

## STERNITE PROMINENCE IS RELATED TO LOWEST RELATIVE HUMIDITY IN *CENTROBOLUS* COOK, 1897

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**Abstract-** Sternite prominence was tested for a correlation with lowest relative humidity in forest red millipedes *Centrobolus*. Sternite prominence was related to lowest relative humidity ( $r=-0.95548890$ ,  $Z \text{ score}=-1.89132851$ ,  $n=4$ ,  $p=0.02929019$ ).

**Keywords:** surface area, SSD, Red Millipedes

### I. INTRODUCTION

Red millipedes are found in the southern African subregion with northern limits on the east coast being about  $-17^\circ$  latitude S and southern limits being  $-35^\circ$  latitude S. They are well represented in the littoral forests of the eastern half of the subcontinent [1-326]. It consists of taxonomically important species with 12 species considered threatened and includes nine vulnerable and three endangered species [326]. It occurs in all the forests of the coastal belt from the Cape Peninsula to Beira in Mocambique [325]. These worm-like millipedes have female-biased sexual size dimorphism [57].

Here, sternite prominence was tested for a correlation with lowest relative humidity in *Centrobolus* Cook, 1897.

### II. MATERIALS AND METHODS

Sternite prominence measurements for 4 species of southern African *Centrobolus* were obtained from published material [7, 18, 28]. These were correlated with lowest relative humidity and generated at <https://www.gigacalculator.com/calculators/correlation-coefficient-calculator.php>.

### III. RESULTS

Sternite prominence was related to lowest relative humidity (Fig. 1:  $r=-0.95548890$ ,  $Z \text{ score}=-1.89132851$ ,  $n=4$ ,  $p=0.02929019$ ).

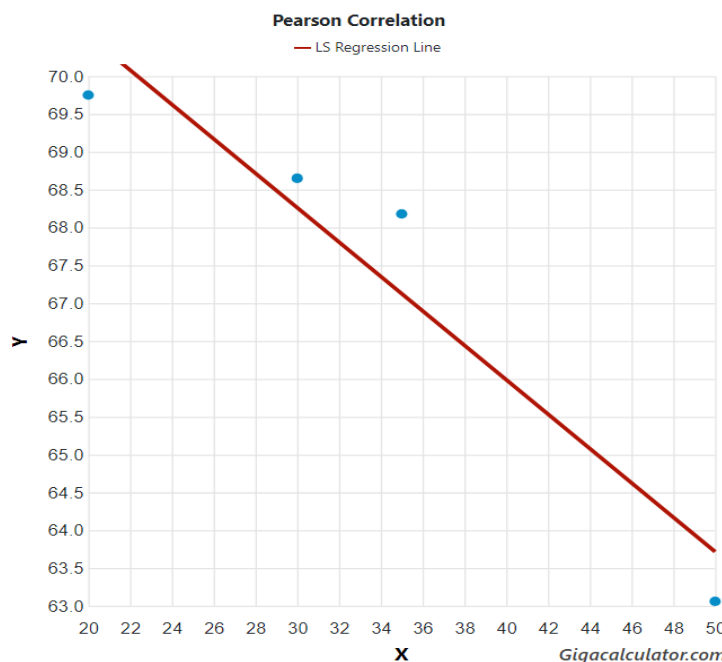


Fig. 1 Sternite prominence (x) correlated to lowest relative humidity (y) in *Centrobolus* Cook, 1897.

### IV. DISCUSSION

The significant differences between males and females in structure are known in this genus [7, 18, 28]. There is a negative correlation between sternite prominence and lowest relative humidity in *Centrobolus*. This is an addition to one of the many correlated with body size in millipedes.

### REFERENCES

1. O. F. Cook, "New relatives of *Spirobolus giganteus*," *Brandtia* (A series of occasional papers on Diplopoda and other Arthropoda), vol. 18, pp. 73-75, 1897.
2. M. COOPER, "Sperm competition in the millipede *Chersastus ruber* (Diplopoda: Pachybolidae)," *The University of Cape Town*, pp. 1-29, 1995.
3. M. I. Cooper, S. R. Telford, "Sperm competition in three *Chersastus* millipedes (Diplopoda, Trigonulidae)," 26th Symposium of the Zoological Society of Southern Africa (Integrating Zoology: Subdisciplines and the Subcontinent), University of Pretoria, Pretoria, 8-12 July, p. 13, 1996. ISBN: 1-86854-059-6..

4. M. I. Cooper, "Ectoparasite-mediated sexual selection in spirobolid millipedes," In: Robertson, Hamish (ed.) Proceedings of the joint congress of the Entomological Society of Southern Africa (11th congress) and the African Association of Insect Scientists (12th congress), Stellenbosch, 30 June-4 July, pp. 223-224, 1997. ISBN : WISC:89058769605. (poster).
5. M. I. Cooper, "Indiscriminate male mating behaviour in spirobolid millipedes," 27th Symposium of the Zoological Society of Southern Africa, University of Cape Town, Cape Town, 7-11 July, p. 105, 1997.
6. M. Cooper, "MILLIPEDES AND THE "MINIATURE FIVE MILLION"," African Wildlife, vol. 52, no. 5, pp. 30-31, 1998..
7. M. I. COOPER, "MATING DYNAMICS OF SOUTH AFRICAN FOREST MILLIPEDES CENTROBOLUS (DIPLOPODA: PACHYBOLIDAE)," THE UNIVERSITY OF CAPE TOWN, pp. 1-141, 1998. <https://hdl.handle.net/11427/17555>.
8. M. Cooper, "Sexual selection in sympatric spirobolid millipedes," 28th Symposium of the Zoological Society of Southern Africa, University of Cape Town, 1998. (poster).
9. M. I. Cooper, M. A. du Plessis, "Biodiversity hotspots in the developing world," Trends in Ecology & Evolution, vol. 13, no. 10, pp. 409, 1998. ISSN 0169-5347, [https://doi.org/10.1016/S0169-5347\(98\)01469-4](https://doi.org/10.1016/S0169-5347(98)01469-4).
10. M. Cooper, "P2 or not P2?" 29th Symposium of the Zoological Society of Southern Africa, University of the North, Limpopo Province, July, 1999. (poster).
11. M. I. Cooper, S. R. Telford, "Copulatory Sequences and Sexual Struggles in Millipedes," Journal of Insect Behavior vol. 13, pp. 217-230, 2000. <https://doi.org/10.1023/A:1007736214299>.
12. M. I. Cooper, "Sex ratios, mating frequencies and relative abundance of sympatric millipedes in the genus Chersastus (Diplopoda: Pachybolidae)," Arthropods, vol. 3, no. 4, pp. 174-176, 2014.
13. M. I. Cooper, "Sexual size dimorphism and corroboration of Rensch's rule in Chersastus millipedes (Diplopoda: Pachybolidae)," J. Entomol. Zool. Stud. vol. 2, no. 6, pp. 264-266, 2014. DOI: 10.22271/j.ento.2014.v2.i6e.452 <http://www.entomoljournal.com/archives/2014/vol2issue6/PartE/47.pdf>.
14. M. I. Cooper, "Competition affected by re-mating interval in a myriapod," J. Entomol. Zool. Stud. vol. 3, no. 4, pp. 77-78, 2015. DOI: 10.22271/j.ento.2015.v3.i4b.550 <http://www.entomoljournal.com/archives/2015/vol3issue4/PartB/3-4-3.pdf>.
15. M. I. Cooper, "Elaborate gonopods in the myriapod genus Chersastus (Diplopoda: Trigoniulidae)," J. Entomol. Zool. Stud. vol. 3, no. 4, pp. 235-238, 2015. DOI: 10.22271/j.ento.2015.v3.i4d.573 <http://www.entomoljournal.com/archives/2015/vol3issue4/PartD/3-3-110.pdf>.
16. M. I. Cooper, "Sperm storage in Centrobolus spp. and observational evidence for egg simulation," J. Entomol. Zool. Stud. vol. 4, no. 1, pp. 127-129, 2016. DOI: 10.22271/j.ento.2016.v4.i1b.797 <https://www.entomoljournal.com/archives/2016/vol4issue1/PartB/3-6-81.pdf>.
17. M. I. Cooper, "Symmetry in ejaculate volumes of Centrobolus inscriptus Attems (Spiroboloidea: Trigoniulidae)," International Journal of Entomological Research, vol. 1, no. 2, pp. 14-15, 2016. <http://www.entomologyjournals.com/archives/2016/vol1/issue2>.
18. M. I. Cooper, "Confirmation of four species of Centrobolus Cook (Spirobolida: Trigoniulidae) based on gonopod ultrastructure," Int. J. Entomol. Res. vol. 1, no. 3, pp. 07-09, 2016. <http://www.entomologyjournals.com/archives/2016/vol1/issue3>.
19. M. I. Cooper, "Fire millipedes obey the female sooner norm in cross mating Centrobolus (Myriapoda)," J. Entomol. Zool. Stud. vol. 4, no. 1, pp. 173-174, 2016. DOI: 10.22271/j.ento.2016.v4.i1c.802 <http://www.entomoljournal.com/archives/2016/vol4issue1/PartC/3-5-82.pdf>.
20. M. I. Cooper, "Symmetry in ejaculate volumes of Centrobolus inscriptus Attems (Spiroboloidea: Trigoniulidae)," J. Entomol. Zool. Stud. vol. 4, no. 1, pp. 386-387, 2016. DOI: 10.22271/j.ento.2016.v4.i1f.833 <http://www.entomoljournal.com/archives/2016/vol4issue1/PartF/4-1-21.pdf>.
21. M. I. Cooper, "Instantaneous insemination in the millipede Centrobolus inscriptus (Spirobolida: Trigoniulidae) determined by artificially-terminated mating," J. Entomol. Zool. Stud. vol. 4, no. 1, pp. 487-490, 2016. DOI: 10.22271/j.ento.2016.v4.i1g.847 <http://www.entomoljournal.com/archives/2016/vol4issue1/PartG/4-1-50-695.pdf>.
22. M. I. Cooper, "Gonopod mechanics in Centrobolus Cook (Spirobolida: Trigoniulidae) II. Images," J. Entomol. Zool. Stud. vol. 4, no. 2, pp. 152-154, 2016. DOI: 10.22271/j.ento.2016.v4.i2c.890 <http://www.entomoljournal.com/archives/2016/vol4issue2/PartC/4-2-55.pdf>.
23. M. Cooper, "Post-insemination associations between males and females in Diplopoda," J. Entomol. Zool. Stud. vol. 4, no. 2, pp. 283-285, 2016. DOI: 10.22271/j.ento.2016.v4.i2d.908 <http://www.entomoljournal.com/archives/2016/vol4issue2/PartD/4-2-63.pdf>.
24. M. I. Cooper, "Heavier-shorter-wider females in the millipede Centrobolus inscriptus Attems (Spirobolida: Trigoniulidae)," J. Entomol. Zool. Stud. vol. 4, no. 2, pp. 509-510, 2016. DOI: 10.22271/j.ento.2016.v4.i2g.937 <http://www.entomoljournal.com/archives/2016/vol4issue2/PartG/4-3-60.pdf>.
25. M. I. Cooper, "Sexual bimaturism in the millipede Centrobolus inscriptus Attems (Spirobolida: Trigoniulidae)," J. Entomol. Zool. Stud. vol. 4, no. 3, pp.

- 86-87, 2016. DOI: 10.22271/j.ento.2016.v4.i3b.961  
<http://www.entomoljournal.com/archives/2016/vol4issue3/PartB/4-3-44.pdf>.
26. M. I. Cooper, "Tarsal pads of *Centrobolus* Cook (Spiroboloidea: Trigonulidae)," *J. Entomol. Zool. Stud.* vol. 4, no. 3, pp. 385-386, 2016. DOI: 10.22271/j.ento.2016.v4.i3f.1008  
<http://www.entomoljournal.com/archives/2016/vol4issue3/PartF/4-3-40-751.pdf>.
27. M. I. Cooper, "Confirmation of four species of *Centrobolus* Cook (Spirobolida: Trigonulidae) based on gonopod ultrastructure," *J. Entomol. Zool. Stud.* vol. 4, no. 4, pp. 389-391, 2016. DOI: 10.22271/j.ento.2016.v4.i4f.1065  
<http://www.entomoljournal.com/archives/2016/vol4issue4/PartF/4-3-118-307.pdf>.
28. M. I. Cooper, "Sperm storage in *Centrobolus inscriptus* Attems (Spirobolida: Trigonulidae)," *J. Entomol. Zool. Stud.* vol. 4, no. 4, pp. 392-393, 2016. DOI: 10.22271/j.ento.2016.v4.i4f.1066  
<http://www.entomoljournal.com/archives/2016/vol4issue4/PartF/4-4-16-207.pdf>.
29. M. I. Cooper, "Sperm dumping in *Centrobolus inscriptus* Attems (Spirobolida: Trigonulidae)," *J. Entomol. Zool. Stud.* vol. 4, no. 4, pp. 394-395, 2016. DOI: 10.22271/j.ento.2016.v4.i4f.1067  
<http://www.entomoljournal.com/archives/2016/vol4issue4/PartF/4-4-17-663.pdf>.
30. M. I. Cooper, "Syncopulatory mate-guarding affected by predation in the aposematic millipede *Centrobolus inscriptus* in a swamp forest," *J. Entomol. Zool. Stud.* vol. 4, no. 6, pp. 483-484, 2016. DOI: 10.22271/j.ento.2016.v4.i6g.1376  
<http://www.entomoljournal.com/archives/2016/vol4issue6/PartG/4-6-114-767.pdf>.
31. M. I. Cooper, "The relative sexual size dimorphism of *Centrobolus inscriptus* compared to 18 congenics," *J. Entomol. Zool. Stud.* vol. 4, no. 6, pp. 504-505, 2016. DOI: 10.22271/j.ento.2016.v4.i6g.1381  
<http://www.entomoljournal.com/archives/2016/vol4issue6/PartG/4-6-123-254.pdf>.
32. M. I. Cooper, "Do females control the duration of copulation in the aposematic millipede *Centrobolus inscriptus*?" *J. Entomol. Zool. Stud.* vol. 4, no. 6, pp. 623-625, 2016. DOI: 10.22271/j.ento.2016.v4.i6i.1396  
<http://www.entomoljournal.com/archives/2016/vol4issue6/PartI/4-6-133-214.pdf>.
33. M. I. Cooper, "The influence of male body mass on copulation duration in *Centrobolus inscriptus* (Attems)," *J. Entomol. Zool. Stud.* vol. 4, no. 6, pp. 804-805, 2016. DOI: 10.22271/j.ento.2016.v4.i6k.08  
<http://www.entomoljournal.com/archives/2016/vol4issue6/PartK/4-6-166-899.pdf>.
34. M. I. Cooper, "Sexual conflict over the duration of copulation in *Centrobolus inscriptus* (Attems)," *J. Entomol. Zool. Stud.* vol. 4, no. 6, pp. 852-854, 2016. DOI: 10.22271/j.ento.2016.v4.i6l.04  
<http://www.entomoljournal.com/archives/2016/vol4issue6/PartL/4-6-155-599.pdf>.
35. M. I. Cooper, "The affect of female body width on copulation duration in *Centrobolus inscriptus* (Attems)," *J. Entomol. Zool. Stud.* vol. 5, no. 1, pp. 732-733, 2017. DOI: 10.22271/j.ento.2017.v5.i1j.10  
<http://www.entomoljournal.com/archives/2017/vol5issue1/PartJ/5-1-92-221.pdf>.
36. M. I. Cooper, "Size matters in myriapod copulation," *J. Entomol. Zool. Stud.* vol. 5, no. 2, pp. 207-208, 2017. DOI: 10.22271/j.ento.2017.v5.i2c.10  
<http://www.entomoljournal.com/archives/2017/vol5issue2/PartC/4-6-108-171.pdf>.
37. M. I. Cooper, "Relative sexual size dimorphism in *Centrobolus digrammus* (Pocock) compared to 18 congenics," *J. Entomol. Zool. Stud.* vol. 5, no. 2, pp. 1558-1560, 2017. DOI: 10.22271/j.ento.2017.v5.i2u.04  
<http://www.entomoljournal.com/archives/2017/vol5issue2/PartU/5-2-199-639.pdf>.
38. M. I. Cooper, "Relative sexual size dimorphism in *Centrobolus fulgidus* (Lawrence) compared to 18 congenics," *J. Entomol. Zool. Stud.* vol. 5, no. 3, pp. 77-79, 2017. DOI: 10.22271/j.ento.2017.v5.i3b.01  
<http://www.entomoljournal.com/archives/2017/vol5issue3/PartB/5-2-198-656.pdf>.
39. Cooper, "Relative sexual size dimorphism *Centrobolus ruber* (Attems) compared to 18 congenics," *J. Entomol. Zool. Stud.* vol. 5, no. 3, pp. 180-182, 2017. DOI: 10.22271/j.ento.2017.v5.i3c.07  
<http://www.entomoljournal.com/archives/2017/vol5issue3/PartC/5-2-187-598.pdf>.
40. M. I. Cooper, "Copulation and sexual size dimorphism in worm-like millipedes," *J. Entomol. Zool. Stud.* vol. 5, no. 3, pp. 1264-1266, 2017. DOI: 10.22271/j.ento.2017.v5.i3r.03 available at <https://www.coursehero.com/file/56889696>.
41. M. I. Cooper, "Allometry of copulation in worm-like millipedes," *J. Entomol. Zool. Stud.* vol. 5, no. 3, pp. 1720-1722, 2017. DOI: 10.22271/j.ento.2017.v5.i3x.03  
<http://www.entomoljournal.com/archives/2017/vol5issue3/PartX/5-3-233-698.pdf>.
42. M. Cooper, "Re-assessment of rensch's rule in *Centrobolus*," *J. Entomol. Zool. Stud.* vol. 5, no. 6, pp. 2408-2410, 2017. DOI: 10.22271/j.ento.2017.v5.i6ag.04  
<http://www.entomoljournal.com/archives/2017/vol5issue6/PartAG/5-6-355-856.pdf>.
43. M. I. Cooper, "Allometry for sexual dimorphism in millipedes (Diplopoda)," *J. Entomol. Zool. Stud.* vol. 6, no. 1, pp. 91-96, 2018. DOI: 10.22271/j.ento.2018.v6.i1b.03  
<http://www.entomoljournal.com/archives/2018/vol6issue1/PartB/5-6-327-547.pdf>.
44. M. I. Cooper, "Sexual dimorphism in pill millipedes (Diplopoda)," *J. Entomol. Zool. Stud.* vol. 6, no. 1, pp. 613-616, 2018. DOI: 10.22271/j.ento.2018.v6.i1i.03  
<http://www.entomoljournal.com/archives/2018/vol6issue1/PartI/5-6-352-508.pdf>.

45. M. I. Cooper, "Sexual size dimorphism and the rejection of Rensch's rule in Diplopoda (Arthropoda)," *J. Entomol. Zool. Stud.* vol. 6, no. 1, pp. 1582-1587, 2018. DOI: 10.22271/j.ento.2018.v6.i1.v07  
<http://www.entomoljournal.com/archives/2018/vol6issue1/PartV/5-6-290-837.pdf>.
46. M. I. Cooper, "Trigoniulid size dimorphism breaks Rensch," *J. Entomol. Zool. Stud.* vol. 6, no. 3, pp. 1232-1234, 2018. DOI: 10.22271/j.ento.2018.v6.i3.9.09  
<http://www.entomoljournal.com/archives/2018/vol6issue3/PartQ/6-3-170-722.pdf>.
47. M. I. Cooper, "Volumes of *Centrobolus albitarsus* (Lawrence, 1967)," *Int. J. Entomol. Res.* vol. 3, no. 4, pp. 20-21, 2018.  
<http://www.entomologyjournals.com/archives/2018/vol3/issue4>.
48. M. Cooper, "A review of studies on the fire millipede genus *centrobolus* (diplopoda: trigoniulidae)," *J. Entomol. Zool. Stud.* vol. 6, no. 4, pp. 126-129, 2018. DOI: 10.22271/j.ento.2018.v6.i4.2.06  
<http://www.entomoljournal.com/archives/2018/vol6issue4/PartC/6-3-87-275.pdf>.
49. M. Cooper, "*Centrobolus anulatus* (Attems, 1934) reversed sexual size dimorphism," *J. Entomol. Zool. Stud.* vol. 6, no. 4, pp. 1569-1572, 2018. DOI: 10.22271/j.ento.2018.v6.i4.13.16  
<http://www.entomoljournal.com/archives/2018/vol6issue4/PartZ/6-4-277-483.pdf>.
50. M. Cooper, "Allometry in *Centrobolus*," *J. Entomol. Zool. Stud.* vol. 6, no. 6, pp. 284-286, 2018. DOI: 10.22271/j.ento.2018.v6.i6.3.07  
<http://www.entomoljournal.com/archives/2018/vol6issue6/PartE/6-5-322-417.pdf>.
51. M. Cooper, "*Centrobolus* size dimorphism breaks Rensch's rule," *Scholars' Press, Mauritius.* pp. 1-48, 2018. ISBN: 978-3-659-83990-0. <https://www.academia.edu/77887053>.
52. M. Cooper, "*Centrobolus* size dimorphism breaks Rensch's rule," *Arthropod.*, vol. 7, no. 3, pp. 48-52, 2018.
53. M. Cooper, "*Centrobolus dubius* (Schubart, 1966) Monomorphism," *International Journal of Research Studies in Zoology*, vol 4, no. 3, pp. 17-21, 2018.  
<http://arcjournals.org/pdfs/ijrsz/v4-i3/3.pdf>.
54. M. Cooper, "*Centrobolus lawrencei* (Schubart, 1966) monomorphism," *Arthropod.*, vol. 7, no. 4, pp. 82-86, 2018.  
[http://www.iaees.org/publications/journals/arthropods/articles/2018-7\(4\)/Centrobolus-lawrencei-monomorphism.pdf](http://www.iaees.org/publications/journals/arthropods/articles/2018-7(4)/Centrobolus-lawrencei-monomorphism.pdf).
55. M. Cooper, "Confirmation of twenty-one species of *Centrobolus* Cook (Diplopoda: Pachybolidae) based on length and width data," 2018.
56. M. Cooper, "*Centrobolus sagatinus* sexual size dimorphism based on differences in horizontal tergite widths," *J. Entomol. Zool. Stud.* vol. 6, no. 6, pp. 275-277, 2018. DOI: 10.22271/j.ento.2018.v6.i6.3.05  
<http://www.entomoljournal.com/archives/2018/vol6issue6/PartE/6-5-323-505.pdf>.
57. M. Cooper, "*Centrobolus silvanus* dimorphism based on tergite width," *Glob. J. Zool.* vol. 3, no. 1, pp. 003-005, 2018. <https://doi.org/10.17352/giz.000010>.
58. M. Cooper, "A review on studies of behavioural ecology of *Centrobolus* (Diplopoda, Spirobolida, Pachybolidae) in southern Africa," *Arthropod.*, vol. 8, no. 1, pp. 38-44, 2019.
59. M. I. Cooper, "*Lawrence's* red millipede *Centrobolus lawrencei* shows length-based variability and size dimorphism," *J. Entomol. Zool. Stud.* vol. 7, no. 2, pp. 1037-1039, 2019. DOI: 10.22271/j.ento.2019.v7.i2.9.07  
<http://www.entomoljournal.com/archives/2019/vol7issue2/PartQ/7-2-114-662.pdf>.
60. M. Cooper, "*Centrobolus titanophilus* size dimorphism shows width-based variability," *Arthropod.*, vol. 8, no. 2, pp. 80-86, 2019.
61. M. Cooper, "Non-significant intersexual differences in millipede mass," *J. Entomol. Zool. Stud.* vol. 7, no. 3, pp. 763-765, 2019. DOI: 10.22271/j.ento.2019.v7.i3m.5267  
<http://www.entomoljournal.com/archives/2019/vol7issue3/PartM/7-3-90-458.pdf>.
62. M. I Cooper, "Quasi-experimental determination of a mass standard in the forest millipede *Centrobolus inscriptus*," *J. Entomol. Zool. Stud.* vol. 7, no. 3, pp. 772-774, 2019. DOI: 10.22271/j.ento.2019.v7.i3m.5269  
<http://www.entomoljournal.com/archives/2019/vol7issue3/PartM/7-3-58-913.pdf>.
63. M. I. Cooper, "Underlying sperm precedence pattern in the millipede *Centrobolus inscriptus* (Attems, 1928) (Diplopoda, Pachybolidae)," *J. Entomol. Zool. Stud.* vol. 7, no. 3, pp. 1066-1069, 2019. DOI: 10.22271/j.ento.2019.v7.i3r.5319  
<http://www.entomoljournal.com/archives/2019/vol7issue3/PartR/7-3-106-957.pdf>.
64. M. Cooper, "When is the change in sperm precedence in the millipede *Centrobolus inscriptus*(Attems, 1928) (Diplopoda, Pachybolidae)?" *J. Entomol. Zool. Stud.* vol. 7, no. 4, pp. 183-186, 2019. DOI: 10.22271/j.ento.2019.v7.i4c.5439  
<http://www.entomoljournal.com/archives/2019/vol7issue4/PartC/7-3-311-692.pdf>.
65. M. Cooper, "Julid millipede and spirobolid millipede gonopod functional equivalents," *J. Entomol. Zool. Stud.* vol. 7, no. 4, pp. 333-335, 2019. DOI: 10.22271/j.ento.2019.v7.i4f.5465  
<http://www.entomoljournal.com/archives/2019/vol7issue4/PartF/7-3-329-431.pdf>.
66. M. Cooper, "Size dimorphism and directional selection in forest millipedes," *Arthropod.*, vol. 8, no. 3, pp. 102-109, 2019.  
[http://www.iaees.org/publications/journals/arthropods/articles/2019-8\(3\)/size-dimorphism-and-directional-selection-in-forest-millipedes.pdf](http://www.iaees.org/publications/journals/arthropods/articles/2019-8(3)/size-dimorphism-and-directional-selection-in-forest-millipedes.pdf).
67. M. Cooper, "Xylophagous millipede surface area to volume ratios are size dependent in forests," *Arthropod.*, vol. 8, no. 4, pp. 127-136, 2019.

68. M. Cooper, "Size dimorphism in six juliform millipedes," *Arthropod.*, vol. 8, no. 4, pp. 137-142, 2019.
69. M. Cooper, "Year-round correlation between mass and copulation duration in forest millipedes," *Arthropod.*, vol. 9, no. 1, pp. 15-20, 2020.
70. M. Cooper, "Kurtosis and skew show longer males in *Centrobolus*," *Arthropod.*, vol. 9, no. 1, pp. 21-26, 2020.
71. M. Cooper, "Studies of behavioural ecology of *Centrobolus*," LAP LAMBERT Academic Publishing, Mauritius. pp. 1-420, 2020. ISBN: 978-620-2-52046-1.
72. M. Cooper, "Mating dynamics of South African forest millipedes," LAP LAMBERT Academic Publishing, Mauritius. pp. 1-164, 2020. ISBN: 978-620-0-58569-1.
73. M. Cooper, "Behavioural ecology of *Centrobolus*," LAP LAMBERT Academic Publishing, Mauritius. pp. 1-520, 2020. ISBN: 978-620-0-50406-7.
74. M. Cooper, "Zoomorphic variation with copulation duration in *Centrobolus*," *Arthropod.*, vol. 9, no. 2, pp. 63-67, 2020.  
[http://www.iaees.org/publications/journals/arthropods/articles/2020-9\(2\)/zoomorphic-variation-with-copulation-duration-in-Centrobolus.pdf](http://www.iaees.org/publications/journals/arthropods/articles/2020-9(2)/zoomorphic-variation-with-copulation-duration-in-Centrobolus.pdf).
75. M. Cooper, "Latitudinal-size trend in eight species of *Centrobolus*," *J. Entomol. Zool. Stud.* vol. 8, no. 2, pp. 122-127, 2020.  
<http://www.entomoljournal.com/archives/2020/vol8issue2/PartC/8-1-381-253.pdf>.
76. M. Cooper, "Longitudinal-size trend in eight species of *Centrobolus*," *Intern. J. Zool. Invest.* vol. 6, no. 1, pp. 58-64, 2020. <https://doi.org/10.33745/ijzi.2020.v06i01.005>.
77. M. Cooper, "Correction: *Centrobolus dubius* (Schubart, 1966) Monomorphism," *Int. J. Res. Stud. Zool.* vol. 6, no. 2, pp. 25-28, 2020.  
<http://www.arcjournals.org/pdfs/ijrsz/v6-i2/3.pdf>.
78. Cooper, Mark. 05/08/2021. *웜과 같은 밀리페드의 교화 지속 시간 변화 (줄리포미아)*. Globe Edit, Latvia. 1-52. ISBN: 978-620-0-62533-5.  
<https://www.goodreads.com/book/show/107948814>.
79. Cooper, Mark. 24/05/2021. *蠕蟲狀千足蟲의複製持續時間變化*. 1-52. Goldenlight publishing, Republic of Moldova. ISBN: 978-620-2-41290-2.  
<https://www.researchgate.net/publication/358397336>.
80. Cooper, Mark. 18/05/2021. *A pázrás időtartama a fêreg-szerű millipedek változása*. Globe Edit, Latvia. 1-52. ISBN: 978-620-0-62261-7.  
<https://www.researchgate.net/publication/358396393>.
81. Cooper, Mark. 11/05/2021. *Variația duratei copulării în milipelele asemănătoare viermilor*. Globe Edit, Latvia. 1-56. ISBN: 978-620-0-62255-6.  
<https://www.researchgate.net/publication/354793731>.
82. Cooper, Mark. 11/05/2021. *Parittelun keston vaihtelu matomaisten millipedes*. Globe Edit, Latvia. 1-52. ISBN: 978-620-0-62259-4.  
<https://www.researchgate.net/publication/354793727>.
83. Cooper, Mark. 11/05/2021. *웜様ミリペデスにおける交尾期間変動*. Globe Edit, Latvia. 1-56. ISBN: 978-620-0-62260-0.  
<https://www.researchgate.net/publication/354793726>.
84. Cooper, Mark. 03/05/2021. *Kopuleringsstidsvariation i maskliknande millipeder*. Globe Edit, Latvia. 1-52. ISBN: 978-620-0-62277-8.  
<https://www.researchgate.net/publication/354793714>.
85. Cooper, Mark. 27/04/2021. *İçeriği Centrobolus Cook boyut aralığı, 1897 (Diplopoda: Pachybolidae)*. LAP LAMBERT Academic Publishing, Mauritius. 1-56. ISBN: 978-620-3-83963-0.  
<https://www.researchgate.net/publication/354793638>.
86. Cooper, Mark. 26/04/2021. *Variation i kopulationsvarighed i ormlignende tusindben*. Globe Edit, Latvia. 1-56. ISBN: 978-620-0-62257-0.  
<https://www.researchgate.net/publication/354793485>.
87. Cooper, Mark. 26/04/2021. *Variatie in copulatieduur in wormachtige duizendpoten*. Globe Edit, Latvia. 1-52. ISBN: 978-620-0-62258-7.  
<https://www.researchgate.net/publication/354793516>.
88. Cooper, Mark. 23/04/2021. *Copulation duration variation in worm-like millipedes*. Scholars' Press, Mauritius. 1-52. ISBN: 978-3-639-66208-5.  
<https://www.researchgate.net/publication/354793386>.
89. Cooper, Mark. 23/04/2021. *Variasjon i kokulasjonsvariasjon i ormlignende millipeder*. Globe Edit, Latvia. 1-52. ISBN: 978-620-0-62250-1.  
<https://www.researchgate.net/publication/354793299>.
90. Cooper, Mark. 23/04/2021. *Zmiana czasu trwania kopulacji w krocionogach przypominających robaki*. Globe Edit, Latvia. 1-56. ISBN: 978-620-0-62248-8.  
<https://www.researchgate.net/publication/354793376>.
91. Cooper, Mark. 06/04/2021. *Variation de durée de copulation dans les mille-pattes vermifuges*. Presses Académiques Francophones, Mauritius. 1-52. ISBN: 978-3-8416-3326-2.  
<https://www.researchgate.net/publication/355369828>.
92. Cooper, Mark. 02/04/2021. *Woodhoopoe nero-nero, dimorfismo sessuale e molle per cappotto*. Edizioni Accademiche Italiane, Mauritius. 1-52. ISBN: 978-620-0-83950-3.  
<https://www.researchgate.net/publication/354792525>.
93. Cooper, Mark. 31/03/2021. *Cambio en la duración de la cópula en ciempiés gusano*. Editorial Académica Española, Mauritius. 1-56. ISBN: 978-620-3-03965-8.  
<https://www.researchgate.net/publication/354792010>.
94. Cooper, Mark. 29/03/2021. *Fiolek łośny masa, dymorfizm płciowy i pióra płaszczka*. Scientia Scripts, Mauritius. 1-52. ISBN: 978-620-3-54464-0.  
<https://www.researchgate.net/publication/354791964>.
95. Cooper, Mark. 29/03/2021. *Masa violeta woodhoopoe, dimorfismo sexual y plumas de manto*. Editorial Académica Española, Letonia, Unión Europea. 1-52. ISBN:

- 978-620-3-03964-1.  
<https://www.researchgate.net/publication/354791947>.
96. Cooper, Mark. 29/03/2021. Massa viola Woodhoopoe, dimorfismo sessuale e piume del mantello. Edizioni Sapienza, Scienza Scripts, Mauritius. 1-52. ISBN: 978-620-3-54462-6.  
<https://www.researchgate.net/publication/354791746>.
97. Cooper, Mark. 29/03/2021. Masse de la grive violette, dimorphisme sexuel et plumes du manteau. Scienza Scripts, Mauritius. 1-52. ISBN: 978-620-3-54461-9.  
<https://www.researchgate.net/publication/354791835>.
98. Cooper, Mark. 29/03/2021. Surtido de tamaño en *Centrobolus* Cook, 1897. Editorial Académica Española, Mauritius. 1-56. ISBN: 978-620-3-03960-3.  
<https://www.researchgate.net/publication/354791921>.
99. Cooper, Mark. 29/03/2021. Variação da duração da cópula em milípedes semelhantes a vermes. Novas Edições Acadêmicas, Mauritius. 1-56. ISBN: 978-620-3-46666-9.  
<https://www.researchgate.net/publication/354791670>.
100. Cooper, Mark. 29/03/2021. Woodhoopoe violetmasse, dimorphisme sexuel et ressorts de manteau. Presses Académiques Francophones. 1-52. ISBN: 978-3-8416-3325-5.  
<https://www.researchgate.net/publication/354791580>.
101. Cooper, Mark. 25/03/2021. Eski dünya ormanında latitudinal ve boyuna gradyanlar kırkayaklar. LAP LAMBERT Academic Publishing, Mauritius. 1-140. ISBN: 978-620-3-58136-2.  
<https://www.researchgate.net/publication/354791363>.
102. Купер, Марк. 25/03/2021. Диапазон размеров в *Centrobolus* Cook, 1897. LAP LAMBERT Academic Publishing, Mauritius. 1-56. ISBN: 978-620-3-58131-7.  
<https://www.researchgate.net/publication/354791357>.
103. Cooper, Mark. 23/03/2021. Variedade de tamanhos no *Centrobolus* Cook, 1897. Novas Edições Acadêmicas, Mauritius. 1-52. ISBN: 978-620-3-46650-8.  
<https://www.researchgate.net/publication/354790986>.
104. Cooper, Mark. 19/03/2021. Violet Woodhoopoe mass, sexual dimorphism and mantle feathers. Scholars' Press, Mauritius. 1-52. ISBN: 978-613-8-95107-0.  
<https://www.researchgate.net/publication/354791034>.
105. Cooper, Mark. 17/03/2021. Intrasexual and intersexual size variation in *Centrobolus* Cook, 1897. Scholars' Press, Mauritius. 1-56. ISBN: 978-613-8-95101-8.  
<https://www.researchgate.net/publication/354790893>.
106. Cooper, Mark. 2021. Latitudinal and longitudinal gradients in Old World forest millipedes. LAP LAMBERT Academic Publishing: 77 pp. ISBN: 978-620-3-02454-8.  
<https://www.researchgate.net/publication/355478935>.
107. Cooper, Mark. 29/05/2020. Behavioural ecology of *Centrobolus*. LAP LAMBERT Academic Publishing, Mauritius. 1-520. ISBN: 978-620-0-50406-7.  
<https://www.researchgate.net/publication/354790878>.
108. Cooper, Mark. 29/05/2020. Mating dynamics of South African forest millipedes. LAP LAMBERT Academic Publishing, Mauritius. 1-164. ISBN: 978-620-0-58569-1.  
<https://www.researchgate.net/publication/354790785>.
109. Cooper, Mark. 30/04/2020. Studies of behavioural ecology of *Centrobolus*. LAP LAMBERT Academic Publishing, Mauritius. 1-420. ISBN: 978-620-2-52046-1.  
<https://www.researchgate.net/publication/354787431>.
110. Cooper, Mark. 02/04/2020. Status of the Namibian Violet Woodhoopoe. LAP LAMBERT Academic Publishing, Mauritius. 1-56. ISBN: 978-620-0-30351-6.  
<https://www.researchgate.net/publication/354787152>.
111. Cooper, Mark. 30/08/2018. *Centrobolus* size dimorphism breaks Rensch's rule. Scholars' Press, Mauritius. 1-48. ISBN: 978-3-659-83990-0.  
<https://www.researchgate.net/publication/327040320>.
112. M. Cooper, "Mass covaries with volume in forest millipedes *Centrobolus* Cook, 1897," J. Entomol. Zool. Stud. vol. 9, no. 6, pp. 190-192, 2021.  
<http://www.entomoljournal.com/archives/2021/vol9issue6/PartC/9-6-36-202.pdf>.
113. COOPER, MARK IAN. THE SURFACE AREA IS RELATED TO MATING FREQUENCIES ACROSS SYMPATRIC *CENTROBOLUS ANULATUS* (ATTEMS, 1934) AND *C. INSCRIPTUS* (ATTEMS, 1928). Universe Int. J. Interdiscip. Res. 2022; 3(7): 11-20. <http://www.doi-ds.org/doi/10.2022-39677929/UIJIR>.
114. Cooper, Mark I. VOLUME IS RELATED TO SURFACE-AREA-TO-VOLUME ACROSS *CENTROBOLUS* COOK, 1897. Universe Int. J. Interdiscip. Res. 2022; 3(6): 83-91. <https://www.doi-ds.org/doi/10.2022-54592882/UIJIR>.  
<http://uijir.com/wp-content/uploads/2022/12/11-221113-UIJIR.pdf>.
115. Cooper, Mark. SEX RATIO VARIES WITH AVERAGE SUN HOURS IN RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(6): 204-207. <https://www.ijesird.com/wp-content/uploads/2024/05/DEC7.pdf>.
116. Cooper, Mark. SEX RATIO VARIES WITH RAINY DAYS IN RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(6): 199-203. <https://www.ijesird.com/wp-content/uploads/2024/05/DEC6.pdf>.
117. Cooper, Mark. SEX RATIO VARIES WITH HUMIDITY IN RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(6): 194-198. <https://www.ijesird.com/wp-content/uploads/2024/05/DEC5.pdf>.
118. Cooper, Mark. SEX RATIO VARIES WITH PRECIPITATION IN RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(6): 189-193. <https://www.ijesird.com/wp-content/uploads/2024/05/DEC4.pdf>.
119. Cooper, Mark. SEX RATIO VARIES WITH MAXIMUM TEMPERATURE IN RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(6): 184-188. <https://www.ijesird.com/wp-content/uploads/2024/05/DEC3.pdf>.

120. Cooper, Mark. SEX RATIO VARIES WITH MINIMUM TEMPERATURE IN RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(6): 179-183. <https://www.ijesird.com/wp-content/uploads/2024/05/DEC2-1.pdf>.
121. Cooper, Mark. SEX RATIO VARIES WITH AVERAGE TEMPERATURE IN RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(6): 174-178. <https://www.ijesird.com/wp-content/uploads/2024/05/DEC1.pdf>.
122. Cooper, Mark I. SURFACE-AREA-TO-VOLUME IS RELATED TO SEXUAL SIZE DIMORPHISM ACROSS *CENTROBOLUS COOK*, 1897. Universe Int. J. Interdiscip. Res. 2022; 3(6): 34-42. <https://www.doi-ds.org/doi/11.2022-24116995/UIJIR>. <https://uijir.com/wp-content/uploads/2022/11/5-221102-UIJIR.pdf>.
123. Cooper, Mark. TARSAL PAD LENGTHS ARE RELATED TO SURFACE-AREA-TO-VOLUME RATIOS IN *CENTROBOLUS COOK*, 1897. Universe Int. J. Interdiscip. Res. 2022; 3(6): 27-33. <https://www.doi-ds.org/doi/11.2022-98742794/UIJIR>. <https://uijir.com/wp-content/uploads/2022/11/4-22101-UIJIR.pdf>.
124. COOPER, MARK I. MOMENTS OF INERTIA COVARY WITH SURFACE AREA IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(5): 168-173. [https://www.ijesird.com/wp-content/uploads/2024/05/nov\\_6.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/nov_6.pdf)
125. COOPER, MARK I. ARE SURFACE AREA AND SURFACE-AREA-TO-VOLUME RATIO RELATED TO LATITUDE AND LONGITUDE IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(5): 162-167. [https://www.ijesird.com/wp-content/uploads/2024/05/nov\\_5.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/nov_5.pdf)
126. COOPER, MARK I. MATING FREQUENCY IS RELATED TO SURFACE AREA AND SURFACE-AREA-TO-VOLUME RATIOS IN *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(5): 155-161. [https://www.ijesird.com/wp-content/uploads/2024/05/nov\\_4.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/nov_4.pdf)
127. Cooper, Mark I. DOES EJACULATE VOLUME VARY WITH SURFACE AREA AND SURFACE AREA TO VOLUME RATIO IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(5): 152-154. [https://www.ijesird.com/wp-content/uploads/2024/05/nov\\_3.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/nov_3.pdf)
128. COOPER, MARK I. ARE SURFACE AREA AND SURFACE-AREA-TO-VOLUME RATIO RELATED TO COPULATION DURATION IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(4): 146-151. [https://www.ijesird.com/wp-content/uploads/2024/05/nov\\_2.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/nov_2.pdf)
129. COOPER, MARK I. ARE SURFACE AREA AND SURFACE-AREA-TO-VOLUME RATIO RELATED TO SEX RATIOS IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(5): 140-145. [https://www.ijesird.com/wp-content/uploads/2024/05/nov\\_1.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/nov_1.pdf)
130. Cooper, Mark I. ABUNDANCE IS RELATED TO SURFACE AREA AND SURFACE-AREA-TO-VOLUME RATIOS IN *CENTROBOLUS COOK*, 1897. Universe Int. J. Interdiscip. Res. 2022; 3(5): 231-240. <https://www.doi-ds.org/doi/11.2022-99614928/UIJIR>.
131. Cooper, M. A Latitudinal Gradient in Species Richness of Subgenus *Tetraconasoma* Verhoeff, 1924, not *Sphaerotherium* Brandt, 1833 (Diplopoda: Sphaerotheriida)? Int. j. zool. animal biol. 2022; 5(6): 000413. DOI: 10.23880/izab-16000413. <https://medwinpublishers.com/IZAB/a-latitudinal-gradient-in-species-richness-of-subgenus-tetraconasoma-verhoeff-1924-not-sphaerotherium-brandt-1833-diplopoda-sphaerotheriida.pdf>.
132. COOPER, MARK I. MASS COVARIES WITH SURFACE AREA IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(4): 133-138. <https://www.ijesird.com/wp-content/uploads/2023/10/october2.pdf>.
133. Cooper, Mark Ian. IS MASS CORRELATED WITH LENGTH AMONG RED MILLIPEDES *CENTROBOLUS COOK*, 1897? Universe Int. J. Interdiscip. Res. 2022; 3(5): 98-103. <https://www.doi-ds.org/doi/11.2022-42796679/UIJIR>. <https://uijir.com/wp-content/uploads/2022/11/11-221012-UIJIR.pdf>.
134. COOPER, MARK. PREDICTED SPECIES RICHNESS VARIATION WITH TIME IN RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Universe Int. J. Interdiscip. Res. 2022; 3(5): 80-88. <https://www.doi-ds.org/doi/11.2022-57466768/UIJIR>. <http://uijir.com/wp-content/uploads/2022/11/9-221023-UIJIR.pdf>.
135. Cooper, Mark I. PREDICTED MATING FREQUENCIES FOR CALCULATED AND CONTROLLED MASSES AT DISTANT LATITUDES AND LONGITUDES IN RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Universe Int. J. Interdiscip. Res. 2022; 3(5): 9-17. <https://www.doi-ds.org/doi/10.2022-62878444/UIJIR>. <https://uijir.com/wp-content/uploads/2022/10/2-221008-UIJIR.pdf>.
136. Cooper, Mark I. NO LONGITUDINAL SPECIES DIVERSITY GRADIENT IN RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Universe Int. J. Interdiscip. Res. 2022; 3(5): 1-8. <https://www.doi-ds.org/doi/10.2022-16757148/UIJIR>. <https://uijir.com/wp-content/uploads/2022/10/1-221007-UIJIR-.pdf>.
137. COOPER, MARK IAN. SURFACE AREA IS RELATED TO SPECIES RICHNESS ACROSS *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2022; 9(4): 126-132. [https://www.ijesird.com/wp-content/uploads/2023/10/oct\\_1.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/oct_1.pdf).

138. Cooper, M. Converse of Rensch's rule is Probably true in Millipedes. *International Journal of Zoology and Animal Biology*. 2022; 5(5): 000410. DOI: 10.23880/izab-16000410. <https://medwinpublishers.com/IZAB/converse-of-renschs-rule-is-not-necessarily-true-in-millipedes.pdf>.
139. COOPER, MARK I. Mass variation with time in red millipedes *Centrobolus* Cook, 1897. *Int. j. eng. sci. invention res. dev.* 2022; 9(3): 119-125. [https://www.ijesird.com/wp-content/uploads/2023/10/sep\\_five.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/sep_five.pdf).
140. COOPER, MARK I. PREDICTED ABUNDANCES FOR CALCULATED AND CONTROLLED SEXUAL SIZE DIMORPHISM AT DISTANT LATITUDES AND LONGITUDES IN RED MILLIPEDES *CENTROBOLUS* COOK, 1897. *Int. j. eng. sci. invention res. dev.* 2022; 9(3): 113-118. [https://www.ijesird.com/wp-content/uploads/2023/10/sep\\_four.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/sep_four.pdf).
141. COOPER, MARK. MOMENTS OF INERTIA LINK TO MALE SIZE IN RED MILLIPEDES *CENTROBOLUS* COOK, 1897. *Int. j. eng. sci. invention res. dev.* 2022; 9(3): 107-112. [https://www.ijesird.com/wp-content/uploads/2023/10/sept\\_three\\_two.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/sept_three_two.pdf).
142. Cooper, Mark. MOMENTS OF INERTIA ARE RELATED TO SPECIES RICHNESS IN RED MILLIPEDES *CENTROBOLUS* COOK, 1897. *Universe Int. J. Interdiscip. Res.* 2022; 4(3): 193-200. <http://www.doi-ds.org/doi/10.2022-84613577/UIJIR>. <http://uijir.com/wp-content/uploads/2022/10/27-UIJIR-938.pdf>.
143. Cooper, Mark. CORRELATION COEFFICIENT MATRIX FOR SIXTEEN FACTORS IN THE MATING SYSTEMS OF RED MILLIPEDES *CENTROBOLUS* COOK, 1897. *Universe Int. J. Interdiscip. Res.* 2022; 3(4): 148-155. <http://www.doi-ds.org/doi/10.2022-52233387/UIJIR>. <https://uijir.com/wp-content/uploads/2022/10/20-UIJIR-930.pdf>.
144. Cooper, Mark I. DOES SEXUAL SIZE DIMORPHISM VARY WITH FEWEST DAILY HOURS OF SUNSHINE IN RED MILLIPEDES *CENTROBOLUS* COOK, 1897? *Universe Int. J. Interdiscip. Res.* 2022; 3(4): 33-36. <http://www.doi-ds.org/doi/10.2022-72997389/UIJIR>. <https://uijir.com/wp-content/uploads/2022/09/5-UIJIR-905.pdf>.
145. Cooper, Mark. DOES (PREDICTED) MASS CORRELATE WITH MATING FREQUENCIES IN *CENTROBOLUS* COOK, 1897? *Universe Int. J. Interdiscip. Res.* 2022; 3(4): 14-19. <http://www.doi-ds.org/doi/10.2022-18461239/UIJIR>.
146. Cooper, Mark I. DOES SEXUAL SIZE DIMORPHISM VARY WITH FEWEST DAILY HOURS OF SUNSHINE IN RED MILLIPEDES *CENTROBOLUS* COOK, 1897? *Universe Int. J. Interdiscip. Res.* 2022; 3(3): 89-92. <http://www.doi-ds.org/doi/10.2022-94655978/UIJIR>.
147. COOPER, MARK IAN. IS A PROMINENT STERNITE RELATED TO SEX RATIOS AND ABUNDANCE IN *CENTROBOLUS* COOK, 1897? *Int. j. eng. sci. invention res. dev.* 2022; 9(3): 103-106. [https://www.ijesird.com/wp-content/uploads/2023/10/sep\\_two\\_6.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/sep_two_6.pdf).
148. COOPER, MARK. IS SIZE OR SSD RELATED TO ABUNDANCE IN *CENTROBOLUS* COOK, 1897? *Int. j. eng. sci. invention res. dev.* 2022; 9(3): 96-102. [https://www.ijesird.com/wp-content/uploads/2023/10/sep\\_one.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/sep_one.pdf).
149. Cooper, Mark. 2022. DOES SEXUAL SIZE DIMORPHISM VARY WITH BODY MASS IN FOREST MILLIPEDES *CENTROBOLUS* COOK, 1897? *Munis Entomol. Zool. Suppl.* 17(supplement): 1621-1624. [http://www.munisentzool.org/Issue/abstract/does-sexual-size-dimorphism-vary-with-body-mass-in-forest-millipedes-centrobolus-cook-1897\\_13861](http://www.munisentzool.org/Issue/abstract/does-sexual-size-dimorphism-vary-with-body-mass-in-forest-millipedes-centrobolus-cook-1897_13861).
150. Cooper, Mark. 2022. DOES SEXUAL SIZE DIMORPHISM VARY WITH THE HIGHEST TOTAL HOURS OF SUNSHINE IN A MONTH IN FOREST MILLIPEDES *CENTROBOLUS* COOK, 1897? *Munis Entomol. Zool.* 17(supplement): 1596-1602. [http://www.munisentzool.org/Issue/abstract/does-sexual-size-dimorphism-vary-with-the-highest-total-hours-of-sunshine-in-a-month-in-forest-millipedes-centrobolus-cook-1897\\_13858](http://www.munisentzool.org/Issue/abstract/does-sexual-size-dimorphism-vary-with-the-highest-total-hours-of-sunshine-in-a-month-in-forest-millipedes-centrobolus-cook-1897_13858).
151. Cooper, Mark. 2022. DOES SEXUAL SIZE DIMORPHISM VARY WITH FEMALE WIDTH IN FOREST MILLIPEDES *CENTROBOLUS* COOK, 1897? *Munis Entomol. Zool.* 17(supplement): 1562-1565. [http://www.munisentzool.org/Issue/abstract/does-sexual-size-dimorphism-vary-with-female-width-in-forest-millipedes-centrobolus-cook-1897\\_13854](http://www.munisentzool.org/Issue/abstract/does-sexual-size-dimorphism-vary-with-female-width-in-forest-millipedes-centrobolus-cook-1897_13854).
152. COOPER, Mark I. ARE MATING FREQUENCIES RELATED TO EJACULATE VOLUMES IN *CENTROBOLUS* COOK, 1897? *Int. j. eng. sci. invention res. dev.* 2022; 9(2): 93-95. [https://www.ijesird.com/wp-content/uploads/2023/10/aug\\_ten.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/aug_ten.pdf).
153. Cooper, M. SIZE ACROSS WEATHER GRADIENTS IN PILL MILLIPEDES (DIPLOPODA): III. FEMALE VOLUME AND LOWEST NUMBER OF DAILY HOURS OF SUNSHINE (TOTAL), WARMEST MONTH OF THE YEAR, COOLEST MONTH IN THE YEAR, AVERAGE ANNUAL TEMPERATURE, AND MONTH WITH THE HIGHEST NUMBER OF RAINY DAYS. *Int. j. eng. sci. invention res. dev.* 2022; 9(2): 88-92. [https://www.ijesird.com/wp-content/uploads/2023/10/aug\\_nine.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/aug_nine.pdf).
154. Cooper, M. I. SIZE ACROSS WEATHER GRADIENTS IN PILL MILLIPEDES (DIPLOPODA): I. FEMALE VOLUME AND PRECIPITATION. *Int. j. eng. sci. invention res. dev.* 2022; 9(2): 84-87. [https://www.ijesird.com/wp-content/uploads/2023/10/aug\\_eight.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/aug_eight.pdf).
155. Cooper, M. I. SIZE ACROSS WEATHER GRADIENTS IN PILL MILLIPEDES (DIPLOPODA): II. FEMALE VOLUME AND LOWEST NUMBER OF DAILY HOURS OF SUNSHINE (AVERAGE). *Int. j. eng. sci. invention res.*



- dev. 2022; 9(2): 80-83. [https://www.ijesird.com/wp-content/uploads/2023/10/aug\\_seven.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/aug_seven.pdf).
156. Cooper, M. Ian. THE MOMENTS OF INERTIA TIE-UP WITH FEMALE SIZE, HOURS OF SUNSHINE THROUGHOUT THE YEAR, LATITUDE, LONGITUDE, AND MINIMUM TEMPERATURE IN RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Universe Int. J. Interdiscip. Res. 2022; 3(2): 6-12. <http://www.doi-ds.org/doi/10.2022-76913842/UIJIR>.
157. Cooper, Mark. DOES EJACULATE VOLUME VARY WITH ABSOLUTE ABUNDANCE IN RED MILLIPEDES *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(2): 77-79. [https://www.ijesird.com/wp-content/uploads/2023/10/6\\_aug\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/6_aug_22.pdf).
158. Cooper, M. Ian. ARE MATING FREQUENCIES RELATED TO MALE AND FEMALE SIZE IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(2): 71-76. [https://www.ijesird.com/wp-content/uploads/2023/10/5\\_aug\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/5_aug_22.pdf).
159. Cooper, Mark. ARE ABSOLUTE ABUNDANCES RELATED TO TARSAL PAD LENGTH IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(2): 68-70. [https://www.ijesird.com/wp-content/uploads/2023/10/4\\_aug\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/4_aug_22.pdf).
160. Cooper, Mark. IS COPULATION DURATION RELATED TO TARSAL PAD LENGTH IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(2): 65-67. [https://www.ijesird.com/wp-content/uploads/2023/10/3\\_aug\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/3_aug_22.pdf).
161. Cooper, M. Ian. ARE MATING FREQUENCIES RELATED TO TARSAL PAD LENGTH IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(2): 1-4. [https://www.ijesird.com/wp-content/uploads/2023/10/1\\_aug\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/1_aug_22.pdf).
162. Cooper, Mark. ARE MATING FREQUENCIES RELATED TO MOMENTS OF INERTIA ACROSS THE SEXES IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 52-55. [https://www.ijesird.com/wp-content/uploads/2023/10/13\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/13_jul_22.pdf).
163. Cooper, M. Ian. ARE MATING FREQUENCIES RELATED TO SEXUAL SIZE DIMORPHISM IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 49-51. [https://www.ijesird.com/wp-content/uploads/2023/10/12\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/12_jul_22.pdf).
164. Cooper, M. Ian. ARE MATING FREQUENCIES RELATED TO SEX RATIO IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 45-48. [https://www.ijesird.com/wp-content/uploads/2023/10/11\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/11_jul_22.pdf).
165. Cooper, M. Ian. IS A PROMINENT STERNITE RELATED TO WEATHER IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 41-44. [https://www.ijesird.com/wp-content/uploads/2023/10/10\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/10_jul_22.pdf).
166. Cooper, M. Ian. DOES COPULATION DURATION VARY WITH SEX RATIO IN THE RED MILLIPEDE *CENTROBOLUS INSCRIPTUS* (ATTEMPS, 1928)? Int. j. eng. sci. invention res. dev. 2022; 9(1): 38-40. [https://www.ijesird.com/wp-content/uploads/2023/10/9\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/9_jul_22.pdf).
167. Cooper, M. Ian. ARE MATING FREQUENCIES RELATED TO ABSOLUTE ABUNDANCE IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 33-37. [https://www.ijesird.com/wp-content/uploads/2023/10/8\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/8_jul_22.pdf).
168. Cooper, Mark I. Is mass related to latitude, longitude, and weather in *Centrobolus Cook*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 27-32. [https://www.ijesird.com/wp-content/uploads/2023/10/7\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/7_jul_22.pdf).
169. Cooper, M. I. Are coleopod spine length and number related to mass in *Centrobolus Cook*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 24-26. [https://www.ijesird.com/wp-content/uploads/2023/10/6\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/6_jul_22.pdf).
170. Cooper, M. I. Are coleopod spine length and number related to weather in *Centrobolus Cook*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 16-23. [https://www.ijesird.com/wp-content/uploads/2023/10/5\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/5_jul_22.pdf).
171. Cooper, M. Ian. Are a prominent sternite, coleopod spine length, and spine number related to mating frequencies in *Centrobolus Cook*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 12-15. [https://www.ijesird.com/wp-content/uploads/2023/10/4\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/4_jul_22.pdf).
172. Cooper, M. Ian. Does copulation duration vary with absolute abundance in red millipedes *Centrobolus Cook*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 9-11. [https://www.ijesird.com/wp-content/uploads/2023/10/3\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/3_jul_22.pdf).
173. Cooper, Mark Ian. Does sex ratio vary with absolute abundance in red millipedes *Centrobolus Cook*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 5-8. [https://www.ijesird.com/wp-content/uploads/2023/10/2\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/2_jul_22.pdf).
174. Cooper, M. Ian. Is a prominent sternite related to mass in *Centrobolus Cook*, 1897? Int. j. eng. sci. invention res. dev. 2022; 9(1): 1-4. [https://www.ijesird.com/wp-content/uploads/2023/10/1\\_jul\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/1_jul_22.pdf).
175. Cooper, Mark Ian. Sexual dimorphism across latitude in pill millipedes (Diplopoda). Zool. Entomol. Letrs. 2022; 2(2): 17-20. <http://www.zoologicaljournal.com/archives/2022.v2.i2.A.4.2>.
176. Cooper, M. Ian. 2022. COPULATION DURATION IS RELATED TO EJACULATING VOLUME IN *CENTROBOLUS INSCRIPTUS* (ATTEMPS, 1928). Int. j. eng. sci. invention res. dev. 2022; 8(12): 32-40. [https://www.ijesird.com/wp-content/uploads/2023/10/3\\_june\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/3_june_22.pdf).

177. Cooper, M. Ian. IS COPULATION DURATION RELATED TO MOMENTS OF INERTIA IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 8(12): 29-31. [https://www.ijesird.com/wp-content/uploads/2023/10/2\\_june\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/2_june_22.pdf).
178. Cooper, M. Ian. IS A PROMINENT STERNITE RELATED TO MOMENTS OF INERTIA IN *CENTROBOLUS COOK*, 1897? Int. j. eng. sci. invention res. dev. 2022; 8(12): 26-28. [https://www.ijesird.com/wp-content/uploads/2023/10/1\\_june\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2023/10/1_june_22.pdf).
179. Cooper, M. THE TIE-IN OF MALE BODY WIDTH ON COPULATION DURATION IN *CENTROBOLUS COOK*, 1897. Universe Int. J. Interdiscip. Res. 2022; 3(1): 45-47. <http://www.doi-ds.org/doi/10.5281/zenodo.6656536>.
180. Cooper, M. I. FEMALE VOLUME, LOWEST HOURS OF SUNSHINE, MONTH WITH THE HIGHEST NUMBER OF RAINY DAYS, RAINFALL, AND TEMPERATURES IN THE COOLEST AND WARMEST MONTHS OF THE YEAR ARE RELATED TO LATITUDE (AND LONGITUDE) ACROSS THE DISTRIBUTION OF PILL MILLIPEDES *SPHAEROTHERIUM BRANDT*, 1833. Universe Int. J. Interdiscip. Res. 2022; 3(1): 11-22. <http://www.doi-ds.org/doi/10.5281/zenodo.6613064>.
181. Cooper, M. I. THE MONTH WITH THE HIGHEST NUMBER OF RAINY DAYS, AVERAGE AND WARMEST TEMPERATURES, DAILY HOURS OF SUNSHINE, AND RAINFALL ACROSS THE DISTRIBUTION OF PILL MILLIPEDES *SPHAEROTHERIUM BRANDT*, 1833. Universe Int. J. Interdiscip. Res. 2022; 3(1): 1-10. <http://www.doi-ds.org/doi/10.5281/zenodo.6613001>.
182. Cooper, Mark Ian. Is mass correlated with width among red millipedes *Centrobolus Cook*, 1897? Zool. Entomol. Lett. 2022; 2(1): 81-85. <http://www.zoologicaljournal.com/archives/2022.v2.i1.B.3.8>.
183. Cooper, Mark Ian. Do copulation duration and sexual size dimorphism vary with relative abundance in red millipedes *Centrobolus Cook*, 1897? Acta Entomol. Zool. 2022; 3(1): 06-09. <http://www.actajournal.com/archives/2022.v3.i2.A.69>. <https://doi.org/10.33545/27080013.2022.v3.i2a.69>.
184. Cooper, Mark Ian. Is a prominent sternite related to spine length, spine number, copulation duration, and male width in *Centrobolus Cook*, 1897? Acta Entomol. Zool. 2022; 3(2): 01-05. <http://www.actajournal.com/archives/2022.v3.i2.A.68>. <https://doi.org/10.33545/27080013.2022.v3.i2a.68>.
185. Cooper, M. THE MOMENTS OF INERTIA TIE-UP WITH PRECIPITATION, NUMBER OF RAINY DAYS, LOWEST RELATIVE HUMIDITY, AND AVERAGE TEMPERATURE IN RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. J. Re. Res. Thesis Diss. 2022; 3(1): 130-145. <https://doi.org/10.5281/zenodo.6659980>.
186. Cooper, M. THE MOMENTS OF INERTIA TIE-UP WITH SEXUAL SIZE DIMORPHISM IN RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. J. Re. Res. Thesis Diss. 2022; 3(1): 127-129. <https://doi.org/10.5281/zenodo.6656536>.
187. Cooper, Mark Ian. DOES SEXUAL SIZE DIMORPHISM VARY WITH LOG SEXUAL SIZE DIMORPHISM IN RED MILLIPEDES *CENTROBOLUS COOK*, 1897? Universe Int. J. Interdiscip. Res. 2022; 2(12): 52-54. <http://www.doi-ds.org/doi/10.5281/zenodo.6613064>.
188. Cooper, Mark I. The inverse latitudinal gradients in species richness of Southern African millipedes. Int. J. Re. Res. Thesis Diss. 2022; 3(1): 91-112. <https://doi.org/10.5281/zenodo.6613064>.
189. Cooper, Mark I. Do copulation durations of sympatric red millipedes vary seasonally with mating frequencies? Int. J. Re. Res. Thesis Diss. 2022; 3(1): 85-90. <https://doi.org/10.5281/zenodo.6613001>.
190. Cooper, Mark. DOES SEXUAL SIZE DIMORPHISM VARY WITH PRECIPITATION IN FOREST MILLIPEDES *CENTROBOLUS COOK*, 1897? Munis Entomology and Zoology. 17(2): 1185-1189. [http://www.munisentzool.org/Issue/abstract/does-sexual-size-dimorphism-vary-with-precipitation-in-forest-millipedes-centrobolus-cook-1897\\_13813](http://www.munisentzool.org/Issue/abstract/does-sexual-size-dimorphism-vary-with-precipitation-in-forest-millipedes-centrobolus-cook-1897_13813).
191. Cooper, Mark. DOES SEXUAL SIZE DIMORPHISM VARY WITH FEMALE LENGTH IN FOREST MILLIPEDES *CENTROBOLUS COOK*, 1897? Universe Int. J. Interdiscip. Res. 2(12): 1-7. <http://www.doi-ds.org/doi/10.5281/zenodo.6613064>.
192. Cooper, Mark Ian. Do copulation duration and sexual size dimorphism vary with absolute abundance in red millipedes *Centrobolus Cook*, 1897? Acta Entomol. Zool. 2022; 3(1): 51-54. <http://www.actajournal.com/archives/2022.v3.i1.A.64>. <https://doi.org/10.33545/27080013.2022.v3.i1a.64>.
193. Cooper, Mark. Millipede mass: Intersexual differences. Zool. Entomol. Lett. 2022; 2(1): 69-70. <http://www.zoologicaljournal.com/archives/2022.v2.i1.B.3.6>.
194. Cooper, Mark. Does sexual size dimorphism vary with sex ratio in red millipedes *Centrobolus Cook*, 1897? Zool. Entomol. Lett. 2022; 2(1): 66-68. <http://www.zoologicaljournal.com/archives/2022.v2.i1.B.3.5>.
195. Cooper, Mark. Does sexual size dimorphism vary with maximum and minimum temperatures in red millipedes *Centrobolus Cook*, 1897? Zool. Entomol. Lett. 2022; 2(1): 60-65. <http://www.zoologicaljournal.com/archives/2022.v2.i1.B.3.4>.
196. Cooper, Mark. Mating frequencies of sympatric red millipedes differ across substrate due to absolute abundances. Acta Entomol. Zool. 2022; 3(1): 34-39. I: <https://doi.org/10.33545/27080013.2022.v3.i1a.62>.

197. Cooper, Mark. Does sexual size dimorphism vary with time in red millipedes *Centrobolus* Cook, 1897? Zool. Entomol. Lett. 2(1): 30-35. <http://www.zoologicaljournal.com/archives/2022.v2.i1.A.2.9>.
198. Cooper, Mark Ian. Five factors effecting copulation duration in the breeding season in forest millipedes *Centrobolus* Cook, 1897. Zool. Entomol. Lett. 2(1): 17-22. <http://www.zoologicaljournal.com/archives/2022.v2.i1.A.2.6>.
199. Cooper, Mark. DOES SEXUAL SIZE DIMORPHISM VARY WITH SPECIES RICHNESS IN FOREST MILLIPEDES *CENTROBOLUS* COOK, 1897? Universe Int. J. Interdiscip. Res. 2(10): 25-29. <http://www.doi-ds.org/doi/10.33545/27080013.2022.v3.i1a.58>.
200. Cooper, Mark. PAIR-WISE COMPARISON OF SEXUAL SHAPE DIMORPHISM AMONG FIFTEEN FACTORS IN FOREST MILLIPEDES *CENTROBOLUS* COOK, 1897. Universe Int. J. Interdiscip. Res. 2(10): 9-14. <http://www.doi-ds.org/doi/10.33545/27080013.2022-18727172/UIJIR>.
201. Cooper, Mark. Does sexual size dimorphism vary with hours of sunshine throughout the year in forest millipedes *Centrobolus* Cook, 1897? Acta Entomol. Zool. 3(1): 19-25. DOI: <https://doi.org/10.33545/27080013.2022.v3.i1a.58>.
202. Cooper, Mark. Does sexual size dimorphism vary with female size in forest millipedes *Centrobolus* Cook, 1897? Acta Entomol. Zool. 3(1): 15-18. <https://doi.org/10.33545/27080013.2022.v3.i1a.57>.
203. Cooper, Mark. PAIR-WISE COMPARISON OF SEXUAL SIZE DIMORPHISM AMONG NINE FACTORS IN FOREST MILLIPEDES *CENTROBOLUS* COOK, 1897. Universe Int. J. Interdiscip. Res. 2(9): 31-33. <http://www.doi-ds.org/doi/10.33545/27080013.2022-75935617/UIJIR>.
204. Cooper, Mark. DOES SEXUAL SIZE DIMORPHISM VARY WITH MONTH WITH THE HIGHEST NUMBER OF RAINY DAYS IN FOREST MILLIPEDES *CENTROBOLUS* COOK, 1897. Universe Int. J. Interdiscip. Res. 2(9): 9-14. <http://www.doi-ds.org/doi/10.33545/27080013.2022-63261534/UIJIR>.
205. Cooper, Mark. Does sexual size dimorphism vary with temperature in forest millipedes *Centrobolus* Cook, 1897? Acta Entomol. Zool. 2022;3(1):08-11. <https://doi.org/10.33545/27080013.2022.v3.i1a.51>.
206. Cooper, Mark. Does sexual size dimorphism vary with latitude in forest millipedes *Centrobolus* Cook, 1897? Int. J. Re. Res. Thesis Diss. 2022; 3(1): 6-11. <http://www.paperpublications.org/issue/IJRRTD/Issue-1-January-2022-June-2022>.
207. Cooper, Mark. Does sexual size dimorphism vary with longitude in forest millipedes *Centrobolus* Cook, 1897? International Journal of Recent Research in Thesis and Dissertation. 2022; 3(1): 1-5. <http://www.paperpublications.org/issue/IJRRTD/Issue-1-January-2022-June-2022>.
208. Cooper, Mark. The copulation duration allometry in *Centrobolus* (Diplopoda: Spirobolida: Pachybolidae). J. Entomol. Zool. Stud. 2022;10(1):63-68. <https://doi.org/10.22271/j.ento.2022.v10.i1a.8925>.
209. Cooper, Mark. The inverse latitudinal gradient in species richness of forest millipedes: Pachybolidae Cook, 1897. J. Entomol. Zool. Stud. 2022;10(1):05-08. <http://www.entomoljournal.com/archives/2022/vol10issue1/PartA/9-6-49-906.pdf>.
210. Cooper, Mark. The inverse latitudinal gradient in species richness of forest millipedes: Pentazonia Brandt, 1833. J. Entomol. Zool. Stud. 2022;10(1):01-04. <http://www.entomoljournal.com/archives/2022/vol10issue1/PartA/9-6-47-884.pdf>.
211. Cooper, Mark. (2022). Total Body Rings Increase with Latitude and Decrease with Precipitation in Forest Millipedes *Centrobolus* Cook, 1897. *New Visions in Biological Science* Vol. 9, 96-101. <http://doi.org/10.9734/bpi/nvbs/v9/1900A>.
212. Cooper, Mark. (2022). The Latitudinal Gradient in Dalodesmidae Cook, 1896a Species Richness. *New Visions in Biological Science* Vol. 9, 89-95. <http://doi.org/10.9734/bpi/nvbs/v9/1899A>.
213. Cooper, Mark. (2022). The Inverse Latitudinal Gradient in Species Richness of Forest Millipedes: *Centrobolus* Cook, 1897. *New Visions in Biological Science* Vol. 9, 82-88. <http://doi.org/10.9734/bpi/nvbs/v9/1898A>.
214. Cooper, Mark. (2022). Bergmann's Rule: Size Correlates with Longitude and Temperature in Forest Millipedes *Centrobolus* Cook, 1897. *New Visions in Biological Science* Vol. 9, 68-81. <http://doi.org/10.9734/bpi/nvbs/v9/1897A>.
215. Cooper, Mark. (2022). Why Sexual Size Dimorphism Increases with Longitude, Precipitation and Temperature and Decreases with Latitude in Forest Millipedes *Centrobolus* Cook, 1897. *New Visions in Biological Science* Vol. 9, 58-67. <http://doi.org/10.9734/bpi/nvbs/v9/1896A>.
216. Cooper, Mark. (2022). The Relationships between Sexual Size Dimorphism and Precipitation and Female Size and Temperature in *Sphaerotherium* Brandt, 1833. *New Visions in Biological Science* Vol. 9, 52-57. <http://doi.org/10.9734/bpi/nvbs/v9/1895A>.
217. Cooper, Mark. (2022). Mating Order Establishes Male Size Advantage in the Polygynandrous Millipede *Centrobolus* in scriptus Attems, 1928. *New Visions in Biological Science* Vol. 9, 46-51. <http://doi.org/10.9734/bpi/nvbs/v9/1894A>.
218. Cooper, Mark. (2022). Length and Width Correlations in *Centrobolus* Cook, 1897. *New Visions in Biological Science* Vol. 9, 39-45. <http://doi.org/10.9734/bpi/nvbs/v9/1893A>.
219. Cooper, Mark. (2022). The Copulation duration Allometry in Worm-like Millipedes (Diplopoda: Chilognatha: Helminthomorpha). *New Visions in Biological Science* Vol. 9, 29-38. <http://doi.org/10.9734/bpi/nvbs/v9/1892A>.
220. Cooper, Mark. (2022). The Copulation duration Allometry in *Centrobolus* (Diplopoda: Spirobolida: Pachybolidae). *New Visions in Biological Science* Vol. 9, 21-28. <http://doi.org/10.9734/bpi/nvbs/v9/1891A>.
221. Cooper, Mark. (2022). Assessment of Latitudinal Gradient in Species Richness of *Sphaerotherium*. *New Visions in*

- Biological Science* Vol. 9, 14-20.  
<http://doi.org/10.9734/bpi/nvbs/v9/1885A>.
222. Cooper, Mark. (2022). Study About Size Dimorphism and Directional Selection in Forest Millipedes. *New Visions in Biological Science* Vol. 9, 7-13.  
<http://doi.org/10.9734/bpi/nvbs/v9/1884A>.
223. Cooper, Mark. (2022). Behavioral ecology of Centrobolus (Diplopoda, Spirobolida, Pachybolidae) in Southern Africa. *New Visions in Biological Science* Vol. 9, 1-6.  
<http://doi.org/10.9734/bpi/nvbs/v9/1883A>.
224. Cooper, Mark. (2022). Study on Zoomorphic Variation with Copulation Duration in Centrobolus. *New Visions in Biological Science* Vol. 8, 144-149.  
<http://doi.org/10.9734/bpi/nvbs/v8/1882A>.
225. Cooper, Mark. (2022). Assessment of Latitudinal Gradient in Gnomeskelus Species Richness. *New Visions in Biological Science* Vol. 8, 136-143.  
<http://doi.org/10.9734/bpi/nvbs/v8/1881A>.
226. Cooper, Mark. (2022). A Study on Centrobolus titanophilus Size Dimorphism Shows Width-Based Variability. *New Visions in Biological Science* Vol. 8, 129-135.  
<http://doi.org/10.9734/bpi/nvbs/v8/1880A>.
227. Cooper, Mark. (2022). Xylophagous Millipede Surface Area to Volume Ratios are Size-dependent in Forests: A Brief Study. *New Visions in Biological Science* Vol. 8, 120-128.  
<http://doi.org/10.9734/bpi/nvbs/v8/1879A>.
228. Cooper, Mark. (2022). Study on Size Dimorphism in Six Juliform Millipedes. *New Visions in Biological Science* Vol. 8, 113-119.  
<http://doi.org/10.9734/bpi/nvbs/v8/1878A>.
229. Cooper, Mark. (2022). Study on Year-round Correlation between Mass and Copulation Duration in Forest Millipedes. *New Visions in Biological Science* Vol. 8, 107-112.  
<http://doi.org/10.9734/bpi/nvbs/v8/1877A>.
230. Cooper, Mark. (2022). Longer Males Determined with Positive Skew and Kurtosis in Centrobolus (Diplopoda: Spirobolida: Pachybolidae). *New Visions in Biological Science* Vol. 8, 102-106.  
<http://doi.org/10.9734/bpi/nvbs/v8/1876A>.
231. Cooper, M. AIR PRESSURE IS NOT RELATED TO SPECIES RICHNESS IN PILL MILLIPEDES *SPHAEROTHERIUM* BRANDT, 1833. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1553-1556.  
[https://www.ijesird.com/wp-content/uploads/2024/05/chapter\\_18.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/chapter_18.pdf).
232. Cooper, M. HIGH AIR PRESSURE IS RELATED TO LOW SPECIES RICHNESS IN GNOMESKELUS ATTEMS, 1926. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1548-1551.  
[https://www.ijesird.com/wp-content/uploads/2024/05/chapter\\_17.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/chapter_17.pdf).
233. Cooper, M. I. AIR PRESSURE IS (INVERSELY) RELATED TO SPECIES RICHNESS IN DALODESMIDAE COOK, 1896A. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1543-1547.  
[https://www.ijesird.com/wp-content/uploads/2024/05/chapter\\_16.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/chapter_16.pdf).
234. Cooper, M. NO AIR PRESSURE-SPECIES RICHNESS RELATIONSHIP IN JULOMORPHIDAE VERHOEFF, 1924. Int. j. eng. sci. invention res. dev. 2023; 10 (6): 1540-1542.  
[https://www.ijesird.com/wp-content/uploads/2024/05/chapter\\_15.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/chapter_15.pdf).
235. COOPER M. CURVED SURFACE AREA IS RELATED TO AT LEAST TWENTY FACTORS IN FOREST RED MILLIPEDES CENTROBOLUS COOK, 1897. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1438-1509.  
[https://www.ijesird.com/wp-content/uploads/2024/05/chapter\\_14.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/chapter_14.pdf).
236. Cooper M. VOLUME IS RELATED TO OCEAN WATER TEMPERATURES IN COASTAL FOREST RED MILLIPEDES CENTROBOLUS COOK, 1897. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1410-1437.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December\\_17\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December_17_23.pdf).
237. Cooper M. FACTORS RELATED TO PRECIPITATION IN FOREST RED MILLIPEDES CENTROBOLUS COOK, 1897. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1376-1409.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December\\_16\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December_16_23.pdf).
238. COOPER M. MONTH WITH THE LOWEST NUMBER OF RAINY DAYS IS RELATED TO AT LEAST FOUR FACTORS AND MONTH WITH THE HIGHEST NUMBER OF RAINY DAYS IS RELATED TO FIVE FACTORS IN FOREST RED MILLIPEDES CENTROBOLUS COOK, 1897. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1355-1375.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December\\_15\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December_15_23.pdf).
239. COOPER M. SECOND POLAR MOMENTS OF INERTNESS ARE RELATED TO TIME IN RED MILLIPEDES CENTROBOLUS COOK, 1897. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1354.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December\\_14\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December_14_23.pdf).
240. Cooper M. I. AIR PRESSURE IS RELATED TO AT LEAST SEVEN FACTORS AND DISTANCE TO THE NEAREST AIRPORT IS RELATED TO AT LEAST THREE FACTORS IN FOREST RED MILLIPEDES CENTROBOLUS COOK, 1897. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1330-1354.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December\\_13\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December_13_23.pdf).
241. Cooper M. SURFACE AREA, SURFACE AREA TO VOLUME RATIO, AND CLIMATIC CORRELATES IN PILL MILLIPEDES *SPHAEROTHERIUM* BRANDT, 1833. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1299-1329.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December12\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December12_23.pdf).
242. Cooper Mark. DOES EJACULATE VOLUME, MASS AND COLEOPOD SPINE LENGTH AND NUMBER VARY WITH MOMENTS OF INERTIA AND SEX RATIO IN CENTROBOLUS COOK, 1897? Int. j. eng. sci.

- invention res. dev. 2023; 10(6): 1282-1298.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December11\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December11_23.pdf).
243. Cooper M. STERNITE PROMINENCE AND OCEAN WATER TEMPERATURE ARE RELATED TO ABUNDANCE IN *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1266-1281.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December\\_10\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December_10_23.pdf).
244. Cooper M. FACTORS RELATED TO SUNSHINE IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1146-1265.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December\\_9\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December_9_23.pdf).
245. Cooper M. I. MASS IS RELATED TO NINE FACTORS IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1126-1142.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December\\_8\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December_8_23.pdf).
246. Cooper M. LOWEST RELATIVE HUMIDITY IS RELATED TO HIGHEST RELATIVE HUMIDITY, HIGHEST OCEAN WATER TEMPERATURE, STERNITE PROMINENCE AND MOMENTS OF INERTIA AND HIGHEST RELATIVE HUMIDITY IS RELATED TO ABUNDANCE, MINIMUM AND MAXIMUM OCEAN WATER TEMPERATURES IN COASTAL FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2023; 10(6): 1104-1125.  
[https://www.ijesird.com/wp-content/uploads/2024/05/December\\_7\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/December_7_23.pdf).
247. Cooper M. CORRELATION COEFFICIENT MATRIX FOR SEVEN FACTORS IN THE CLIMATE OF 23 LOCALITIES IN SOUTHERN AFRICA. International Journal of Engineering Science Invention Research & Development. 2023; 10(5): 820-992.  
[https://www.ijesird.com/wp-content/uploads/2024/05/nov\\_11\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/nov_11_23.pdf).
248. Cooper M. (2023). FEMALE SECOND POLAR MOMENTS OF INERTNESS ARE RELATED TO MAXIMUM PRECIPITATION IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. International Journal of Engineering Science Invention Research & Development; Vol. 10, Issue 4, October pp. 1-19.  
[https://www.ijesird.com/wp-content/uploads/2024/05/chapter\\_1.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/chapter_1.pdf).
249. COOPER, M. I. THE WETTEST MONTHS VARY WITH THE DISTANCE TO THE CLOSEST AIRPORT ACROSS THE DISTRIBUTION OF PILL MILLIPEDES *SPHAEROTHERIUM BRANDT*, 1833. Int. j. eng. sci. invention res. dev. 2024; 10(12): 3297-3316.  
<https://www.ijesird.com/wp-content/uploads/2024/06/59.pdf>.
250. COOPER, M. I. THE DIFFERENCE BETWEEN THE DRIEST AND WETTEST MONTHS VARY WITH THE DISTANCE TO THE CLOSEST AIRPORT ACROSS THE DISTRIBUTION OF PILL MILLIPEDES *SPHAEROTHERIUM BRANDT*, 1833. Int. j. eng. sci. invention res. dev. 2024; 10(12): 3277-3296.  
<https://www.ijesird.com/wp-content/uploads/2024/06/58.pdf>.
251. COOPER, M. I. SURFACE AREA IS RELATED TO WIDTH IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(12): 3256-3276.  
<https://www.ijesird.com/wp-content/uploads/2024/06/57.pdf>.
252. COOPER, M. I. SURFACE AREA IS RELATED TO LENGTH IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(12): 3235-3255.  
<https://www.ijesird.com/wp-content/uploads/2024/06/56.pdf>.
253. COOPER, M. I. MOMENTS OF INERTIA ARE RELATED TO WIDTH IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(12): 3215-3234.  
<https://www.ijesird.com/wp-content/uploads/2024/06/55.pdf>.
254. COOPER, M. LENGTH IS RELATED TO HIGHEST TOTAL HOURS OF SUNSHINE IN A MONTH IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 3102-3129.  
<https://www.ijesird.com/wp-content/uploads/2024/05/54.pdf>.
255. COOPER, M. I. FEMALE WIDTH IS RELATED TO HOURS OF SUNSHINE THROUGHOUT THE YEAR IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 3073-3101.  
<https://www.ijesird.com/wp-content/uploads/2024/05/53.pdf>.
256. COOPER, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IN A DAY IS RELATED TO LENGTH IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 3044-3072.  
<https://www.ijesird.com/wp-content/uploads/2024/05/52.pdf>.
257. COOPER, M. LENGTH IS RELATED TO HOURS OF SUNSHINE THROUGHOUT THE YEAR IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 3015-3043.  
<https://www.ijesird.com/wp-content/uploads/2024/05/51.pdf>.
258. COOPER, M. WIDTH IS RELATED HIGHEST TOTAL HOURS OF SUNSHINE IN A MONTH IN FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2989-3014.  
<https://www.ijesird.com/wp-content/uploads/2024/05/50.pdf>.
259. Cooper, M. CURVED SURFACE AREA IS RELATED TO MEAN OCEAN WATER TEMPERATURES IN COASTAL FOREST RED MILLIPEDES *CENTROBOLUS COOK*, 1897. Int. j. eng. sci. invention

- res. dev. 2024; 10(11): 2964-2988.  
<https://www.ijesird.com/wp-content/uploads/2024/05/49.pdf>.
260. Cooper, M. CURVED SURFACE AREA IS RELATED TO MINIMUM OCEAN WATER TEMPERATURES IN COASTAL FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2939-2963.  
<https://www.ijesird.com/wp-content/uploads/2024/05/48.pdf>.
261. Cooper, M. CURVED SURFACE AREA IS RELATED TO HIGHEST OCEAN WATER TEMPERATURES IN COASTAL FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2914-2938.  
<https://www.ijesird.com/wp-content/uploads/2024/05/47.pdf>.
262. Cooper, M. CURVED SURFACE AREA IS RELATED TO AVERAGE TEMPERATURE VARIATION IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2883-2908.  
<https://www.ijesird.com/wp-content/uploads/2024/05/46.pdf>.
263. Cooper, M. CURVED SURFACE AREA IS RELATED TO MINIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2857-2882.  
<https://www.ijesird.com/wp-content/uploads/2024/05/45.pdf>.
264. Cooper, M. CURVED SURFACE AREA IS RELATED TO LONGITUDE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2831-2856.  
<https://www.ijesird.com/wp-content/uploads/2024/05/44.pdf>.
265. COOPER, M. CURVED SURFACE AREA IS RELATED TO WIDTH IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2806-2830.  
<https://www.ijesird.com/wp-content/uploads/2024/05/43.pdf>.
266. COOPER, M. CURVED SURFACE AREA IS RELATED TO LENGTH IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2780-2805.  
<https://www.ijesird.com/wp-content/uploads/2024/05/42.pdf>.
267. COOPER, M. CURVED SURFACE AREA IS RELATED TO SEX RATIO IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2755-2779.  
<https://www.ijesird.com/wp-content/uploads/2024/05/41.pdf>.
268. COOPER, MARK IAN. CURVED SURFACE AREA IS RELATED TO HOURS OF SUNSHINE THROUGHOUT THE YEAR IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(10): 2523-2550.  
<https://www.ijesird.com/wp-content/uploads/2024/05/40.pdf>.
269. COOPER, MARK. VOLUME IS CORRELATED TO MINIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(10): 2496-2522.  
<https://www.ijesird.com/wp-content/uploads/2024/05/39.pdf>.
270. COOPER, MARK. MASS IS CORRELATED TO MONTH WITH THE HIGHEST NUMBER OF RAINY DAYS IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(10): 2470-2495.  
<https://www.ijesird.com/wp-content/uploads/2024/05/38.pdf>.
271. COOPER, MARK IAN. MASS IS CORRELATED TO LOWEST RELATIVE HUMIDITY IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(10): 2444-2469.  
<https://www.ijesird.com/wp-content/uploads/2024/05/37.pdf>.
272. Cooper, Mark Ian. COPULATION DURATION IS MODELLED TO MINIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(10): 2508-2534.  
<https://www.ijesird.com/wp-content/uploads/2024/05/36.pdf>.
273. Cooper, M. IS MATING FREQUENCY RELATED TO HOURS OF SUNSHINE THROUGHOUT THE YEAR IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897? Int. j. eng. sci. invention res. dev. 2024; 10(10): 2478-2507.  
<https://www.ijesird.com/wp-content/uploads/2024/05/35.pdf>.
274. Cooper, Mark Ian. IS MATING FREQUENCY RELATED TO LOWEST RELATIVE HUMIDITY IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897? Int. j. eng. sci. invention res. dev. 2024; 10(10): 2451-2477.  
<https://www.ijesird.com/wp-content/uploads/2024/05/34.pdf>.
275. Cooper, Mark Ian. IS MATING FREQUENCY RELATED TO MINIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897? Int. j. eng. sci. invention res. dev. 2024; 10(10): 2423-2450.  
<https://www.ijesird.com/wp-content/uploads/2024/05/33.pdf>.
276. Cooper, Mark Ian. IS MATING FREQUENCY RELATED TO MAXIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897? Int. j. eng. sci. invention res. dev. 2024; 10(10): 2392-2422.  
<https://www.ijesird.com/wp-content/uploads/2024/05/32.pdf>.
277. Cooper, M. Ian. MOMENTS OF INERTIA ARE RELATED TO MAXIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2358-

2384. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_31.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_31.pdf).
278. Cooper, M. Ian. IS MATING FREQUENCY RELATED TO TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897? Int. j. eng. sci. invention res. dev. 2024; 10(9): 2333-2357. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_30.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_30.pdf).
279. Cooper, M. Ian. TEMPERATURE IS RELATED MINIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2308-2332. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_29.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_29.pdf).
280. Cooper, M. Ian. IS MATING FREQUENCY RELATED HIGHEST TOTAL HOURS OF SUNSHINE THROUGHOUT A MONTH IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897? Int. j. eng. sci. invention res. dev. 2024; 10(9): 2283-2307. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_28.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_28.pdf).
281. Cooper, M. Ian. IS MATING FREQUENCY RELATED TO PRECIPITATION IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897? Int. j. eng. sci. invention res. dev. 2024; 10(9): 2259-2282. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_27.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_27.pdf).
282. Cooper, M. Ian. TEMPERATURE IS RELATED MAXIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2235-2258. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_26.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_26.pdf).
283. Cooper, M. Ian. PRECIPITATION IS RELATED TO TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2211-2234. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_25.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_25.pdf).
284. Cooper, M. Ian. HIGHEST TOTAL HOURS OF SUNSHINE THROUGHOUT A MONTH ARE RELATED TO TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2187-2210. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_24.pdf).
285. Cooper, M. Ian. HIGHEST TOTAL HOURS OF SUNSHINE THROUGHOUT A MONTH ARE RELATED TO PRECIPITATION IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2163-2186. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_23.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_23.pdf).
286. Cooper, M. Ian. COPULATION DURATION IS RELATED TO MONTH WITH THE HIGHEST NUMBER OF RAINY DAYS IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2138-2161. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_22.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_22.pdf).
287. Cooper, M. Ian. HIGHEST TOTAL HOURS OF SUNSHINE THROUGHOUT A MONTH ARE RELATED TO MONTH WITH THE HIGHEST NUMBER OF RAINY DAYS IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2114-2137. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_21.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_21.pdf).
288. Cooper, M. Ian. HIGHEST TOTAL HOURS OF SUNSHINE THROUGHOUT A MONTH ARE RELATED TO SPECIES VOLUME IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2090-2113. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_20.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_20.pdf).
289. Cooper, M. Ian. HOURS OF SUNSHINE THROUGHOUT THE YEAR ARE RELATED TO SPECIES VOLUME IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2066-2089. [https://www.ijesird.com/wp-content/uploads/2024/05/ch\\_19.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/ch_19.pdf).
290. COOPER, M. I. MOMENTS OF INERTIA ARE RELATED TO LENGTH IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(12): 3195-3214. [https://www.ijesird.com/wp-content/uploads/2024/06/june\\_4\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/06/june_4_24.pdf).
291. COOPER, M. I. WIDTH MODELS WITH MATING FREQUENCY IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(12): 3175-3194. [https://www.ijesird.com/wp-content/uploads/2024/06/june\\_3\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/06/june_3_24.pdf).
292. COOPER, M. I. FEMALE WIDTH IS RELATED TO LOWEST NUMBER OF HOURS OF SUNSHINE IN A DAY IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(12): 3154-3174. [https://www.ijesird.com/wp-content/uploads/2024/06/june\\_2\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/06/june_2_24.pdf).
293. Cooper, M. CLIMATIC CORRELATES IN PILL MILLIPEDES *SPHAEROTHERIUM* BRANDT, 1833. Int. j. eng. sci. invention res. dev. 2024; 10(12): 3130-3153. [https://www.ijesird.com/wp-content/uploads/2024/06/june\\_1\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/06/june_1_24.pdf).
294. COOPER, M. COPULATION DURATION IS RELATED TO CURVED SURFACE AREA IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2731-2754. [https://www.ijesird.com/wp-content/uploads/2024/05/may\\_7\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/may_7_24.pdf).
295. COOPER, M. CURVED SURFACE AREA IS RELATED TO MOMENTS OF INERTIA IN FOREST RED

- MILLIPEDES CENTROBOLUS COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2706-2730.  
[https://www.ijesird.com/wp-content/uploads/2024/05/may\\_6\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/may_6_24.pdf).
- 296.COOPER, M. CURVED SURFACE AREA IS RELATED TO MASS IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2681-2705.  
[https://www.ijesird.com/wp-content/uploads/2024/05/may\\_5\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/may_5_24.pdf).
- 297.COOPER, M. CURVED SURFACE AREA IS RELATED TO TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2655-2680.  
[https://www.ijesird.com/wp-content/uploads/2024/05/may\\_4\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/may_4_24.pdf).
- 298.COOPER, M. CURVED SURFACE AREA IS RELATED TO SPECIES VOLUME IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2630-2654.  
[https://www.ijesird.com/wp-content/uploads/2024/05/may\\_3\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/may_3_24.pdf).
- 299.COOPER, M. CURVED SURFACE AREA IS RELATED TO SURFACE AREA IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2605-2629.  
[https://www.ijesird.com/wp-content/uploads/2024/05/may\\_2\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/may_2_24.pdf).
- 300.COOPER, M. CURVED SURFACE AREA IS RELATED TO LOWEST HOURS OF SUNSHINE IN A DAY IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(11): 2580-2604.  
[https://www.ijesird.com/wp-content/uploads/2024/05/may\\_1\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/may_1_24.pdf).
- 301.COOPER, M. CURVED SURFACE AREA IS RELATED TO HIGHEST HOURS OF SUNSHINE THROUGHOUT A MONTH IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(10): 2556-2579.  
[https://www.ijesird.com/wp-content/uploads/2024/05/apr\\_5\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/apr_5_24.pdf).
- 302.COOPER, MARK IAN. MASS IS INVERSELY CORRELATED TO MINIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(10): 2418-2443.  
[https://www.ijesird.com/wp-content/uploads/2024/05/apr\\_3\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/apr_3_24.pdf).
- 303.Cooper, M. MASS IS CORRELATED TO PRECIPITATION IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(10): 2392-2417.  
[https://www.ijesird.com/wp-content/uploads/2024/05/april\\_2\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/april_2_24.pdf).
- 304.Cooper, M. Ian. HOURS OF SUNSHINE THROUGHOUT THE YEAR IS RELATED TO MOMENTS OF INERTIA IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2040-2065.  
[https://www.ijesird.com/wp-content/uploads/2024/05/march\\_6\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/march_6_24.pdf).
- 305.Cooper, M. Ian. HOURS OF SUNSHINE THROUGHOUT THE YEAR IS RELATED TO PRECIPITATION IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 2014-2039.  
[https://www.ijesird.com/wp-content/uploads/2024/05/march\\_5\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/march_5_24.pdf).
- 306.Cooper, M. Ian. HOURS OF SUNSHINE THROUGHOUT THE YEAR IS RELATED TO SURFACE AREA IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 1988-2013.  
[https://www.ijesird.com/wp-content/uploads/2024/05/march\\_4\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/march_4_24.pdf).
- 307.Cooper, M. Ian. LOWEST RELATIVE HUMIDITY IS RELATED TO MOMENTS OF INERTIA IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 1962-1987.  
[https://www.ijesird.com/wp-content/uploads/2024/05/march\\_3\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/march_3_24.pdf).
- 308.Cooper, M. Ian. COPULATION DURATION IS RELATED TO LOWEST RELATIVE HUMIDITY IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 1936-1961.  
[https://www.ijesird.com/wp-content/uploads/2024/05/march\\_2\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/march_2_24.pdf).
- 309.Cooper, M. Ian. HOURS OF SUNSHINE THROUGHOUT THE YEAR IS RELATED TO TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(9): 1912-1935.  
[https://www.ijesird.com/wp-content/uploads/2024/05/march\\_1\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/march_1_24.pdf).
- 310.Cooper, M. AIR PRESSURE IS NOT RELATED TO SPECIES RICHNESS IN PILL MILLIPEDES SPHAEROTHERIIDAE BRANDT, 1833. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1908-1911.  
[https://www.ijesird.com/wp-content/uploads/2024/05/feb\\_15\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/feb_15_24.pdf).
- 311.Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO LONGITUDE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1884-1907.  
[https://www.ijesird.com/wp-content/uploads/2024/05/Feb\\_14\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb_14_24.pdf).
- 312.Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO MASS IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1860-1883.  
[https://www.ijesird.com/wp-content/uploads/2024/05/Feb13\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb13_24.pdf).
- 313.Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO MOMENTS OF INERTIA IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1836-



1859. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb12\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb12_24.pdf).
314. Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO LATITUDE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1810-1835. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb11\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb11_24.pdf).
315. Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO MONTH WITH THE HIGHEST NUMBER OF RAINY DAYS IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1784-1809. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb10\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb10_24.pdf).
316. Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO TOTAL HOURS OF SUNSHINE IN A YEAR IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1758-1783. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb9\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb9_24.pdf).
317. Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO MAXIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1734-1757. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb8\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb8_24.pdf).
318. Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO MINIMUM TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1710-1733. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb7\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb7_24.pdf).
319. Cooper, M. HOURS OF SUNSHINE THROUGHOUT THE YEAR IS RELATED TO HIGHEST TOTAL HOURS OF SUNSHINE IN A MONTH IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1684-1709. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb6\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb6_24.pdf).
320. Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO PRECIPITATION IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1660-1683. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb5\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb5_24.pdf).
321. Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO MONTH WITH THE HIGHEST NUMBER OF RAINY DAYS IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1636-1659. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb4\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb4_24.pdf).
322. Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO SURFACE AREA IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1610-1635. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb3\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb3_24.pdf).
323. Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO SPECIES VOLUME IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1584-1608. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb2\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb2_24.pdf).
324. Cooper, M. LOWEST NUMBER OF DAILY HOURS OF SUNSHINE IS RELATED TO TEMPERATURE IN FOREST RED MILLIPEDES *CENTROBOLUS* COOK, 1897. Int. j. eng. sci. invention res. dev. 2024; 10(8): 1557-1582. [https://www.ijesird.com/wp-content/uploads/2024/05/Feb1\\_24.pdf](https://www.ijesird.com/wp-content/uploads/2024/05/Feb1_24.pdf).
325. R. F. Lawrence, "The Spiroboloidea (Diplopoda) of the eastern half of Southern Africa\*," Annals of the Natal Museum, vol. 18, no. 3, pp. 607-646, 1967.
326. R. P. Mailula, "Taxonomic revision and Red List assessment of the red millipede genus *Centrobolus* (Spirobolida: Pachybolidae) of South Africa," The University of Kwazulu Natal, pp. 289, 2021.

**APPENDIX 1.** Sternite prominence (%) followed by relative humidity (%; lowest) for four species of *Centrobolus* Cook, 1897.

50, 63.06  
30, 68.65  
35, 68.18  
20, 69.75