

# Campbell Lab & Teaching Site

*Reproductive Endocrinology*

*Reproductive Biology*

*Human Reproductive Ecology*

**Kenneth L. Campbell, Ph.D.**



Lecturing, on holiday, at graduation, & serving the campus as Associate Dean of Science & Mathematics (2005-2008).

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## Home

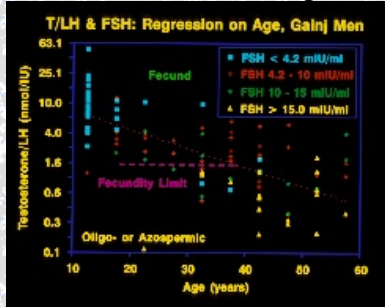
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## Campbell Lab Focus

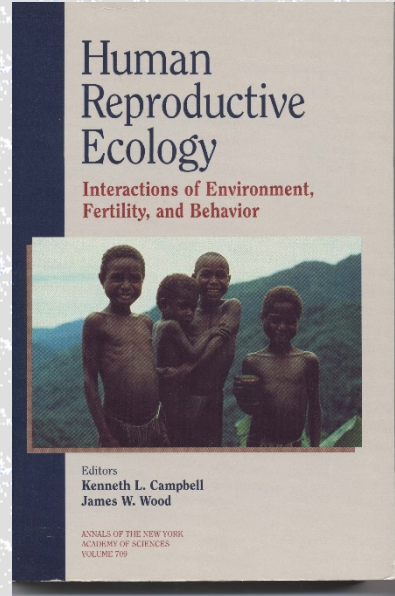
We focus on the physiological factors causing inter-population variations in realized fertility in humans and the development of biomarkers and tools for assessing these factors. Our work has



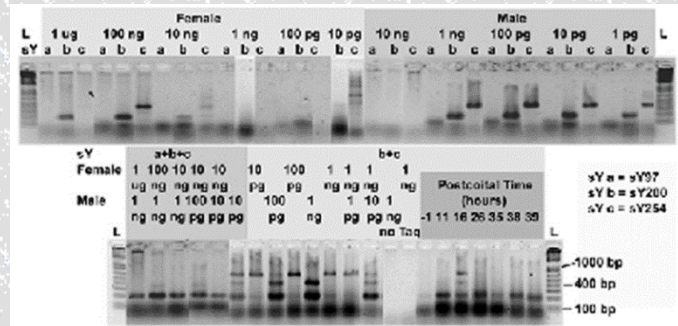
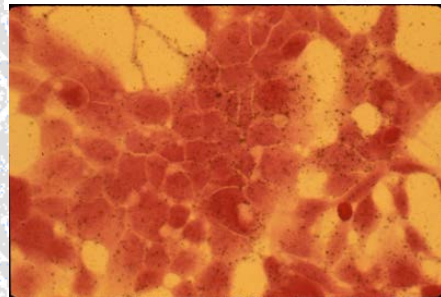
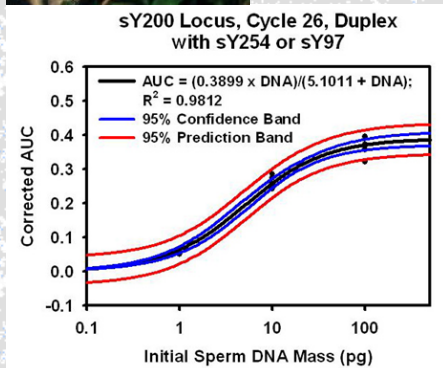
helped found the discipline of human reproductive ecology which includes examination of factors that link diet and disease status to such phenomena as birth seasonality, female conceptive loss, male endocrine function, and the urogenital microbiome.



Exploration of the reproductive biology of a captive prosimian has expanded applications of our methods beyond humans. *In vitro* studies of the measurement and metabolism of several hormones including steroids, gonadotropins and inhibin, hormone binding globulins, and molecular genetic probing of disease vectors, immune status, female reproductive status and coital patterning both in human and nonhuman



species have expanded the list of possible study variables. Development of methods for simultaneously and noninvasively measuring ovarian, insemination and urogenital microbiome status in serial female urine sediments has expanded the abilities of demographers, epidemiologists and clinicians conducting fertility enhancements. More recent proteomic exploration of protein hormone metabolism in the context of a search for biomarkers relevant to endocrinology hints at the existence of exciting new avenues for exploration of endocrine regulation and control.



Ultimately our work should help define the physiological and ecological parameters most appropriate for modulation in programs to empower couples to regulate the size and spacing of children and the maintenance of health and full physiological function. In addition it should help to define those most vulnerable to ecological insults and therefore in need of protection with environmental, animal management, public health, nutrition, or care delivery programs.

## **Publications:**

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