

DIGITAL APPENDIX 1

The 40 most frequently used words in title of publications by Panama authors in the Science Citation Index Expanded

Words in title	<i>TA</i>	1980-2013 <i>R</i> (%)	1980-1996 <i>R</i> (%)	1997-2013 <i>R</i> (%)
Panama	578	1 (15)	1 (16)	1 (14)
tropical	555	2 (14)	2 (14)	2 (14)
species	442	3 (11)	3 (6.8)	3 (12)
forest	303	4 (7.6)	4 (5.3)	4 (8.2)
tree	193	5 (4.9)	19 (2.1)	5 (5.6)
neotropical	175	6 (4.4)	8 (3.4)	6 (4.7)
effects	138	7 (3.5)	6 (3.6)	8 (3.4)
diversity	133	8 (3.3)	17 (2.2)	7 (3.7)
central	108	9 (2.7)	56 (1.2)	9 (3.1)
variation	104	10 (2.6)	24 (1.8)	12 (2.8)
genus	102	11 (2.6)	36 (1.4)	11 (2.9)
growth	99	12 (2.5)	10 (2.8)	17 (2.4)
pacific	99	12 (2.5)	21 (1.9)	14 (2.6)
structure	97	14 (2.4)	21 (1.9)	15 (2.6)
hymenoptera	96	15 (2.4)	14 (2.4)	17 (2.4)
forests	95	16 (2.4)	219 (0.48)	10 (2.9)
Caribbean	92	17 (2.3)	7 (3.5)	26 (2.0)
America	91	18 (2.3)	503 (0.24)	12 (2.8)
genetic	87	19 (2.2)	76 (1.0)	16 (2.5)
evolution	87	19 (2.2)	15 (2.3)	21 (2.2)
Panamanian	83	21 (2.1)	5 (4.3)	47 (1.5)
evidence	82	22 (2.1)	29 (1.6)	20 (2.2)
patterns	82	22 (2.1)	24 (1.8)	22 (2.1)
distribution	81	24 (2.0)	44 (1.3)	19 (2.2)
coral	78	25 (2.0)	12 (2.5)	32 (1.8)
implications	77	26 (1.9)	27 (1.7)	26 (2.0)
soil	74	27 (1.9)	102 (0.85)	22 (2.1)
marine	73	28 (1.8)	65 (1.1)	25 (2.0)
plant	71	29 (1.8)	76 (1.0)	26 (2.0)
analysis	69	30 (1.7)	29 (1.6)	34 (1.8)
bats	68	31 (1.7)	960 (0.12)	22 (2.1)
trees	68	31 (1.7)	102 (0.85)	29 (1.9)
activity	68	31 (1.7)	76 (1.0)	30 (1.9)
reef	67	34 (1.7)	9 (2.9)	58 (1.4)
lowland	67	34 (1.7)	76 (1.0)	31 (1.9)
human	66	36 (1.7)	10 (2.8)	58 (1.4)
leaf	64	37 (1.6)	65 (1.1)	35 (1.7)
water	63	38 (1.6)	56 (1.2)	36 (1.7)
eastern	62	39 (1.6)	65 (1.1)	36 (1.7)
effect	60	40 (1.5)	29 (1.6)	47 (1.5)

TA: total articles; %: the percentage of the frequency of a given word in title to the total number of articles.



DIGITAL APPENDIX 2

The 20 most frequently used author keywords for Panama publications in the Science Citation Index Expanded

Author Keywords	<i>TA</i>	1980-2013 <i>R</i> (%)	1980-1996 <i>R</i> (%)	1997-2013 <i>R</i> (%)
Panama	289	1 (12)	1 (13)	1 (12)
tropical forest	91	2 (3.7)	2 (4.8)	3 (3.6)
Barro Colorado island	88	3 (3.6)	22 (1.6)	2 (3.7)
phylogeny	49	4 (2.0)	22 (1.6)	4 (2.0)
taxonomy	47	5 (1.9)	123 (0.53)	4 (2.0)
speciation	47	5 (1.9)	41 (1.1)	6 (2.0)
sexual selection	45	7 (1.8)	12 (2.1)	7 (1.8)
neotropics	42	8 (1.7)	22 (1.6)	8 (1.7)
photosynthesis	35	9 (1.4)	3 (3.2)	15 (1.3)
new species	35	9 (1.4)	N/A	9 (1.5)
biodiversity	32	11 (1.3)	N/A	10 (1.4)
tropical forests	32	11 (1.3)	41 (1.1)	12 (1.3)
Caribbean	32	11 (1.3)	123 (0.53)	11 (1.4)
mitochondrial DNA	31	14 (1.3)	12 (2.1)	16 (1.2)
crassulacean acid metabolism	31	14 (1.3)	3 (3.2)	22 (1.1)
herbivory	30	16 (1.2)	N/A	12 (1.3)
phylogeography	30	16 (1.2)	N/A	12 (1.3)
diversity	29	18 (1.2)	41 (1.1)	16 (1.2)
growth	28	19 (1.1)	123 (0.53)	16 (1.2)
rain forest	28	19 (1.1)	41 (1.1)	21 (1.1)

TA: total articles; %: the percentage of the frequency of a given author keyword to the total number of articles; N/A: not available.

DIGITAL APPENDIX 3

The 30 most frequently used *KeyWords Plus* for Panama articles in the Science Citation Index Expanded

<i>KeyWords Plus</i>	<i>TA</i>	1980-2013 <i>R</i> (%)	1980-1996 <i>R</i> (%)	1997-2013 <i>R</i> (%)
evolution	328	1 (10)	1 (10)	1 (10)
diversity	213	2 (6.6)	11 (3.0)	2 (7.0)
rain-forest	205	3 (6.4)	14 (2.7)	3 (6.7)
patterns	176	4 (5.5)	7 (3.3)	4 (5.7)
growth	159	5 (4.9)	7 (3.3)	5 (5.1)
Panama	127	6 (3.9)	3 (4.0)	6 (3.9)
behavior	111	7 (3.4)	2 (6.4)	9 (3.1)
ecology	101	8 (3.1)	17 (2.3)	7 (3.2)
forest	94	9 (2.9)	59 (1.3)	10 (3.1)
Costa-Rica	94	9 (2.9)	17 (2.3)	11 (3.0)
biodiversity	93	11 (2.9)	N/A	8 (3.2)
dynamics	90	12 (2.8)	17 (2.3)	12 (2.8)
sexual selection	89	13 (2.8)	24 (2.0)	12 (2.8)
plants	85	14 (2.6)	6 (3.7)	14 (2.5)
communities	75	15 (2.3)	24 (2.0)	17 (2.4)
tropical forest	75	15 (2.3)	88 (1.0)	16 (2.5)
conservation	75	15 (2.3)	139 (0.67)	15 (2.5)
populations	72	18 (2.2)	3 (4.0)	24 (2.1)
size	69	19 (2.1)	14 (2.7)	22 (2.1)
speciation	68	20 (2.1)	35 (1.7)	19 (2.2)
tropical forests	66	21 (2.0)	N/A	18 (2.3)
abundance	66	21 (2.0)	35 (1.7)	22 (2.1)
hymenoptera	66	21 (2.0)	88 (1.0)	19 (2.2)
climate-change	62	24 (1.9)	N/A	21 (2.1)
mitochondrial-DNA	62	24 (1.9)	139 (0.67)	24 (2.1)
tree	61	26 (1.9)	35 (1.7)	28 (1.9)
species richness	60	27 (1.9)	139 (0.67)	26 (2.0)
dispersal	60	27 (1.9)	24 (2.0)	29 (1.8)
neotropical forest	58	29 (1.8)	327 (0.33)	27 (1.9)
identification	58	29 (1.8)	35 (1.7)	30 (1.8)

TA: Total articles; %: the percentage of the frequency of a given *KeyWords Plus* to the total number of articles; N/A: Not available.

DIGITAL APPENDIX 4: FIGURES 5 THROUGH 9

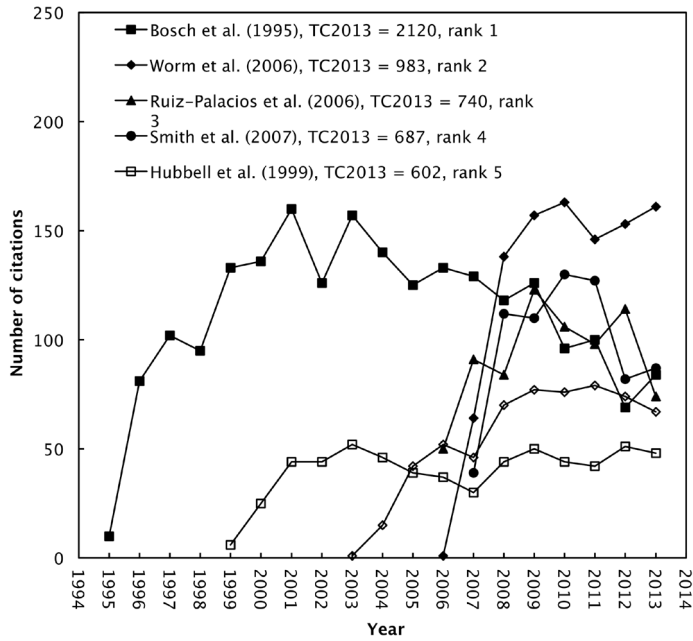


Fig. 5. Top six most cited articles ($TC_{2013} > 500$) for Panama authors in the Science Citation Index Expanded.

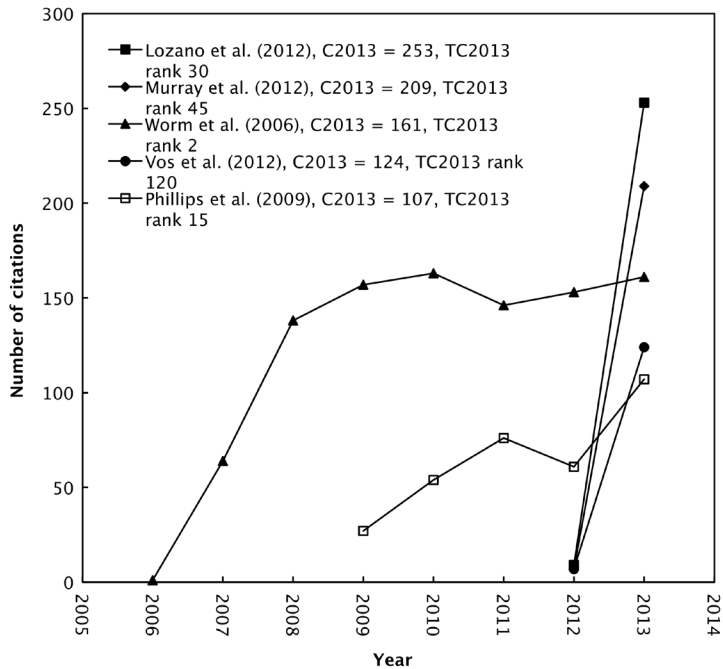


Fig. 6. Articles cited more 100 times in 2013 for Panama authors in the Science Citation Index Expanded.

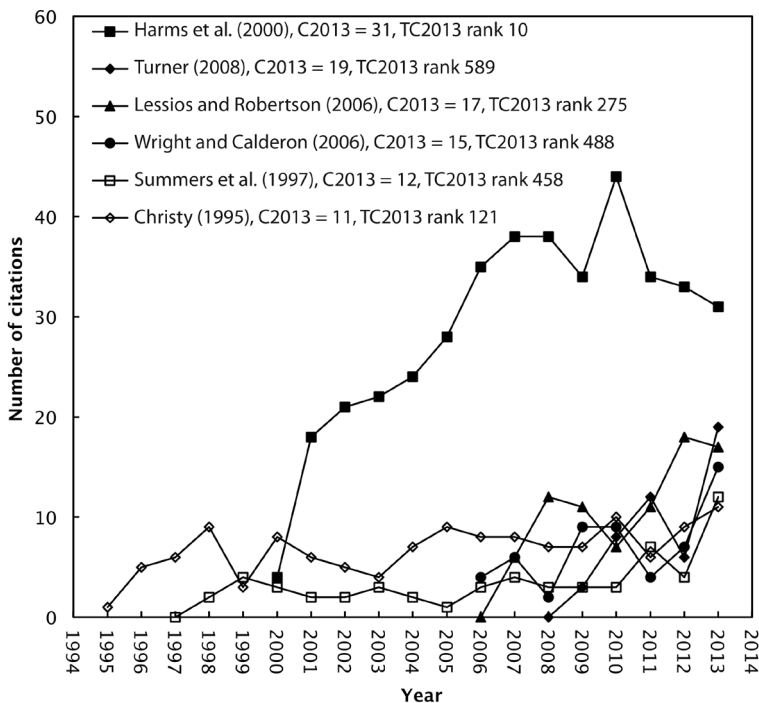


Fig. 7. Most cited Panama independent articles with citation above 10 times in 2013.

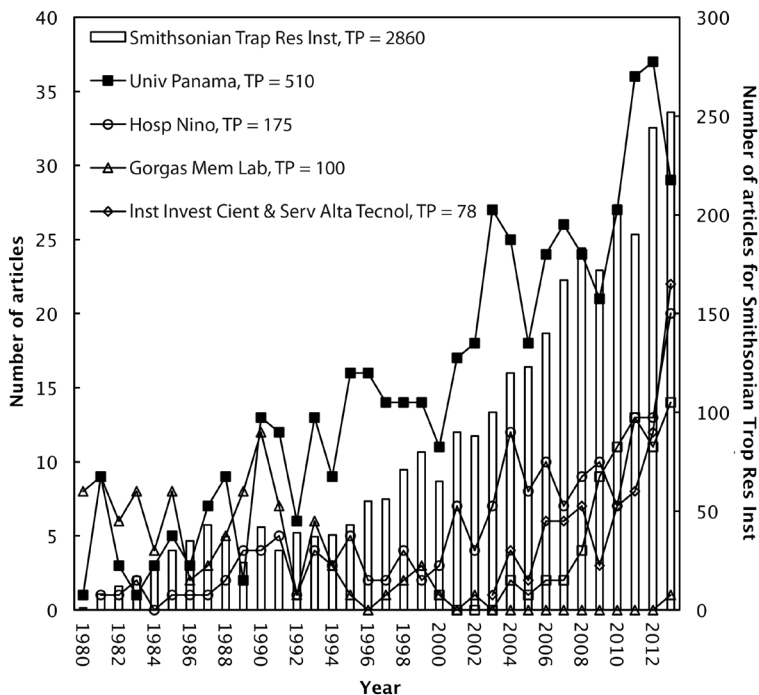


Fig. 8. Time trend in publications for the top Panama institutions in the Science Citation Index Expanded.

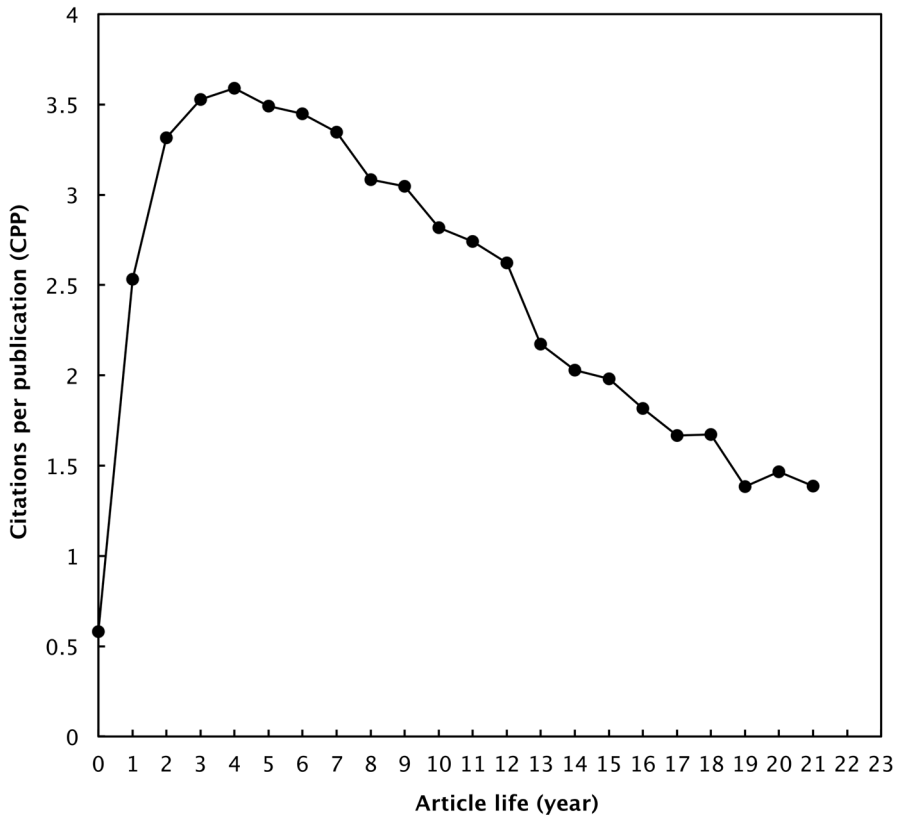


Fig. 9. Citation life for Panama publications in the Science Citation Index Expanded.