Article Title: A Forager-Resource Population Ecology Model and Implications for Indigenous Conservation Name:Ayiana Baynes

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What is the purpose/goal of this study?

The purpose/goal of this study is to showcase how "population ecology and foraging theory can be combined to simulate the population dynamics of hunter-gatherers and their prey resources." They bring light to a different method to examine hunter-gatherer population dynamics.

Why is this issue significant/why do we care?

This issue is significant because it can help us to see a better method to examining intentional resource conservation. It also allows for us to have deeper views into conservation than we previously had by bringing out different methods and different aspects to the research.

What words/vocab do you need to know to make this make sense? Define them here.

Ecology: the branch of biology that deals with the relations of organisms to one another and to their physical surroundings.: "the laws seek to protect wildlife and the ecology of the forest".

Ethnographic: relating to the scientific description of peoples and cultures with their customs, habits, and mutual differences.: "ethnographic research in European border communities".

Archaeological Fieldwork: the process of conducting on-site research and gathering information about past human activity by identifying and recording cultural artifacts, features, and other traces of the past within their natural context

Avifauna: the birds of a particular region, habitat, or geological period.: "I am not familiar with the highland avifauna".

Procurement technologies: digital tools and systems that automate, streamline, and optimize the acquisition of goods and services within a supply chain, encompassing the strategic sourcing and buying process from supplier selection to payment.

Pleistocene Overkill Hypothesis: suggests that early human hunting of large animals (megafauna) was the primary cause of their extinction at the end of the Pleistocene Epoch.

What approach are they taking in this study (e.g., specific qualitative or quantitative methods)

The approach they are taking in this study is by using a quantitative method, specifically running a simulation.

What are the results of the study? If there are figures – write a sentence summarizing each figure/table.

The results of the study are hard to figure out, so I can only give the summary of the figures and tables used in the article.

Table 1: Showcases the "value assigned to resource population parameters" and the "basic properties of the dynamic simulation."

Table 2: Showcases the "parameters of the forager population," such as speed, search radius and cost, home range, etc.

Table 3: Showcases the "deterministic diet breadth analysis without resource depletion."

Table 4: Showcases the "summary of simulation results at equilibrium or end of simulation iterations."

Figure 1: "Human foragers' net acquisition rate of energy (NAR) in one-species simulation (A) and population sizes for human foragers and prey in the one-species (CPREY) simulation, showing smooth growth to equilibrium (B)."

Figure 2: "Human foragers' net acquisition rate of energy (NAR) in two-species simulation (A) and two-species (CPREY & EPREY) similation, demonstrating smooth growth with switching (B). See Table 1 for explanation of prey type."

Figure 3: "Human foragers' net acquisition rate of energy (NAR) in four-species simulation (A) and four species run (B); (EPREY enters the diet at iteration 39, as the foraging NAR has dropped to 590.2 kcal/hour below GPREY's pursuit and handling rate of 605.5 kcal/hour; APREY goes extinct at iteration 273 [indicated by the arrow] after a long period of very slow decline in equilibrium density [it has the lowest r of all resources]). System demonstrates damped oscillations."

Figure 4: "Human foragers' net acquistion rate of energy (NAR) in a four-species simulation, where CPREY (the top-ranked resource, see Table 3) has its intrinsic rate of increase doubled from 0.7 to 1.5 (A). Doubling CPREY's r causes APREY to go extinct at iteration 78 (indicated by the arrow), showing that a high r in a harvested species will support a larger human population and may put other harvested prey species at risk of extinction (B). System shows complex switching and oscillations."

Does the data make sense based on your experiences?

This data does not make sense based on my experiences because it was a lot of jargon and results that I could not understand or follow along with. After trying to read this article, I determined that it was definitely made with the audience of scientists in mind.

How is this pushing the field forward and helping society?

This is pushing the field forward because it is bringing to light a new perspective of intentional resource conservation. By bringing light to this new method, it allows for it to be studied and perfected.