"New Mexico Trinity Digger Bee: A Speculative Melittology" (165-169)
by Ramsey Lofton

becoming–Feral

a book of beasts

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NEW MEXICO TRINITY DIGGER BEE

New Mexico Trinitatis Nuclei Anthophora Apnea

A Speculative Melittology

The Trinity Atomic Digger Bee (TAD-Bee) is a newly discovered Anthophila found at the Trinity Site in the Jornada del Muerto desert of New Mexico, the location of the first atomic bomb test on July 16, 1945. This subterranean bioluminescent bee is one of eleven known species within the Trinity Bioluminescent Biomass Ecology (TBBE), an extant radioactive ecosystem. TAD-Bees, like other species of the TBBE, are invisible to the human eye when they are above ground—intermittently flashing a glow often missed in daylight, but similar to a lightening bug in the evening. However, the TBBE species are visually detectable underground using a distal tip endoscope attached to a thermal imaging camera.

The TAD-Bee exists within a shared habitat of underground roosts accessed by service tunnels that lead above ground. The TBBE's chthonic habitat is approximately the size of a football field with corridors tunneled through clay and molten rock with multiple levels allowing separate roost areas for diverse species and common space for food storage and interspecies commingling. Throughout the architecture of the TBBE's chthonic environment, there are etched engravings on the rock walls. Symbols repeat in the manner of a written language with over 300 different symbols identified for further study.

The TAD-Bees' roosts are comb structures made of vitrified porous clay that provide the dual function of structural soundness and production of humidity, essential for communication between species. The instinctive role of the TAD-Bee is to collect "communication pollen" from the TBBE members, which is then stored in combs to undergo

fermentation, producing pheromones imbued with chemical empathic stimulators. When a TAD-Bee's comb chambers are filled, the bee sleeps until fermentation has been reached. When ready, a gaseous odor is released that both elevates the humidity and wakes the bee. Upon waking, the TAD-Bee samples the fermented communication pollen and performs a waggle dance—standing on its hind legs, swiveling its abdomen, and rapidly fanning its wings—while making tooting and quacking sounds. This dance generates air currents, which change the concentration of fermented vapors in the air. The empathic communication self-replicates by attaching to moisture particles sent on these currents to be delivered throughout the vast chthonic ecosystem.

TAD-Bees are hermaphroditic and cannot self-fertilize, requiring a partner to stimulate production of a hormone that makes the pair generate egg sacks that are exchanged between partners to take to their separate combs. There, the bees regurgitate a sticky liquid to coat and fertilize the egg sacks. During the incubation period, the pair visit back and forth tending to both sets of egg sacks. They will remain partnered throughout the maturation of the offspring until the adolescent bees move to a collective care center with dormitory-like structures where they are mentored to collect communication pollen, continuing their sustainable process of regeneration.

TAD-Bees demonstrate a highly eusocial reproductive and altricial developmental existence fortified by their production of the Dsup protein that protects their DNA and allows them to thrive within an otherwise repellant radioactive chthonic habitat. Unlike the native or Mexican migratory digger bees that currently populate the Trinity Site, TAD-Bees bypass the evolutionary reproductive and precocial strategies of declining digger bee populations destined for extinction. By contrast, TAD-Bees are thriving in their departure from the digger-bee evolutionary chain.

The discovery of the TAD-Bee was made by the New Mexico Trinity Atomic Chthonic Study (NM-TACE) while investigating the cause of a Cherenkov radiation glow—a phenomenon locals refer to as the "undark glow"—emanating from below the desert surface of the Trinity Site. The NM-TACE researchers investigated the site's subterranean geology using the combined technologies of an electromagnetic utility locator with ground-penetrating radar, distal tip endoscopic thermal imaging cameras, and ultrasonic leak detectors to explore fissures and mineral composition. Their exploration revealed a radioactive chthonic chamber containing a biomass hotspot of bioluminescent flora and fauna now known as the Trinity Bioluminescent Biomass Ecology. Its evolutionary origin is yet to

be determined, with both chthonic and man-made sources of radiation present compounded by a rare alien radioactive isotope much like the uncultivated bacterium *Desulforudis audaxviator*[1] discovered by Dylan Chivian of Lawrence Berkeley National Laboratory but with an unknown biomarker variation. Similarly, it is indeterminable whether the bioluminescent biomass is extant, newly realized, or Lazarus taxa.[2]

Ramsey Lofton
Artist/Writer
—Albuquerque, New Mexico, USA

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NEW MEXICO TRINITY DIGGER BEE

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Series ID	BECOMING / Two
Publisher	Objet-a Creative Studio, Glasgow, UK SCIO registered in Scotland: SC048214 www.objeta.org
Designer	Objet-a Creative Studio
Editors	Josh Armtrong, Alexandra Lakind, Chessa Adsit-Morris, Rebekka Sæter, Addie Hopes, Emery Jenson, Sabrina Manero
Copy Editor	Gabrielle Kelenyi
Supported by	University of Wisconsin–Madison Royal Conservatoire of Scotland University of California, Santa Cruz
Printed	November 2021
ISBN	978-1-9161283-1-6

Enquiries to be made to *becoming@objeta.org*

A catalogue of this book is available from the British Library.

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