical for developing management plans to conserve sea turtles. Therefore, in our studies, we take small samples from sea turtles captured in the wild on their foraging grounds or intercepted on nesting beaches. Analyses of the tissue samples yield genetic tags and stable isotope values that allow us to address the above questions. We also collect small blood samples to study normal blood parameters to help with health assessments.

Technical Expertise & Authorizations

12. CV or resume outlining the technical experience of the researchers and field technicians collecting the samples, as it relates to the proposed activities, including experience with other similar species.
    The CV of Karen Bjorndal, Director of the Archie Carr Center for Sea Turtle Research (ACCSTR) is included with the application

Shipment Information

1. Please indicate if this is a one-time shipment or if you anticipate needing to import/export/re-export samples multiple times within one year or over multiple years.
   We will need to import samples multiple times over multiple years.
2. How will the samples be imported or exported (e.g., personally carried or shipped)?
   Usually personally carried; sometimes shipped
3. If personally carried, please specify the individual(s) who will be transporting the samples.
   Karen A. Bjorndal, Director of the Archie Carr Center for Sea Turtle Research (ACCSTR) or a Research Associate of the ACCSTR who will possess an official letter of designation to transport samples under this permit.