Rofela Combey

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University of Cape Coast

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RESEARCH

Interests	Insect biosystematics · Geometric morphometrics · Phylogenetics · Hive product development
Areas	Ecology, Evolution, Behavior and Systematics · Genetics · Insect Science · Ecology · Plant Science · Ecological Modeling

RESEARCH SUMMARY

57	407	12	12	1.53	29%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 57 publications listed below, 2007–2026. Field-weighted impact is the mean over the 24 works scored for it; 1.00 is the world average for works of the same field, type and year. 7 of the 24 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Associate Professor 2022–present
Department of Conservation Biology and Entomology, University of Cape Coast, Cape Coast, Ghana

Snr Lecturer/ Insect Biosystematist 2014–2022
Conservation Biology & Entomology, University of Cape Coast, Cape Coast, Ghana

Lecturer 2009–2014
Entomology & Wildlife, University of Cape Coast, Cape Coast, Ghana

EDUCATION AND QUALIFICATIONS

Ph.D / Zoology 2005–2008
School of Biological Science, University of Cape Coast, Cape Coast, Ghana

DISTINCTIONS, MEMBERSHIPS AND SERVICE

Entomological Society of America 2022–present
Annapolis, United States

British Ecological Society 2021–present
London, United Kingdom

Entomological Society of Ghana 2016–present
Accra, Ghana

University Teachers Association of Ghana, UCC Chapter 2009–present
Cape Coast, Ghana

Ghana Science Association 2008–present
Accra, Ghana

West African Network for Taxonomy-WAFRINET, Ghana Chapter 2005–present
Accra, Ghana

Association of African Insect Scientists-AAIS, Ghana Chapter 2005–present
Accra, Ghana

African Pollinators Initiative –API 2003–present
Pretoria, South Africa

Visiting Scholar/Researcher/Visiting Professor 2021
Fulbright U.S. Scholar Program, Washington, United States

Head of Department 2020–2024
Conservation Biology and Entomology, University of Cape Coast, Cape Coast, Ghana

School Registration Officer 2013–2016
School of Biological Sciences, University of Cape Coast, Cape Coast, Ghana

PostDoc 2012–2013
Genetics, Universidade de São Paulo, Sao Paulo, Brazil

Department Examination Officer 2011–2014
Department of Conservation Biology and Entomology, University of Cape Coast, Cape Coast, Ghana

PUBLICATIONS

Journal articles 47

1. Andrew Kibogo, Kwaku Brako Dakwa, Peter K. Kwapong, **Rofela Combey** (2026). Contribution of Beekeeping to Household Income around Gishwati- Mukura National Park in Rwanda. *DOAJ (DOAJ: Directory of Open Access Journals)*.
2. Ekene Kwabena Nwaefuna, Isaac Kwame Badu, Francis Dzabeng, Peter Basepa Ketting, **Rofela Combey**, Alexander Egir-Yawson (2026). Cuticular hydrocarbon profiles of Bactrocera dorsalis in Ghana: insights into population structure. *International Journal of Tropical Insect Science*. https://doi.org/10.1007/s42690-026-01827-1
3. G Deku, **R Combey** (2026). Integrating Traditional Machine Learning and Convolutional Neural Networks Into the Geometric Morphometric Pipeline for Taxonomic Classification (GM-ML-CNN). *Integrative Organismal Biology*. https://doi.org/10.1093/iob/obag048
4. Pierre Noiset, Leon Marshall, Denise A. Alves, John S. Ascher, Nathalie Cabirol, Luísa G. Carvalheiro, Shao Xiong Chui, **Rofela Combey**, Guaraci D. Cordeiro, James B. Dorey and 19 others (2026). Mapping the Global Range of Stingless Bees: Insights Into Their Ecological Niches and Environmental Tolerances. *Journal of Biogeography*. https://doi.org/10.1111/jbi.70340
5. Kwaku Brako Dakwa, Peter Kofi Kwapong, **Rofela Combey** (2026). Species Composition, Relative Abundance and Diversity of Forager Honey Bees in and around Gishwati-Mukura National Park, Rwanda. *Ethiopian Journal of Science and Sustainable Development*. https://ejssd.astu.edu.et/index.php/EJSSD/article/view/1147
6. Lillian Blanchard, Eva Gates, Henry Adamson, Hilda Armonle, Calvin Amenfi Asiedu, Lou Bellinghausen, Ebenezer Boakye, Princess Abena Dede Coffie, Imara Desulme, Thomas Dodzi Dovie, Myah Massiah, Evajoice Otoo, Abdul Raazik Mbanba Abdul Rashid, Malek Stafford, Kofi Adu, **Rofela Combey**, Jessica L Ware, Lara D LaDage (2026). Structural variation in the pterostigma of percher and flyer dragonflies (Odonata: Anisoptera). *Insect Systematics and Diversity*. https://doi.org/10.1093/isd/ixag010
7. Godwin Deku, Dorothy Obuobi, Millicent Captain-Esoah, Stephen L. Doggett, **Rofela Combey**, Isaac Kwame Badu, Emmanuel Younge, Godwin Kwame Amlalo, Ibrahim Kwaku Gyimah, Phyllis AKwaa-Sekyi (2026). The Occurrence of Two Arboviral Vectors, Aedes aegypti and Aedes vittatus (Diptera: Culicidae), and Their Associated Risk Factors From a Dengue Outbreak During 2024 in Ghana. *Tropical Medicine & International Health*. https://doi.org/10.1111/tmi.70199
8. Pierre Noiset, Madeleine Héger, Chloé Salmon, Peter Kwapong, **Rofela Combey**, Kumara Thevan, Natapot Warrit, Marcelo Rojas-Oropeza, Nathalie Cabirol, Carlos Zaragoza-Trello, Claus Rasmussen, Kiatoko Nkoba, Nicolas J. Vereecken (2025). Ecological and evolutionary drivers of stingless bee honey variation

at the global scale. *The Science of The Total Environment*. https://doi.org/10.1016/j.scitotenv.2025.178945

9. Andreas A. Kudom, Philipp Hanke, Joana Ayettey, **Rofela Combey**, Ben A. Mensah, Benjamin Anderson, Andreas Wieser (2025). Molecular identification and knockdown resistance mutation of bed bugs involved in 2019 outbreak in Cape Coast, Ghana and Munich, Germany. *Acta Tropica*. https://doi.org/10.1016/j.actatropica.2025.107623
10. Jessica Ware, John Abbott, Kendra Abbott, Christopher D Beatty, Cornelio A Bota-Sierra, Sebastian Büsse, Yiselle Cano-Cobos, **Rofela Combey**, Juliana Ehlert, Judicaël Fomekong-Lontchi and 21 others (2025). Odonata systematics: past, present, and future: a review of the phylogenetic works in Anisoptera (dragonflies). *Insect Systematics and Diversity*. https://doi.org/10.1093/isd/ixaf030
11. Rachel Desulme, Eva Gates, Myah Massiah, Malek Stafford, Lou Bellinghausen, Lillian Blanchard, Henry Adamson, Evajoice Otoo, Thomas D. Dovie, Abdul A. R. M. Rashid, Ebenezer Boakye, Calvin A. Asiedu, Princess W. Coffie, Hilda Armonle, Abigail Mensah, Kofi W. Adu, Jessica L. Ware, Lara D. LaDage, **Rofela Combey**, Ekaterina S. Kiseeva (2025). Raman Signature of the Wings of the Globe Skimmer Dragonfly: Pantala flavescens. *Journal of Raman Spectroscopy*. https://doi.org/10.1002/jrs.70089
12. **Rofela Combey**, Kofi W Adu, Lara D LaDage, Isaac Badu, Jessica L Ware (2025). The secrets of the extreme durability of odonata wings. *Annals of the Entomological Society of America*. https://doi.org/10.1093/aesa/saaf032
13. Ekene Kwabena Nwaefuna, Peter Basepa Ketting, Isaac Kwame Badu, **Rofela Combey**, Alexander Egir-Yawson (2025). The use of geometric morphometry to illustrate variations in wing shape of Bactrocera invadens populations, from four agro-ecological zones in Ghana. *Scientific African*. https://doi.org/10.1016/j.sciaf.2025.e03014
14. Laura N Sutherland, Payton R Carter, John Abbott, Christopher Beatty, Cornelio A Bota-Sierra, Sebastian Büsse, Yiselle Cano-Cobos, **Rofela Combey**, Adolfo Cordero-Rivera, Rhema Uche Dike and 22 others (2025). Zygoptera systematics: past, present, and future. *Insect Systematics and Diversity*. https://doi.org/10.1093/isd/ixaf013
15. Peter Quandahor, Iddrisu Yahaya, Francis Kusi, Issah Sugri, Julius Yirzagla, Abdul Karim Alhassan, Jerry A. Nboyine, George Y. Mahama, Godwin Opoku, Mohammed Mujitaba Dawuda, Asieku Yahaya, Theophilus Kwabla Tengey, **Rofela Combey**, John Abraham (2024). DNA Barcoding of Insects and Its Direct Application for Plant Protection. *Open Journal of Applied Sciences*. https://doi.org/10.4236/ojapps.2024.143048
16. Richard G. Boakye, **Rofela Combey**, Blánaid White, Dara A. Stanley (2024). Relationships between flower-visiting insects and forest cover in cocoa-growing landscapes in Ghana. *Landscape Ecology*. https://doi.org/10.1007/s10980-024-02003-x
17. Isaac Kwame Badu, **Rofela Combey**, John Abraham (2024). Response of Odonata assemblages to disturbance in urban freshwater habitats. *African Journal of Ecology*. https://doi.org/10.1111/aje.13258
18. Peter Quandahor, Iddrisu Yahaya, Francis Kusi, Issah Sugri, George Y. Mahama, Julius Yirzagla, Abdul Karim Alhassan, Mohammed Mujitaba Dawuda, Theophilus Kwabla Tengey, Asieku Yahaya, Mary Aku Ogum, **Rofela Combey**, Vincent Kunlen, Anslem B. Nyuor, Emmanuel Asibi Aziiba, Ibrahim Hashim, Rahinatu Yakubu, Alhassan Nuhu Jinbaani (2023). Aphids Response to Drought Stress Hypothesis Vary between Species. *OALib*. https://doi.org/10.4236/oalib.1110633
19. Peter Quandahor, George Y. Mahama, Iddrisu Yahaya, Francis Kusi, Julius Yirzagla, Issah Sugri, Abdul Karim Alhassan, Mohammed Mujitaba Dawuda, Abdul-Salam Azizi, Theophilus Kwabla Tengey, Asieku Yahaya, Mary Aku Ogum, **Rofela Combey**, Vincent Kunlen, Anslem B. Nyuor, Emmanuel Asibi Aziiba, Ibrahim Hashim, Rahinatu Yakubu, Alhassan Nuhu Jinbaani (2023). Nitrogen Fertilizer Rates and Pesticides Interaction Effect on Maize and Fall Armyworm Performance in Northern Ghana. *OALib*. https://doi.org/10.4236/oalib.1110632
20. Isaac Badu, **Rofela Combey**, Peter Quandahor (2022). Assessment of variation between two blowfly species, Lucilia cuprina (Wiedemann) and Lucilia sericata (Meigen) (Diptera, Calliphoridae) using geometric morphometrics and cuticular hydrocarbon profiling. *Journal of Insect Biodiversity and Systematics*. https://doi.org/10.52547/jibs.8.3.449
21. Marc Kenis, Lakpo Koku Agboyi, Richard Adu-Acheampong, Michael Ansong, Stephen Arthur, Prudence

Tonator Attipoe, Abdul-Salam Mahamud Baba, Patrick Beseh, Victor Attuquaye Clottey, **Rofela Combey** and 12 others (2022). Horizon scanning for prioritising invasive alien species with potential to threaten agriculture and biodiversity in Ghana. *NeoBiota*. https://doi.org/10.3897/neobiota.71.72577

22. Godwin Deku, **Rofela Combey**, Stephen L Doggett (2022). Morphometrics of the Tropical Bed Bug (Hemiptera: Cimicidae) From Cape Coast, Ghana. *Journal of Medical Entomology*. https://doi.org/10.1093/jme/tjac072
23. Godwin Deku, **Rofela Combey**, Stephen L Doggett, Benjamin A Mensah (2021). Assessment of Tropical Bed Bug (Hemiptera: Cimicidae), Infestations in Cape Coast, Ghana: Household Control Practices and Efficacy of Commercial Insecticides and Long-Lasting Insecticidal Nets Against Field Bed Bugs. *Journal of Medical Entomology*. https://doi.org/10.1093/jme/tjab042
24. **Rofela Combey** (2018). Geometric morphometrics captures possible segregation occurring within subspecies Apis mellifera adansonii in three agro ecological zones. *Annals of Biological Research*. https://www.academia.edu/download/57122557/Geometric-Morphometrics-Captures-Possible-Segregation-Occurring-Within-subspecies-apis-mellifera-adansonii-in-three-agro.pdf
25. **Rofela Combey** (2018). Impact of ecozone characteristics on nest behaviour of subspecies Apis mellifera adansonii in Ghana. *A App Sci Res*. https://www.researchgate.net/profile/Peter-Quandahor/publication/328090652_414391/links/5bb6cecd92851c7fde2e98f2/414391.pdf
26. **ROFELA COMBEY** (2017). Landscape Influence on Bee Abundance and Diversity: Conserving Pollinators for Increased Crop Production in the Forest Savannah Transition Zone of Ghana. *Academic Journal of Entomology*.
27. **Rofela Combey** (2017). Microbial and qualitative analyses of stingless bee bread using dry preservation methods. *European Journal of Zoological Research*. https://www.academia.edu/download/119009509/microbial-and-qualitative-analyses-of-stingless-bee-bread-using-drypreservation-methods.pdf
28. **Rofela Combey** (2017). Necrophagous insects succession on carrions' of two tropical animals. *European Journal of Zoological Research*. https://www.researchgate.net/profile/Rofela-Combey/publication/317289914_Necrophagous_Insects_Succession_on_Carrions'_of_Two_Tropical_Animals/links/598ae424a6fdcc7cf923f4db/Necrophagous-Insects-Succession-on-Carrions-of-Two-Tropical-Animals.pdf
29. KP Kwapong, **R Combey** (2017). Variation in bee abundance and diversity across subzones in the forest savannah transition zone of Ghana. *Researchjournali's Journal of Ecology*. https://www.researchgate.net/profile/Rofela-Combey/publication/326410360_Variation_in_Bee_Abundance_and_Diversity_Across_Subzones_in_the_Forest_Savanna_Transition_Zone_of_Ghana_Journal_of_Ecology_4_31-13/links/5b4bad1f0f7e9b4637dd649c/Variation-in-Bee-Abundance-and-Diversity-Across-Subzones-in-the-Forest-Savanna-Transition-Zone-of-Ghana-Journal-of-Ecology-4-31-13.pdf
30. **Rofela Combey** (2017). Variation in the susceptibility of okra (Abelmoschus esculentus L. Moench) genotypes to okra mosaic virus and Podagrica species under field conditions. *Journal of Plant Breeding and Crop Science*. https://academicjournals.org/journal/JPBCS/article-full-text/F96D88664529
31. **R Combey** (2016). Bee Fauna in and Around Kakum National Park. Entomol Ornithol Herpetol. *Entomol Ornithol Herpetol*. https://www.researchgate.net/profile/Rofela-Combey/publication/305079235_Bee_Fauna_in_and_Around_Kakum_National_Park/links/57865ea408aec5c2e4e2eab7/Bee-Fauna-in-and-Around-Kakum-National-Park.pdf
32. **ROFELA COMBEY** (2016). Landscape influence on bee abundance and diversity in the forest savannah transition zone of Ghana and community knowledge of pollinators and pollination. *University of Cape Coast. Retrieved on*. https://ir.ucc.edu.gh/server/api/core/bitstreams/1e8c0ba6-7def-4bd3-a191-f90d7ebc4f22/content
33. **ROFELA COMBEY**, Peter K. Kwapong (2015). Nesting ecology of stingless bees and potential threats to their survival within selected landscapes in the northern Volta region of Ghana. *African Journal of Ecology*. https://doi.org/10.1111/aje.12208
34. **ROFELA COMBEY** (2014). Prevalence of okra mosaic and leaf curl diseases and Podagrica spp. damage of okra (Albelmoschus esculentus) plants. *International Journal of Current Research and Academic Review*. https://scholar.google.com/scholar?cluster=4637976067572015377&hl=en&oi=scholarr

35. **ROFELA COMBEY** (2013). Evaluation of inexpensive pollen substitute diets through quantification of haemolymph proteins. *Journal of Apicultural Research*. https://doi.org/10.3896/ibra.1.52.3.01

36. **R Combey**, Peter Kwapong (2013). Geometric morphometrics reveals morphological differentiation within four African stingless bee species. *Annals of Biological Research*. https://www.academia.edu/download/83896091/Geometric_morphometrics_reveals_morpholo20220411-8647-jrv2zu.pdf

37. **R Combey**, Peter Kwapong (2013). Ghanaian children's' perception of rainforest biodiversity. *Biological Research*. https://www.researchgate.net/profile/Rofela-Combey/publication/307415903_Ghanaian_children's'_perception_of_rainforest_biodiversity/links/57c558a808ae496e4211bce7/Ghanaian-childrens-perception-of-rainforest-biodiversity.pdf

38. **ROFELA COMBEY** (2013). Nesting ecology of stingless bees within three landscapes in the Northern part of the Volta Region of Ghana. *CHAPTER ONE*. https://ir.ucc.edu.gh/server/api/core/bitstreams/ee74ceec-6eb6-43fb-b69d-fddef31fdc52/content

39. **ROFELA COMBEY**, PK Kwapong (2013). Shelf-life and variances in antimicrobial properties of honey from Meliponula bocandei and Meliponula ferruginea in central Ghana. *Journal of Young Investigators*. https://www.researchgate.net/profile/Daniel-Wubah/publication/263379251_Shelf_life_and_variances_in_antimicrobial_properties_of_honey_from_Melinopula_bocandei_and_Melinopula_ferruginae_from_the_central_region_in_Ghana/links/0deec53ab13ed7ade7000000/Shelf-life-and-variances-in-antimicrobial-properties-of-honey-from-Melinopula-bocandei-and-Melinopula-ferruginae-from-the-central-region-in-Ghana.pdf

40. PK Kwapong, **R Combey** (2012). What Are The Bees Collecting?: Case Study Of Stingless Bees In The Central Region of Ghana. *Third international scientific symposium" Agrosym Jahorina*. https://scholar.google.com/scholar?cluster=4248552951958004346&hl=en&oi=scholarr

41. **ROFELA COMBEY** (2011). Stingless bees in Ghana. *Bees for Development Journal*. https://scholar.google.com/scholar?cluster=15739872321942818931&hl=en&oi=scholarr

42. Peter K Kwapong, **R Combey** (2011). The utility of aerial pan-trapping for assessing insect pollinators across vertical strata. *Journal of the Kansas Entomological Society*. https://www.jstor.org/stable/41353889

43. **R Combey**, P Kwapong (2010). Phylogenetic analysis of the bee tribe Anthidiini. *Journal of Ghana Science Association*. https://ghanascience.gov.gh/wp-content/uploads/2018/04/Combey.pdf

44. P Kwapong, **R Combey** (2010). Stingless Bees A Training Manual for Stingless Beekeeping. *Unimax*. https://scholar.google.com/scholar?cluster=16915553362150712056&hl=en&oi=scholarr

45. P Kwapong, **R Combey** (2010). Stingless Bees Importance. *Management and Utilisation*. https://scholar.google.com/scholar?cluster=14836901794110901341&hl=en&oi=scholarr

46. **R Combey** (2008). Phylogenetic analyses of the bee Tribe Anthidiini and revision of the Afrotropical Genus Anthidiellum (cockerell). *D Thesis, Department of Entomology and Wildlife of the School of Biological Sciences, University of Cape Coast*. https://scholar.google.com/scholar?cluster=14146150549388857868&hl=en&oi=scholarr

47. **ROFELA COMBEY**, PK Kwapong (2007). A survey of indigenous knowledge of stingless bees (Apidae: Meliponini) in the central region of Ghana. *Journal of the Ghana Science Association*. https://www.ajol.info/index.php/jgsa/article/view/48073

Conference papers 1

1. Andrew Atiogbe Huzortey, Benjamin Anderson, Jonathan Ntow, Samuel Sonko Sackey, **Rofela Combey**, Joseph Kwasi Adu, Charles Lloyd Yeboah Amuah, Peter Kofi Kwapong, Alfred Owusu (2022). 445 nm Laser-Induced Fluorescence monitoring of 5-Hydroxymethylfurfural in Honey. *Conference on Lasers and Electro-Optics*. https://doi.org/10.1364/cleo_at.2022.am2m.5

Theses 9

1. **ROFELA COMBEY** (2022). Pollination ecology of shea (vitellaria paradoxa cf Gaertn.) In the guinea savanna zone of Ghana. *University of Cape Coast*. https://ir.ucc.edu.gh/server/api/core/bitstreams/c9effd3c-7017-48c6-bf7e-c4c961850159/content
2. **ROFELA COMBEY** (2022). The Effects of Habitat Disturbance on Adult Odonata Assemblages in Urban Freshwater Habitats of Southern Cape Coast Metropolis of Ghana. *University of Cape Coast*. https://ir.ucc.edu.gh/server/api/core/bitstreams/650312ec-04f9-45fb-a4bb-740f0ae043b5/content
3. **ROFELA COMBEY** (2021). Biology and susceptibility of spodoptera frugiperda (fall armyworm) to selected insecticides. *University of Cape Coast*. https://ir.ucc.edu.gh/items/79f06710-f4d7-4869-a488-2105f78770a3
4. **ROFELA COMBEY** (2020). Landscape genetics of Anopheles gambiae in southern Ghana. *PQDT-Global*. https://search.proquest.com/openview/80ff54b1b78b2399b655314f6bc2b955/1?pq-origsite=gscholar&cbl=2026366&diss=y
5. **ROFELA COMBEY** (2015). MORPHOMETRIC AND ELECTROPHORETIC ANALYSES OF GREY MULLETS IN BENYA LAGOON AND KAKUM ESTUARY. *Department of Fisheries and Aquatic Sciences of the College Agriculture and Natural Sciences, University of Cape Coast*. https://fishcomghana.ucc.edu.gh/wp-content/uploads/2017/01/MORPHOMETRIC-AND-ELECTROPHORETIC-ANALYSES-OF-GREY-MULLETS-IN-BENYA-LAGOON-AND-KAKUM-ESTUARY_Sheilla-F_2015.pdf
6. **ROFELA COMBEY** (2014). Distribution and abundance of hornbills in some selected matrices/landscapes in southern Ghana. *University of Cape Coast*. https://www.academia.edu/download/78936960/DZITSE_202014.pdf
7. **ROFELA COMBEY** (2014). Species variability in Afrotropical genus Hypotrigona (Cockerell) within three districts in the Central Region of Ghana. *Thesis submitted Master of Physiology degree in Entomology Department of Entomology and Wildlife of the School of Biological Sciences, University of Cape Coast, 153p*. https://ir.ucc.edu.gh/server/api/core/bitstreams/df80047d-e14d-40e5-91e6-eefe59232204/content
8. **ROFELA COMBEY** (2012). Aspects of the biology of Cichlids in the Brimsu reservoir in Cape Coast, Ghana. *M. Phil. thesis). Cape Coast: Department of Fisheries and Aquatic Sciences, University of Cape Coast*. https://fishcomghana.ucc.edu.gh/wp-content/uploads/2017/01/ASPECTS-OF-THE-BIOLOGY-OF-CICHLIDS-IN-THE-BRIMSU-RESERVOIR-IN-CAPE-COAST-GHANA_Mireku_2012.pdf
9. **ROFELA COMBEY** (2008). The Role of Insect Flower Visitors in Cowpea (Vigna Unguiculata') Agro-Ecosystem in three Districts in the Central Region of Ghana. *University of Cape Coast*. https://ir.ucc.edu.gh/items/6a91850f-e12d-4be1-aae4-2799e03e0384