CHARLES HENRY TURNER

(1867-1923)Subject: Ants and BeesField: EthologyNationality: American

Entomologist Month



The traced paths of two ants leaving and returning to their nests. This phenominon is refurred to as 'Turner's Ciricling' Credit:_ E.L. Bouvier

While Charles Henry Turner studied a diverse array of topics throughout his career, some of his most influential work was on the subject of ant and bee learning and behavior.

Turner discovered that rather than walk straight lines in search of their nest entrance, foraging ants use circular paths to locate the entrance site; a phenomenon the French researcher, Victor Cornetz, later coined 'Turner's Circling' in his honor. Additionally, Turner conducted some of the first controlled experiments on honey bee color vision, pattern recognition, and associative learning. Despite his clear aptitude for scientific research and storied accomplishments such as being elected to St. Louis Academy of Sciences and becoming the first African American author to publish in the journal *Science*, systemic racism prevented him from ever securing a permanent academic position. Instead, Turner became a teacher at Sumner High School in St. Louis, MO. This however did not prevent him from achieving a prolific publishing record. While teaching full time, and without the financial and technological resources of a University at his disposal, Turner managed to publish an impressive 70 papers throughout his career; a testament to his curiosity, tenacity, and scientific brilliance.

References:

- Abramson, C. I. (2009). A study in inspiration: Charles Henry Turner (1867–1923) and the investigation of insect behavior. Annual review of entomology, 54, 343-359.
- Giurfa, M. and Gabriela de Brito Sanchez, M. (2020). Black Lives Matter: Revisiting Charles Henry Turner's experiments on honey bee color vision. Current Biology 30, R1235–R1239.
- This factsheet was produced by Staci Cibotti, Penn State Center for Pollinator Research Graduate Student

December 2021



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