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INTERVIEWEE: Charles Caillouet, Jr.
INTERVIEWER: David Todd
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David Todd [00:00:02] OK. My name is David Todd, and I am, I have the great pleasure of being with Dr. Caillouet today and we plan on recording this interview for research and educational work on behalf of a nonprofit group called the Conservation History Association of Texas, and for a book and a website for Texas A&M University Press, and finally for an archive at the Briscoe Center for American History at the University of Texas in Austin. And Dr. Caillouet would have equal rights to use your reporting as well, and I just wanted to make sure that that was agreeable to tell.

Charles Caillouet, Jr. [00:00:48] That's OK with me. Yes.

David Todd [00:00:50] Great. OK. Well, it is December 13th, 2021. It's about 3:10 PM, Central Time. My name is David Todd. I am in Austin and we are conducting an interview with Dr. Charles W. Caillouet, Jr., who is in Montgomery, Texas. And this interview is being done remotely.

David Todd [00:01:20] Dr. Caillouet is a marine fisheries biologist, who holds a B.S. in forestry and M.S. in game management from Louisiana State University, and a Ph.D. in Fishery Biology, with minors in statistics and physiology from Iowa State University.

David Todd [00:01:36] He was employed as an assistant professor at the University of Southwestern Louisiana in Lafayette from 1964 to 1967, and then as an associate professor at the University of Miami, in Florida, from 1967 to '72, and as a supervisory fishery biologist (research) at the NOAA National Marine Fisheries Service Laboratory in Galveston, 1972 to 1998.

David Todd [00:02:06] He is a fellow emeritus of the American Institute of Fisheries Research Biologists.

David Todd [00:02:14] During his career, as well as in retirement, Dr. Caillouet has been involved in research related to population dynamics management of three Penaeid shrimp species (white shrimp, brown shrimp and pink shrimp), and also research related to the recovery of populations of the Kemp's ridley and other sea turtle species.

David Todd [00:02:40] Our discussion today will focus on his work with the endangered Kemp's ridley sea turtle over a span of 40 years. Dr. Caillouet has been generous to also provide a script of his written answers to my earlier, more extensive written questions for archival use and for availability on the Kemp's Ridley Sea Turtle Texas Fauna project website that would be at https://www.texasfauna.org/category/kemps-ridley-sea-turtle. Its file is entitled, "David Todd Questions and Charles Private Answers for Texas on a Project Interview,

3 December 2021 Final Revision.docx. It describes his childhood, education, career and thoughts about the historical trends, the current status of the Kemp's ridley, the population.

David Todd [00:03:45] To complement that written script, Dr. Caillouet has been kind to agree to answer in spoken form my selection of three questions from that written script. And our conversation will follow. I will ask a few questions that we've discussed before, and Dr. Caillouet will be kind to give us a response.

David Todd [00:04:14] Let's start . So, under the heading, "Decline", I'd like to say that I have read that restoration of the Kemp's ridley sea turtle, and its eventual down listing, are keyed to the turtle's 1947 arribada numbers. However, I hear that determining that threshold is complicated. For instance, should it be based on a single day's arribada count, or on an entire year's count? And how should the threshold take into account the skew in the sample counts for nesting Kemp's ridleys? I'm hoping that the good doctor can help us understand the issues at play here.

Charles Caillouet, Jr. [00:04:58] The 1984 recovery plan for marine turtles prepared by the marine turtle recovery team and edited by Sally R. Hopkins and James I. Richardson mentioned Dr. Henry Hildebrand's 1963 estimate of 40,000 adults Kemp's ridley females nesting in a single day in 1947 arribada at Rancho Nuevo, Tamaulipas, Mexico. Hildebrand's estimate was based on his examination of the movie of the arribada made by Carlos Andrés Herrera Casasus on 18 June 1947.

Charles Caillouet, Jr. [00:05:43] The Kemp's ridley portion of the 1984 recovery plan was on pages 227 and 250. On page 236 was a statement of objective. Paraphrasing that statement, the objective was to restore the Kemp's ridley population to a level comparable to that based on the single day arribada in 1947. Since then, questions have arisen with regard to the validity of Hildebrand's estimates of the number of nesters in the 1947 arribada at Rancho Nuevo.

Charles Caillouet, Jr. [00:06:19] In the 2011 United States - Mexico recovery plan for Kemp's ridley, the verbatim demographic criteria for downlisting from endangered to threatened status are (I will read them verbatim, but the wording in the document is rather vague.).

Charles Caillouet, Jr. [00:06:41] Number one, a population of at least 10,000 nesting females in a season (as measured by clutch frequency per female per season) distributed at the primary nesting beaches (Rancho Nuevo, Tepehuajes, and Playa Dos) in Mexico is attained. Methodology and capacity to implement and ensure accurate nesting female counts have been developed.

Charles Caillouet, Jr. [00:07:07] Number two, recruitment of at least 300,000 hatchlings to the marine environment per season at the three primary nesting beaches in Mexico, is attained to assure a minimum level of drone production through in-situ incubation, incubation and corrals, or combination of both.

Charles Caillouet, Jr. [00:07:32] The verbatim democratic demographic criteria for delisting, that is taking it off the endangered species list:.

Charles Caillouet, Jr. [00:07:42] Number one, an average population of at least 40,000 nesting females per season (as measured by clutch frequency per female per season) over a 6-year period distributed among nesting beaches in Mexico and the U.S. is attained.

Methodology and capacity to ensure accurate nesting female counts have been developed and implemented.

Charles Caillouet, Jr. [00:08:05] Number two, ensure average annual recruitment of hatchlings over a 6-year period from in-situ and beach corrals is sufficient to maintain a population of at least 40,000 nesting females per season, per nesting season, distributed among nesting beaches in Mexico and the U.S. into the future. This criterion may rely on massive nesting events, in other words, arribadas that will swamp predators as well as rely on supplemental protection and corrals and facilites.

Charles Caillouet, Jr. [00:08:38] In their 2016 research paper. Elizabeth Bevan and others re-examined the Herrera movie. They re-estimated the number of adult female Kemp's ridleys in the 1947 arribada to have been only 26,916. They then estimated the mean number of adult female Kemp's ridley during the entire 1947 nesting season have been 48,607, with a range of 33,006 to 83,981.

Charles Caillouet, Jr. [00:09:17] However, the frequency distribution of their 26 sample counts of adult female Kemp's ridleys in the single-day of arribada in 1947 was not a normal, bell-shaped distribution. Instead, it was strongly, positively skewed (that is skewed to the right). That is not surprising, since frequency distributions of count data are typically skewed to the right. Therefore, Bevan's and others' estimate of 26,916 adult females in the 1947 arribada is likely too high.

Charles Caillouet, Jr. [00:09:57] A statistical re-analysis that adjusts for the positive skew of their 26 sample counts likely produce even lower mean numbers of matching females in the 1947 arribada and season than those obtained by Bevan and others in 2016.

Charles Caillouet, Jr. [00:10:16] The most important message I take from their paper is that Hildebrandt's estimate of 40,000 females nesting in the 1947 arribada was too high. Obviously, the estimated size of the 1947 armada is very important, because of its past and potential use in deriving thresholds for downlisting and de-listing Kemp's ridley.

Charles Caillouet, Jr. [00:10:40] I personally believe that serious consideration should be given to basing future downlisting and delisting thresholds on the largest single-day arribada during the nesting season, rather than on a seasonal total number of nesting females. My reasoning is that reproductive effort and output may become more closely accurate or dated around the largest arribada during the season as the number of adults in the population increases.

Charles Caillouet, Jr. [00:11:10] I recently discussed this with my colleague, Dr. Nathan F. Putman. Perhaps this idea will be discussed when evaluating the new 5-year review of Kemps' ridley, which is currently underway, or by updating the 2011 bi-national recovery plan, or both.

David Todd [00:11:32] That is a really helpful insight, and I look forward to hearing how that might get incorporated in the next five year review. Well, let me follow up with a second question, please.

David Todd [00:11:48] You and other turtle researchers have urged more study of the role of rescue, resuscitation, rehabilitation and release. In other words, RRR translocations in Kemp's ridley sea turtle recovery. What is your theory about the role of these translocations, many of

which are probably originally undertaken more for humane concerns for ill and injured turtles?

Charles Caillouet, Jr. [00:12:19] In my opinion, the role of rescue, resuscitation, rehabilitation and release translocations of Kemp's ridleys should be evaluated scientifically. In a 2016 paper, I and others call for such an evaluation and suggested that it be applied to other sea turtle species as well. We included the acronym, as you pointed out, RRRR, to represent rescue, research, resuscitation, rehabilitation or release. It is surprising that no evaluations have been conducted to determine whether RRRR translocations contribute significantly to Kemp's ridley population recovery, or to population recovery of any sea turtle species.

Charles Caillouet, Jr. [00:13:06] For example, methods that were used to evaluate and terminate the Kemp's ridley Head Start experiment could be applied to evaluate such translocations.

Charles Caillouet, Jr. [00:13:16] There is a major information concerning sea turtle RRRR translocations because relatively few such Kemp's ridleys or other species of sea turtles have been marked, tagged, or fitted with transmitters to determine how long they survive in the wild following release, and to determine what proportion reaches maturity and reproduces.

Charles Caillouet, Jr. [00:13:39] For the United States or its territories, another issue is that many, if not most, sea turtles saved by RRRR translocations have been required by the U.S. Fish and Wildlife Service to be released near locations where they were found stranded. This requirement needs evaluating. It probably would be better to release RRRR translocated Kemp's ridleys into waters of the western Gulf of Mexico, where most reproduction takes place.

Charles Caillouet, Jr. [00:14:08] Like Head Start, RRRR translocations are highly manipulative conservation interventions. They involve extended exposure of captive sea turtles to human treatment and care. Conditioning to extended human exposure and thereby reduce their survivability in the wild.

David Todd [00:14:31] Thank you. That's really interesting and helpful.

David Todd [00:14:37] Just one last question, if you will indulge us. This would be under the heading of the National Park Service, which of course, has had a large role in the Kemp's ridley program. And the question that I wanted to pose is this: the National Park Service has recently proposed cutting back on the Sea Turtle Science and Recovery Program on Padre Island National Seashore. From the outside, that seems odd, since it looks like the program has been effective in helping restore the Kemp's ridley and in educating and building support among the public. Can you help us understand the reason behind these policy and funding changes?

Charles Caillouet, Jr. [00:15:25] Mr. Todd, I assume that you're referring to the Review of the Sea Turtle Science and Recovery Program at Padre Island National Seashore, dated 8 June 2000. This review was recommended by National Park Service's Patrick Malone, Division Chief of Natural Resources for Department of Interior Region 6, 7, and 8. It was reviewed and concurred with by Jennifer Carpenter, Associate Regional Director of Resource Stewardship and Science for the Department of Interior Region 6, 7, and 8, and approved by Michael T. Reynolds, Regional Director of Department of Interior Region 6, 7, and 8.

Charles Caillouet, Jr. [00:16:05] The National Park Service's Sea Turtle Science and Recovery Program contributed in major ways, along with federal and state agencies of Mexico, the NOAA National Fisheries Service's Galveston Laboratory, U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department, U.S. Coast Guard, University of Texas - Corpus Christi, Texas A&M University, Florida Department of Environmental Protection, ARCO Oil and Gas Company., Help Endangered Animals - Ridley Turtles and others toward restoration of the Kemp's ridley nesting colony on Padre Island National Seashore.

Charles Caillouet, Jr. [00:16:45] If the detrimental actions taken by the National Park Service, subsequent to its June 2020 review of the Sea Turtle Science and Recovery program are allowed to continue on and testify, they will likely lead to a major setback of this important Kemp's ridley nesting colony, and thereby waste millions of U.S. dollars, taxpayers' dollars, that were devoted to reestablish this over four decades, not to mention the cost of Mexico's federal government. Mexico's federal government was a full and eager partner in this restoration.

Charles Caillouet, Jr. [00:17:26] In my opinion, cutting the program at this time of uncertainty concerning the causes of the 2010 interruption of the 1986 to 2009 upward trend in the Kemp's ridley population, and failure of this population to resume growing during the last 11 years, is misguided at best. Instead of implementing numerous cuts to the Sea Turtle Science and Recovery Program at Padre Island National Seashore, the National Park Service should continue and enhance its support of that program.

Charles Caillouet, Jr. [00:18:00] National Park Service should also participate in the ongoing investigation of the possible causes of the 2010 nesting setback in Tamaulipas and Veracruz, Mexico, and in Texas. That nesting setback began in 2010, despite the fact that 10 years earlier, annual releases of hatchlings from Tamaulipas beaches began exceeding the 300,000 per year threshold for downlisting Kemp's ridley, established by the 2011 recovery plan. Nesting data provided by the Sea Turtle Science and Recovery program, as well as for all other beaches where Kemp's ridleys have been documented to nest along the Gulf of Mexico and U.S. East coasts, should be integral parts of such an investigation.

Charles Caillouet, Jr. [00:18:50] I submitted written testimony in support of the Sea Turtle Science and Recovery Program and Dr. Donna J. Shaver, who supervised that program successfully for 40 years, to the Nueces County Commissioners Court for its meeting on 17 November 2021. That testimony and oral testimonies given by others are on record at the commissioners' court archives.

Charles Caillouet, Jr. [00:19:24] Mr. Todd, I greatly appreciate your having invited me to participate in the Kemp's Ridley Sea Turtle Texas Fauna Project, and for your and the board of directors' archival of my extensive written script on this, on its website, as well as for being interviewed based on the three questions you selected. Thank you very much.

David Todd [00:19:45] It's our pleasure and our honor. It's such a wonderful treat to talk to you and to learn from you. So thank you very much.

David Todd [00:19:55] And just as you said, we will be archiving all this material on our website, and at the Briscoe Center, and I think it'll be of great value to people who come after us.

David Todd [00:20:07] So thank you for your work to-date and of course, for your participation in this oral history project.

Charles Caillouet, Jr. [00:20:13] I have a feeling we'll stay in contact.

David Todd [00:20:16] I hope so. It's been a pleasure to get to know you. With that, I will. Let's see end our recording.