
**PATTERNS IN THE DIVERSITY
AND DISTRIBUTION OF
FLOWERING PLANT GENERA**

VOLUME II

APPENDICES

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A thesis presented for the degree of Doctor of Philosophy

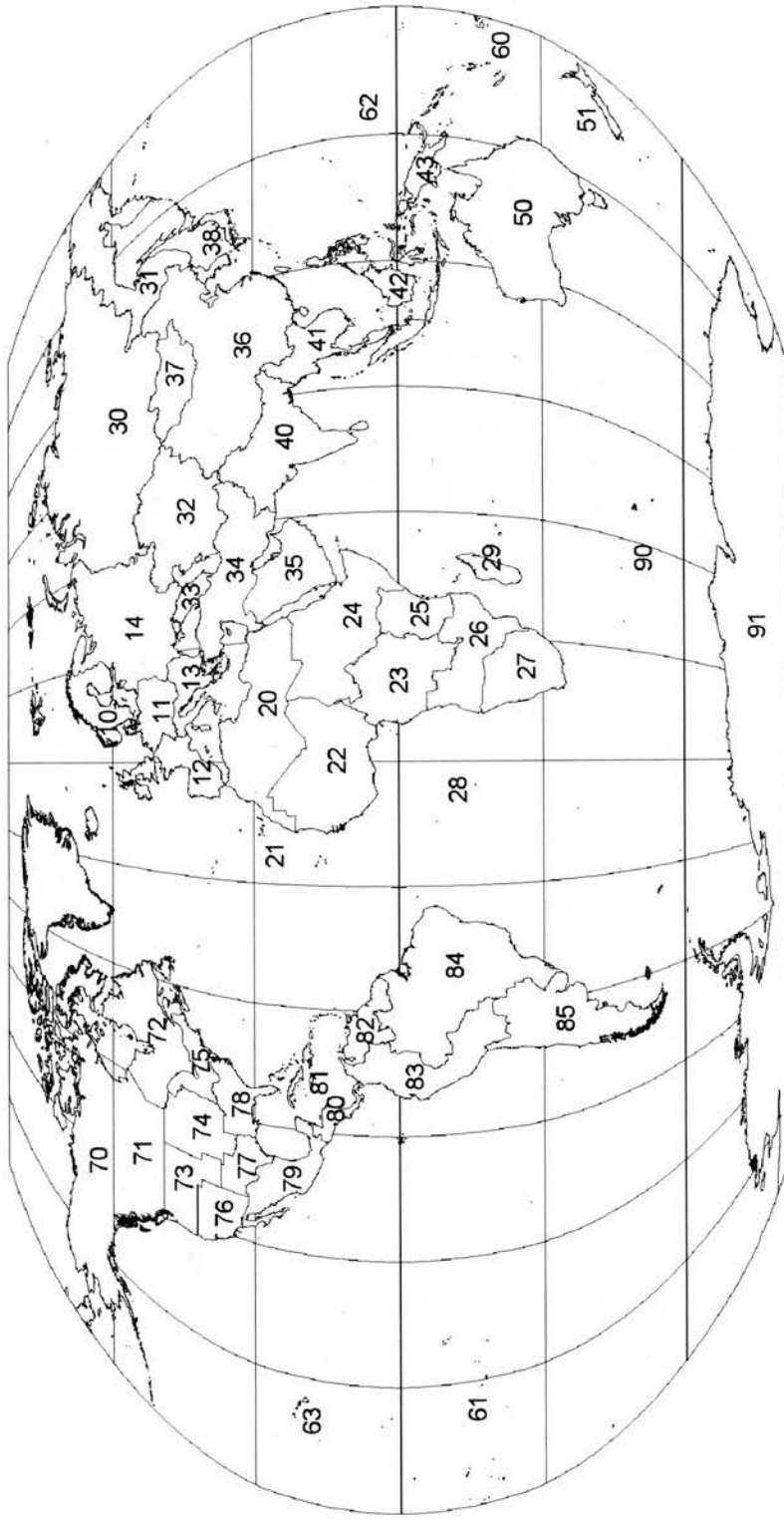
University of Edinburgh

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APPENDIX 1

**The TDWG World Geographical Scheme for
Recording Plant Distributions, edition 2**



Map of the 52 Level 2 Regions of the TDWG World Geographical Scheme for recording plant distributions (Brummitt, 2001); names and details of the geographic composition of each region are given here in Appendix 1, along with the numeric codes used. This map was reproduced as Figure 1.1.

**The TDWG World Geographical Scheme for Recording
Plant Distributions, edition 2 (Brummitt, 2001)**

The complete 4-level geographical scheme is shown, with the 52 Level 2 Regions used in this thesis given in bold title case, along with their numeric codes, and the constituent countries and Level-4 Units (with ISO codes) for each Region listed below. Although all modern political countries can be reconstructed from all those Level-4 Units sharing an ISO code, geo-political names and units used at higher levels should not be taken as political statements concerning the validity of those units.

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
1 EUROPE			
10 Northern Europe			
Denmark	DEN-OO	Denmark	DK
Finland	FIN-OO	Finland	FI
Føroyar	FOR-OO	Føroyar	FO
Great Britain	GRB-OO	Great Britain	UK
Iceland	ICE-OO	Iceland	IS
Ireland	IRE-IR	Ireland	IE
	IRE-NI	Northern Ireland	UK
Norway	NOR-OO	Norway	NO
Svalbard	SVA-OO	Svalbard	SJ
Sweden	SWE-OO	Sweden	SE
11 Middle Europe			
Austria	AUT-AU	Austria	AT
	AUT-LI	Liechtenstein	LI
Belgium	BGM-BE	Belgium	BE
	BGM-LU	Luxembourg	LU
Czechoslovakia	CZE-CZ	Czech Republic	CZ
	CZE-SL	Slovakia	SK
Germany	GER-OO	Germany	DE
Hungary	HUN-OO	Hungary	HU
Netherlands	NET-OO	Netherlands	NL
Poland	POL-OO	Poland	PL
Switzerland	SWI-OO	Switzerland	CH

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
12 Southwestern Europe			
Baleares	BAL-OO	Baleares	ES
Corse	COR-OO	Corse	FR
France	FRA-CI	Channel Is.	UK
	FRA-FR	France	FR
	FRA-MO	Monaco	MC
	POR-OO	Portugal	PT
Portugal	POR-OO	Portugal	PT
Sardegna	SAR-OO	Sardegna	IT
Spain	SPA-AN	Andorra	AD
	SPA-GI	Gibraltar	GI
	SPA-SP	Spain	ES
13 Southeastern Europe			
Albania	ALB-OO	Albania	AL
Bulgaria	BUL-OO	Bulgaria	BG
Greece	GRC-OO	Greece	GR
Italy	ITA-IT	Italy	IT
	ITA-SM	San Marino	SM
	ITA-VC	Vatican City	VA
	KRI-OO	Kriti	GR
Romania	ROM-OO	Romania	RO
Sicilia	SIC-MA	Malta	MT
	SIC-SI	Sicilia	IT
	TUE-OO	Turkey-in-Europe	TR
Turkey-in-Europe	TUE-OO	Turkey-in-Europe	TR
Yugoslavia	YUG-BH	Bosnia-Herzegovina	BA
	YUG-CR	Croatia	HR
	YUG-KO	Kosovo	YU
	YUG-MA	Macedonia	MK
	YUG-MN	Montenegro	YU
	YUG-SE	Serbia	YU
	YUG-SL	Slovenia	SI
14 Eastern Europe			
Belarus	BLR-OO	Belarus	BY
Baltic States	BLT-ES	Estonia	EE
	BLT-KA	Kaliningrad	RU
	BLT-LA	Latvia	RU

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
	BLT-LI	Lithuania	LT
Krym	KRY-OO	Krym	UA
Central European Russia	RUC-OO	Central European Russia	RU
East European Russia	RUE-OO	East European Russia	RU
North European Russia	RUN-OO	North European Russia	RU
South European Russia	RUS-OO	South European Russia	RU
Northwest European Russia	RUW-OO	Northwest European Russia	RU
Ukraine	UKR-MO	Moldova	MD
	UKR-UK	Ukraine	UA
2 AFRICA			
20 Northern Africa			
Algeria	ALG-OO	Algeria	DZ
Egypt	EGY-OO	Egypt	EG
Libya	LBY-OO	Libya	LY
Morocco	MOR-MO	Morocco	MA
	MOR-SP	Spanish North African Territories	ES
Tunisia	TUN-OO	Tunisia	TN
Western Sahara	WSA-OO	Western Sahara	EH
21 Macaronesia			
Azores	AZO-OO	Azores	PT
Canary Is.	CNY-OO	Canary Is.	ES
Cape Verde	CVI-OO	Cape Verde	CV
Madeira	MDR-OO	Madeira	PT
Selvagens	SEL-OO	Selvagens	PT
22 West Tropical Africa			
Benin	BEN-OO	Benin	BJ
Burkina	BKN-OO	Burkina	BF
Gambia, The	GAM-OO	Gambia, The	GM
Ghana	GHA-OO	Ghana	GH
Guinea-Bissau	GNB-OO	Guinea-Bissau	GW
Guinea	GUI-OO	Guinea	GN
Ivory Coast	IVO-OO	Ivory Coast	CI
Liberia	LBR-OO	Liberia	LR

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
Mali	MLI-OO	Mali	ML
Mauritania	MTN-OO	Mauritania	MR
Nigeria	NGA-OO	Nigeria	NG
Niger	NGR-OO	Niger	NE
Senegal	SEN-OO	Senegal	SN
Sierra Leone	SIE-OO	Sierra Leone	SL
Togo	TOG-OO	Togo	TG
23 West-Central Tropical Africa			
Burundi	BUR-OO	Burundi	BI
Cabinda	CAB-OO	Cabinda	AO
Central African Republic	CAF-OO	Central African Republic	CF
Cameroon	CMN-OO	Cameroon	CM
Congo	CON-OO	Congo	CG
Equatorial Guinea	EQG-OO	Equatorial Guinea	GQ
Gabon	GAB-OO	Gabon	GA
Gulf of Guinea Is.	GGI-AN	Annobón	GQ
	GGI-BI	Bioko	GQ
	GGI-PR	Príncipe	ST
	GGI-ST	São Tomé	ST
Rwanda	RWA-OO	Rwanda	RW
Zaire	ZAI-OO	Zaire	CD
24 Northeast Tropical Africa			
Chad	CHA-OO	Chad	TD
Djibouti	DJI-OO	Djibouti	DJ
Eritrea	ERI-OO	Eritrea	ER
Ethiopia	ETH-OO	Ethiopia	ET
Socotra	SOC-OO	Socotra	YE
Somalia	SOM-OO	Somalia	SO
Sudan	SUD-OO	Sudan	SD
25 East Tropical Africa			
Kenya	KEN-OO	Kenya	KE
Tanzania	TAN-OO	Tanzania	TZ
Uganda	UGA-OO	Uganda	UG
26 South Tropical Africa			
Angola	ANG-OO	Angola	AO

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
Malawi	MLW-OO	Malawi	MW
Mozambique	MOZ-OO	Mozambique	MZ
Zambia	ZAM-OO	Zambia	ZM
Zimbabwe	ZIM-OO	Zimbabwe	ZW
27 Southern Africa			
Botswana	BOT-OO	Botswana	BW
Cape Provinces	CPP-EC	Eastern Cape Province	ZA
	CPP-NC	Northern Cape Province	ZA
	CPP-WC	Western Cape Province	ZA
Caprivi Strip	CPV-OO	Caprivi Strip	NA
Lesotho	LES-OO	Lesotho	LS
Namibia	NAM-OO	Namibia	NA
KwaZulu-Natal	NAT-OO	KwaZulu-Natal	ZA
Free State	OFS-OO	Free State	ZA
Swaziland	SWZ-OO	Swaziland	SZ
Northern Provinces	TVL-GA	Gauteng	ZA
	TVL-MP	Mpumalanga	ZA
	TVL-NP	Northern Province	ZA
	TVL-NW	North-West Province	ZA
28 Middle Atlantic Ocean			
Ascension	ASC-OO	Ascension	SH
St. Helena	STH-OO	St. Helena	SH
29 Western Indian Ocean			
Aldabra	ALD-OO	Aldabra	SC
Chagos Archipelago	CGS-OO	Chagos Archipelago	IO
Comoros	COM-CO	Comoros	KM
	COM-MA	Mayotte	YT
Mauritius	MAU-OO	Mauritius	MU
Mozambique Channel Is.	MCI-OO	Mozambique Channel Is.	RE
Madagascar	MDG-OO	Madagascar	MG
Réunion	REU-OO	Réunion	RE
Rodrigues	ROD-OO	Rodrigues	MU
Seychelles	SEY-OO	Seychelles	SC

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
3 ASIA-TEMPERATE			
30 Siberia			
Altay	ALT-OO	Altay	RU
Buryatiya	BRY-OO	Buryatiya	RU
Chita	CTA-OO	Chita	RU
Irkutsk	IRK-OO	Irkutsk	RU
Krasnoyarsk	KRA-OO	Krasnoyarsk	RU
Tuva	TVA-OO	Tuva	RU
West Siberia	WSB-OO	West Siberia	RU
Yakutiya	YAK-OO	Yakutiya	RU
31 Russian Far East			
Amur	AMU-OO	Amur	RU
Kamchatka	KAM-OO	Kamchatka	RU
Khabarovsk	KHA-OO	Khabarovsk	RU
Kuril Is.	KUR-OO	Kuril Is.	RU
Magadan	MAG-OO	Magadan	RU
Primorye	PRM-OO	Primorye	RU
Sakhalin	SAK-OO	Sakhalin	RU
32 Middle Asia			
Kazakhstan	KAZ-OO	Kazakhstan	KZ
Kirgizstan	KGZ-OO	Kirgizstan	KG
Turkmenistan	TKM-OO	Turkmenistan	TM
Tadzhikistan	TZK-OO	Tadzhikistan	TJ
Uzbekistan	UZB-OO	Uzbekistan	UZ
33 Caucasus			
North Caucasus	NCS-CH	Chechnya	RU
	NCS-DA	Dagestan	RU
	NCS-IN	Ingushetiya	RU
	NCS-KB	Kabardino-Balkariya	RU
	NCS-KC	Karacheyevo-Cherkessiya	RU
	NCS-KR	Krasnodar	RU
	NCS-SO	Severo-Osetiya	RU
	NCS-ST	Stavropol	RU
Transcaucasus			

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name	ISO Code	
	TCS-AB	Abkhaziya	GE
	TCS-AD	Adzhariya	GE
	TCS-AR	Armenia	AM
	TCS-AZ	Azerbaijan	AZ
	TCS-GR	Gruziya	GE
	TCS-NA	Nakhichevan	AZ
	TCS-NK	Nagorno Karabakh	AM
34 Western Asia			
Afghanistan	AFG-OO	Afghanistan	AF
Cyprus	CYP-OO	Cyprus	CY
East Aegean Is.	EAI-OO	East Aegean Is.	GR
Iran	IRN-OO	Iran	IR
Iraq	IRQ-OO	Iraq	IQ
Lebanon-Syria	LBS-LB	Lebanon	LB
	LBS-SY	Syria	SY
Palestine	PAL-IS	Israel	IL
	PAL-JO	Jordan	JO
Sinai	SIN-OO	Sinai	EG
Turkey	TUR-OO	Turkey	TR
35 Arabian Peninsula			
Gulf States	GST-BA	Bahrain	BH
	GST-QA	Qatar	QA
	GST-UA	United Arab Emirates	AE
Kuwait	KUW-OO	Kuwait	KW
Oman	OMA-OO	Oman	OM
Saudi Arabia	SAU-OO	Saudi Arabia	SA
Yemen	YEM-NY	North Yemen	YE
	YEM-SY	South Yemen	YE
36 China			
China South-Central	CHC-CQ	Chongqing	CN
	CHC-GZ	Guizhou	CN
	CHC-HU	Hubei	CN
	CHC-SC	Sichuan	CN
	CHC-YN	Yunnan	CN
Hainan	CHH-OO	Hainan	CN

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code	
Inner Mongolia	CHI-NM	Nei Mongol	CN	
	CHI-NX	Ningxia	CN	
Manchuria	CHM-HJ	Heilongjiang	CN	
	CHM-JL	Jilin	CN	
	CHM-LN	Liaoning	CN	
	CHN-BJ	Beijing	CN	
China North-Central	CHN-GS	Gansu	CN	
	CHN-HB	Hebei	CN	
	CHN-SA	Shaanxi	CN	
	CHN-SD	Shandong	CN	
	CHN-SX	Shanxi	CN	
	CHN-TJ	Tianjin	CN	
	CHQ-OO	Qinghai	CN	
	CHS-AH	Anhui	CN	
China Southeast	CHS-FJ	Fujian	CN	
	CHS-GD	Guangdong	CN	
	CHS-GX	Guangxi	CN	
	CHS-HE	Henan	CN	
	CHS-HK	Hong Kong	CN	
	CHS-HN	Hunan	CN	
	CHS-JS	Jiangsu	CN	
	CHS-JX	Jiangxi	CN	
	CHS-KI	Kin-Men	TW	
	CHS-MA	Macau	MO	
	CHS-MP	Ma-tsu-Pai-chúan	TW	
	CHS-SH	Shanghai	CN	
	CHS-ZJ	Zhejiang	CN	
	Tibet	CHT-OO	Tibet	CN
	Xinjiang	CHX-OO	Xinjiang	CN
	37	Mongolia		
Mongolia	MON-OO	Mongolia	MN	
38	Eastern Asia			
Japan	JAP-HK	Hokkaido	JP	
	JAP-HN	Honshu	JP	

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
	JAP-KY	Kyushu	JP
	JAP-SH	Shikoku	JP
Korea	KOR-NK	North Korea	KP
	KOR-SK	South Korea	KR
Kazan-retto	KZN-OO	Kazan-retto	JP
Nansei-shoto	NNS-OO	Nansei-shoto	JP
Ogasawara-shoto	OGA-OO	Ogasawara-shoto	JP
Taiwan	TAI-OO	Taiwan	TW
4 ASIA-TROPICAL			
40 Indian Subcontinent			
Assam	ASS-AS	Assam	IN
	ASS-MA	Manipur	IN
	ASS-ME	Meghalaya	IN
	ASS-MI	Mizoram	IN
	ASS-NA	Nagaland	IN
	ASS-TR	Tripura	IN
Bangladesh	BAN-OO	Bangladesh	BD
East Himalaya	EHM-AP	Arunachal Pradesh	IN
	EHM-BH	Bhutan	BT
	EHM-DJ	Darjiling	IN
	EHM-SI	Sikkim	IN
India	IND-AP	Andhra Pradesh	IN
	IND-BI	Bihar	IN
	IND-CH	Chandigarh	IN
	IND-CT	Chattisgarh	IN
	IND-DD	Dadra-Nagar-Haveli	IN
	IND-DE	Delhi	IN
	IND-DI	Diu	IN
	IND-DM	Daman	IN
	IND-GO	Goa	IN
	IND-GU	Gujarat	IN
	IND-HA	Haryana	IN
	IND-JK	Jharkhand	IN
	IND-KE	Kerala	IN
	IND-KL	Karaikal	IN

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name	ISO Code
	IND-KT Karnataka	IN
	IND-MH Mahé	IN
	IND-MP Madhya Pradesh	IN
	IND-MR Maharashtra	IN
	IND-OR Orissa	IN
	IND-PO Pondicherry	IN
	IND-PU Punjab	IN
	IND-RA Rajasthan	IN
	IND-TN Tamil Nadu	IN
	IND-UP Uttar Pradesh	IN
	IND-WB West Bengal	IN
	IND-YA Yanam	IN
Laccadive Is.	LDV-OO Laccadive Is.	IN
Maldives	MDV-OO Maldives	MV
Nepal	NEP-OO Nepal	NP
Pakistan	PAK-OO Pakistan	PK
Sri Lanka	SRL-OO Sri Lanka	LK
West Himalaya	WHM-HP Himachal Pradesh	IN
	WHM-JK Jammu-Kashmir	IN
	WHM-UT Uttaranchal	IN
41 Indo-China		
Andaman Is.	AND-AN Andaman Is.	IN
	AND-CO Coco Is.	MM
Cambodia	CBD-OO Cambodia	KH
Laos	LAO-OO Laos	LA
Myanmar	MYA-OO Myanmar	MM
Nicobar Is.	NCB-OO Nicobar Is.	IN
South China Sea	SCS-PI Paracel Is.	PI
	SCS-SI Spratly Is.	SP*
Thailand	THA-OO Thailand	TH
Vietnam	VIE-OO Vietnam	VN
42 Malesia		
Borneo	BOR-BR Brunei	BN

* The code SP is not used officially for the Spratly Is.; ISO does not give them a code as their political status is disputed.

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name	ISO Code
	BOR-KA Kalimantan	ID
	BOR-SB Sabah	MY
	BOR-SR Sarawak	MY
Cocos (Keeling) Is.	CKI-OO Cocos (Keeling) Is.	CC
Jawa	JAW-OO Jawa	ID
Lesser Sunda Is.	LSI-BA Bali	ID
	LSI-ET East Timor	TP
	LSI-LS Lesser Sunda Is.	ID
Malaya	MLY-PM Peninsular Malaysia	MY
	MLY-SI Singapore	SG
Maluku	MOL-OO Maluku	ID
Philippines	PHI-OO Philippines	PH
Sulawesi	SUL-OO Sulawesi	ID
Sumatera	SUM-OO Sumatera	ID
Christmas I.	XMS-OO Christmas I.	CX
43 Papuaasia		
Bismarck Archipelago	BIS-OO Bismarck Archipelago	PG
New Guinea	NWG-IJ Irian Jaya	ID
	NWG-PN Papua New Guinea	PG
Solomon Is.	SOL-NO North Solomons	PG
	SOL-SO South Solomons	SB
5 AUSTRALASIA		
50 Australia		
Norfolk Is.	NFK-LH Lord Howe I.	AU
	NFK-NI Norfolk I.	NF
New South Wales	NSW-CT Australian Capital Territory	AU
	NSW-NS New South Wales	AU
Northern Territory	NTA-OO Northern Territory	AU
Queensland	QLD-CS Coral Sea Is. Territory	AU
	QLD-QU Queensland	AU
South Australia	SOA-OO South Australia	AU
Tasmania	TAS-OO Tasmania	AU
Victoria	VIC-OO Victoria	AU
Western Australia	WAU-AC Ashmore-Cartier Is.	AU
	WAU-WA Western Australia	AU

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
51 New Zealand			
Antipodean Is.	ATP-OO	Antipodean Is.	NZ
Chatham Is.	CTM-OO	Chatham Is.	NZ
Kermadec Is.	KER-OO	Kermadec Is.	NZ
New Zealand North	NZN-OO	New Zealand North	NZ
New Zealand South	NZS-OO	New Zealand South	NZ
6 PACIFIC			
60 Southwestern Pacific			
Fiji	FIJ-OO	Fiji	FJ
Gilbert Is.	GIL-OO	Gilbert Is.	KI
Howland-Baker Is.	HBI-OO	Howland-Baker Is.	UM
Nauru	NRU-OO	Nauru	NR
Niue	NUE-OO	Niue	NU
New Caledonia	NWC-OO	New Caledonia	NC
Phoenix Is.	PHX-OO	Phoenix Is.	KI
Samoa	SAM-AS	American Samoa	AS
	SAM-WS	Samoa	WS
Santa Cruz Is.	SCZ-OO	Santa Cruz Is.	SB
Tokelau-Manihiki	TOK-MA	Manihiki Is.	CK
	TOK-SW	Swains I.	AS
	TOK-TO	Tokelau	TK
Tonga	TON-OO	Tonga	TO
Tuvalu	TUV-OO	Tuvalu	TV
Vanuatu	VAN-OO	Vanuatu	VU
Wallis-Futuna Is.	WAL-OO	Wallis-Futuna Is.	WF
61 South-Central Pacific			
Cook Is.	COO-OO	Cook Is.	CK
Easter Is.	EAS-OO	Easter Is.	CL
Line Is.	LIN-KI	Kiribati Line Is.	KI
	LIN-US	U.S. Line Is.	UM
Marquesas	MRQ-OO	Marquesas	PF
Pitcairn Is.	PIT-OO	Pitcairn Is.	PN
Society Is.	SCI-OO	Society Is.	PF
Tuamotu	TUA-OO	Tuamotu	PF

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
Tubuai Is.	TUB-OO	Tubuai Is.	PF
62 Northwestern Pacific			
Caroline Is.	CRL-MF	Micronesia Federated States	FM
	CRL-PA	Palau	PW
Marcus I.	MCS-OO	Marcus I.	JP
Marianas	MRN-GU	Guam	GU
	MRN-NM	Northern Marianas	MP
Marshall Is.	MRS-OO	Marshall Is.	MH
Wake I.	WAK-OO	Wake I.	UM
63 North-Central Pacific			
Hawaii	HAW-HI	Hawaiian Is.	US
	HAW-JI	Johnston I.	UM
	HAW-MI	Midway Is.	UM
7 NORTHERN AMERICA			
70 Subarctic America			
Aleutian Is.	ALU-OO	Aleutian Is.	US
Alaska	ASK-OO	Alaska	US
Greenland	GNL-OO	Greenland	GL
Nunavut	NUN-OO	Nunavut	CA
Northwest Territories	NWT-OO	Northwest Territories	CA
Yukon	YUK-OO	Yukon	CA
71 Western Canada			
Alberta	ABT-OO	Alberta	CA
British Columbia	BRC-OO	British Columbia	CA
Manitoba	MAN-OO	Manitoba	CA
Saskatchewan	SAS-OO	Saskatchewan	CA
72 Eastern Canada			
Labrador	LAB-OO	Labrador	CA
New Brunswick	NBR-OO	New Brunswick	CA
Newfoundland	NFL-NE	Newfoundland	CA
	NFL-SP	St. Pierre-Miquelon	PM
Nova Scotia	NSC-OO	Nova Scotia	CA
Ontario	ONT-OO	Ontario	CA

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
Prince Edward I.	PEI-OO	Prince Edward I.	CA
Québec	QUE-OO	Québec	CA
73 Northwestern U.S.A.			
Colorado	COL-OO	Colorado	US
Idaho	IDA-OO	Idaho	US
Montana	MNT-OO	Montana	US
Oregon	ORE-OO	Oregon	US
Washington	WAS-OO	Washington	US
Wyoming	WYO-OO	Wyoming	US
74 North-Central U.S.A.			
Illinois	ILL-OO	Illinois	US
Iowa	IOW-OO	Iowa	US
Kansas	KAN-OO	Kansas	US
Minnesota	MIN-OO	Minnesota	US
Missouri	MSO-OO	Missouri	US
North Dakota	NDA-OO	North Dakota	US
Nebraska	NEB-OO	Nebraska	US
Oklahoma	OKL-OO	Oklahoma	US
South Dakota	SDA-OO	South Dakota	US
Wisconsin	WIS-OO	Wisconsin	US
75 Northeastern U.S.A.			
Connecticut	CNT-OO	Connecticut	US
Indiana	INI-OO	Indiana	US
Maine	MAI-OO	Maine	US
Massachusetts	MAS-OO	Massachusetts	US
Michigan	MIC-OO	Michigan	US
New Hampshire	NWH-OO	New Hampshire	US
New Jersey	NWJ-OO	New Jersey	US
New York	NWY-OO	New York	US
Ohio	OHI-OO	Ohio	US
Pennsylvania	PEN-OO	Pennsylvania	US
Rhode Island	RHO-OO	Rhode Island	US
Vermont	VER-OO	Vermont	US
West Virginia	WVA-OO	West Virginia	US

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
76 Southwestern U.S.A.			
Arizona	ARI-OO	Arizona	US
California	CAL-OO	California	US
Nevada	NEV-OO	Nevada	US
Utah	UTA-OO	Utah	US
77 South-Central U.S.A.			
New Mexico	NWM-OO	New Mexico	US
Texas	TEX-OO	Texas	US
78 Southeastern U.S.A.			
Alabama	ALA-OO	Alabama	US
Arkansas	ARK-OO	Arkansas	US
Delaware	DEL-OO	Delaware	US
Florida	FLA-OO	Florida	US
Georgia	GEO-OO	Georgia	US
Kentucky	KTY-OO	Kentucky	US
Louisiana	LOU-OO	Louisiana	US
Maryland	MRY-OO	Maryland	US
Mississippi	MSI-OO	Mississippi	US
North Carolina	NCA-OO	North Carolina	US
South Carolina	SCA-OO	South Carolina	US
Tennessee	TEN-OO	Tennessee	US
Virginia	VRG-OO	Virginia	US
District of Columbia	WDC-OO	District of Columbia	US
79 Mexico			
Mexico Central	MXC-DF	México Distrito Federal	MX
	MXC-ME	México State	MX
	MXC-MO	Morelos	MX
	MXC-PU	Puebla	MX
	MXC-TL	Tlaxcala	MX
Mexico Northeast	MXE-AG	Aguascalientes	MX
	MXE-CO	Coahuila	MX
	MXE-CU	Chihuahua	MX
	MXE-DU	Durango	MX
	MXE-GU	Guanajuato	MX
	MXE-HI	Hidalgo	MX

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name	ISO Code
	MXE-NL Nuevo León	MX
	MXE-QU Querétaro	MX
	MXE-SL San Luis Potosí	MX
	MXE-TA Tamaulipas	MX
	MXE-ZA Zacatecas	MX
Mexico Gulf	MXG-VC Veracruz	MX
Mexican Pacific Is.	MXI-GU Guadalupe I.	MX
	MXI-RA Rocas Alijos	MX
	MXI-RG Revillagigedo Is.	MX
Mexico Northwest	MXN-BC Baja California	MX
	MXN-BS Baja California Sur	MX
	MXN-SI Sinaloa	MX
	MXN-SO Sonora	MX
Mexico Southwest	MXS-CL Colima	MX
	MXS-GR Guerrero	MX
	MXS-JA Jalisco	MX
	MXS-MI Michoacán	MX
	MXS-NA Nayarit	MX
	MXS-OA Oaxaca	MX
Mexico Southeast	MXT-CA Campeche	MX
	MXT-CI Chiapas	MX
	MXT-QR Quintana Roo	MX
	MXT-TB Tabasco	MX
	MXT-YU Yucatán	MX
8 SOUTHERN AMERICA		
80 Central America		
Belize	BLZ-OO Belize	BZ
Costa Rica	COS-OO Costa Rica	CR
Central American Pacific Is.	CPI-CL Clipperton I.	PF
	CPI-CO Cocos I.	CR
	CPI-MA Malpelo I.	CO
El Salvador	ELS-OO El Salvador	SV
Guatemala	GUA-OO Guatemala	GT
Honduras	HON-OO Honduras	HN
Nicaragua	NIC-OO Nicaragua	NI

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
Panama	PAN-OO	Panama	PA
81 Caribbean			
Aruba	ARU-OO	Aruba	AW
Bahamas	BAH-OO	Bahamas	BS
Bermuda	BER-OO	Bermuda	BM
Cayman Is.	CAY-OO	Cayman Is.	KY
Cuba	CUB-OO	Cuba	CU
Dominican Republic	DOM-OO	Dominican Republic	DO
Haiti	HAI-HA	Haiti	HT
	HAI-NI	Navassa I.	PR
Jamaica	JAM-OO	Jamaica	JM
Leeward Is.	LEE-AB	Antigua-Barbuda	AG
	LEE-AG	Anguilla	AI
	LEE-AV	Aves I.	VE
	LEE-BV	British Virgin Is.	VG
	LEE-GU	Guadeloupe	GP
	LEE-MO	Montserrat	MS
	LEE-NL	Netherlands Leeward Is.	AN
	LEE-SK	St. Kitts-Nevis	KN
	LEE-SM	St. Martin-St. Barthélemy	GP
	LEE-VI	Virgin Is.	VI
Netherlands Antilles	NLA-BO	Bonaire	AN
	NLA-CU	Curaçao	AN
Puerto Rico	PUE-OO	Puerto Rico	PR
Southwest Caribbean	SWC-CC	Colombian Caribbean Is.	CO
	SWC-HC	Honduran Caribbean Is.	HN
	SWC-NC	Nicaraguan Caribbean Is.	NI
Turks-Caicos Is.	TCI-OO	Turks-Caicos Is.	TC
Trinidad-Tobago	TRT-OO	Trinidad-Tobago	TT
Venezuelan Antilles	VNA-OO	Venezuelan Antilles	VE
Windward Is.	WIN-BA	Barbados	BB
	WIN-DO	Dominica	DM
	WIN-GR	Grenada	GD
	WIN-MA	Martinique	MQ
	WIN-SL	St. Lucia	LC
	WIN-SV	St. Vincent	VC

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
82 Northern South America			
French Guiana	FRG-OO	French Guiana	GF
Guyana	GUY-OO	Guyana	GY
Suriname	SUR-OO	Suriname	SR
Venezuela	VEN-OO	Venezuela	VE
83 Western South America			
Bolivia	BOL-OO	Bolivia	BO
Colombia	CLM-OO	Colombia	CO
Ecuador	ECU-OO	Ecuador	EC
Galápagos	GAL-OO	Galápagos	EC
Peru	PER-OO	Peru	PE
84 Brazil			
Brazil West-Central	BZC-DF	Brasília Distrito Federal	BR
	BZC-GO	Goiás	BR
	BZC-MS	Mato Grosso do Sul	BR
	BZC-MT	Mato Grosso	BR
Brazil Northeast	BZE-AL	Alagoas	BR
	BZE-BA	Bahia	BR
	BZE-CE	Ceará	BR
	BZE-FN	Fernando de Noronha	BR
	BZE-MA	Maranhão	BR
	BZE-PB	Paraíba	BR
	BZE-PE	Pernambuco	BR
	BZE-PI	Piauí	BR
	BZE-RN	Rio Grande do Norte	BR
	BZE-SE	Sergipe	BR
Brazil Southeast	BZL-ES	Espírito Santo	BR
	BZL-MG	Minas Gerais	BR
	BZL-RJ	Rio de Janeiro	BR
	BZL-SP	São Paulo	BR
	BZL-TR	Trindade	BR
Brazil North	BZN-AC	Acre	BR
	BZN-AM	Amazonas	BR
	BZN-AP	Amapá	BR

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name	ISO Code
	BZN-PA Pará	BR
	BZN-RM Roraima	BR
	BZN-RO Rondônia	BR
	BZN-TO Tocantins	BR
Brazil South	BZS-PR Paraná	BR
	BZS-RS Rio Grande do Sul	BR
	BZS-SC Santa Catarina	BR
85 Southern South America		
Argentina Northeast	AGE-BA Buenos Aires	AR
	AGE-CD Córdoba	AR
	AGE-CH Chaco	AR
	AGE-CN Corrientes	AR
	AGE-DF Argentina Distrito Federal	AR
	AGE-ER Entre Ríos	AR
	AGE-FO Formosa	AR
	AGE-LP La Pampa	AR
	AGE-MI Misiones	AR
	AGE-SF Santa Fé	AR
Argentina South	AGS-CB Chubut	AR
	AGS-NE Neuquén	AR
	AGS-RN Rio Negro	AR
	AGS-SC Santa Cruz	AR
	AGS-TF Tierra del Fuego (Argentina)	AR
Argentina Northwest	AGW-CA Catamarca	AR
	AGW-JU Jujuy	AR
	AGW-LR La Rioja	AR
	AGW-ME Mendoza	AR
	AGW-SA Salta	AR
	AGW-SE Santiago del Estero	AR
	AGW-SJ San Juan	AR
	AGW-SL San Luis	AR
	AGW-TU Tucumán	AR
Chile Central	CLC-BI Biobío	CL
	CLC-CO Coquimbo	CL
	CLC-LA La Araucania	CL
	CLC-MA Maule	CL

Level-1 Continental and Level-2 Regional Codes and Names / Level-3 Unit Name	Level-4 Code/Level-4 Unit Name		ISO Code
	CLC-OH	O'Higgins	CL
	CLC-SA	Santiago	CL
	CLC-VA	Valparaíso	CL
Chile North	CLN-AN	Antofagasta	CL
	CLN-AT	Atacama	CL
	CLN-TA	Tarapacá	CL
Chile South	CLS-AI	Aisén	CL
	CLS-LL	Los Lagos	CL
	CLS-MG	Magellanes	CL
Desventurados Is.	DSV-OO	Desventurados Is.	CL
Juan Fernández Is.	JNF-OO	Juan Fernández Is.	CL
Paraguay	PAR-OO	Paraguay	PY
Uruguay	URU-OO	Uruguay	UY
9 ANTARCTIC			
90 Subantarctic Islands			
Amsterdam-St. Paul Is.	ASP-OO	Amsterdam-St. Paul Is.	TF
Bouvet I.	BOU-OO	Bouvet I.	BV
Crozet Is.	CRZ-OO	Crozet Is.	TF
Falkland Is.	FAL-OO	Falkland Is.	FK
Heard-McDonald Is.	HMD-OO	Heard-McDonald Is.	HM
Kerguelen	KEG-OO	Kerguelen	TF
Macquarie Is.	MAQ-OO	Macquarie Is.	AU
Marion-Prince Edward Is.	MPE-OO	Marion-Prince Edward Is.	ZA
South Georgia	SGE-OO	South Georgia	GS
South Sandwich Is.	SSA-OO	South Sandwich Is.	GS
Tristan da Cunha	TDC-OO	Tristan da Cunha	SH
91 Antarctic Continent			
Antarctica	ANT-OO	Antarctica	AQ

APPENDIX 2

Global distributions for all angiosperm families

Results based on recursive *k*-means partitioning of a non-metric multidimensional scaling ordination (Chapter 6)

Global distributions for all angiosperm families

Group 1 73 Families

Cosmopolitan

Agavaceae	Malvaceae
Alismataceae	Menyanthaceae
Amaranthaceae	Molluginaceae
Amaryllidaceae	Myrsinaceae
Apocynaceae	Nymphaeaceae
Araceae	Oleaceae
Araliaceae	Onagraceae
Aristolochiaceae	Orchidaceae
Asteraceae	Orobanchaceae
Boraginaceae	Oxalidaceae
Brassicaceae	Plantaginaceae
Campanulaceae	Plumbaginaceae
Cannabaceae	Poaceae
Caryophyllaceae	Polygalaceae
Celastraceae	Polygonaceae
Ceratophyllaceae	Portulacaceae
Convolvulaceae	Potamogetonaceae
Cornaceae	Ranunculaceae
Crassulaceae	Rhamnaceae
Cucurbitaceae	Rosaceae
Cyperaceae	Rubiaceae
Droseraceae	Rutaceae
Elatinaceae	Salicaceae
Ericaceae	Santalaceae
Euphorbiaceae	Sapindaceae
Fabaceae	Scrophulariaceae
Gentianaceae	Solanaceae
Geraniaceae	Thymelaeaceae
Haloragaceae	Typhaceae
Hydrocharitaceae	Ulmaceae
Iridaceae	Umbelliferae
Juncaceae	Urticaceae
Lamiaceae	Verbenaceae
Lentibulariaceae	Violaceae
Linaceae	Vitaceae
Loranthaceae	Zygophyllaceae
Lythraceae	

Group 2 12 Families

Throughout temperate and most tropical regions

Adoxaceae	Colchicaceae
Asparagaceae	Hypericaceae
Balsaminaceae	Juncaginaceae
Berberidaceae	Phrymaceae
Buxaceae	Ruscaceae
Caprifoliaceae	Zannichelliaceae

Group 3 16 Families

Panboreal, into tropical Africa and tropical Asia, and south to southern South America

Alliaceae
Betulaceae
Cistaceae
Fagaceae
Frankeniaceae
Grossulariaceae
Hydrangeaceae
Juglandaceae

Nartheciaceae
Nelumbonaceae
Papaveraceae
Polemoniaceae
Primulaceae
Saxifragaceae
Staphyleaceae
Zosteraceae

Group 4 5 Families
Panboreal and into tropical Asia and America

Acoraceae
Elaeagnaceae
Liliaceae

Melanthiaceae
Parnassiaceae

Group 5 2 Families
Panboreal and tropical Africa

Asphodelaceae

Hyacinthaceae

Group 6 3 Families
Widespread through north temperate regions

Diapensiaceae
Scheuchzeriaceae

Tofieldiaceae

Group 7 2 Families
Europe to eastern and tropical Asia to Australia, Africa and Madagascar, S. North America, South America

Hamamelidaceae

Hemerocallidaceae

Group 8 1 Family
Temperate Eurasia and Africa, SW. U.S.A. and Mexico

Resedaceae

Group 9 1 Family
Temperate Eurasia and Africa

Tamaricaceae

Group 10 2 Families
E. Mediterranean (1), eastern and tropical Asia, warm temperate and tropical America

Magnoliaceae

Styracaceae

Group 11 4 Families
S. Europe and N. Africa to eastern and tropical Asia, North America

Biebersteiniaceae
Ixoliiriaceae

Morinaceae
Nitrariaceae

Group 12 2 Families
Temperate Eurasia and North Africa

Butomaceae

Cynomoriaceae

Group 13 2 Families

Mediterranean

Aphyllanthaceae

Drosophyllaceae

Group 14 3 Families

Widespread in temperate Eurasia, and in North America

Datisceae

Paeoniaceae

Peganaceae

Group 15 1 Family

Mediterranean region, Australia

Posidoniaceae

Group 16 20 Families

Pantropical and warm temperate regions, and into temperate regions

Acanthaceae

Menispermaceae

Aizoaceae

Moraceae

Anacardiaceae

Myricaceae

Aquifoliaceae

Nyctaginaceae

Celtidaceae

Phyllanthaceae

Commelinaceae

Phytolacaceae

Cymodoceaceae

Pontederiaceae

Eriocaulaceae

Proteaceae

Hypoxidaceae

Rafflesiaceae

Lauraceae

Smilacaceae

Group 17 18 Families

Pantropical and warm temperate

Bignoniaceae

Meliaceae

Burmanniaceae

Myrtaceae

Dioscoreaceae

Palmae

Erythroxylaceae

Passifloraceae

Gesneriaceae

Piperaceae

Hydroleaceae

Sapotaceae

Loganiaceae

Simaroubaceae

Mackinlayaceae

Ternstroemiaceae

Malpighiaceae

Xyridaceae

Group 18 8 Families

Pantropical to E. Asia and S. U.S.A.

Begoniaceae

Olacaceae

Chrysobalanaceae

Opiliaceae

Combretaceae

Picrodendraceae

Ochnaceae

Putranjivaceae

Group 19 6 Families

Pantropical

Balanophoraceae

Cardiopteridaceae

Sabiaceae
Tapisciaceae

Theaceae

Group 29 4 Families
Madagascar (1), SE. Asia to Australasia and Pacific, South America

Corsiaceae
Centrolepidaceae

Laxmanniaceae
Stylidiaceae

Group 30 9 Families
Palaeotropical, to eastern Asia

Ancistrocladaceae
Aponogetonaceae
Ctenolophonaceae
Flagellariaceae
Irvingiaceae

Musaceae
Pandaceae
Pedaliaceae
Sladeniaceae

Group 31 2 Families
Throughout the Palaeotropics, including Pacific

Pandanaceae

Pittosporaceae

Group 32 5 Families
Africa east to India (and 2 into Indo-China)

Gisekiaceae
Moringaceae
Neuradaceae

Salvadoraceae
Vahliaceae

Group 33 8 Families
Seychelles (1), Eastern and SE. Asia to Australia and S. Pacific

Araliaceae
Crypteroniaceae
Hanguanaceae
Nepenthaceae

Pentaphragmataceae
Philydraceae
Polyosmaceae
Tetramelaceae

Group 34 9 Families
Tropical Africa to South Africa and Arabia, and Madagascar; 1 also S. Pacific

Agapanthaceae
Aphloiaceae
Barbeyaceae
Cyclocheilaceae
Dirachmaceae

Kirkiaceae
Montiniaceae
Oliniaceae
Stilbaceae

Group 35 4 Families
West and Central Africa

Dioncophyllaceae
Hoplestigmataceae

Huaceae
Medusandraceae

Group 36 6 Families
Endemic to South Africa

Bruniaceae
Geissolomataceae
Lanariaceae

Penaeaceae
Rhynchocalycaceae
Roridulaceae

Group 37 8 Families
Endemic to Madagascar/Mascarene Is.

Asteropeiaceae
Barbeuiaceae
Didiereaceae
Melanophyllaceae

Physenaceae
Rousseaceae
Sarcolaenaceae
Sphaerosepalaceae

Group 38 12 Families
Eastern Asia

Bretschneideraceae
Cercidiphyllaceae
Circaeasteraceae
Dipentodontaceae
Eucommiaceae
Eupteleaceae

Helwingiaceae
Paulowniaceae
Petrosaviaceae
Stachyuraceae
Torricelliaceae
Trochodendraceae

Group 39 4 Families
Eastern and tropical Asia

Carlemanniaceae
Daphniphyllaceae

Lowiaceae
Pentaphylacaceae

Group 40 6 Families
Tropical Asia, Australasia and Pacific

Himantandraceae
Joinvilleaceae
Lophopyxidaceae

Myodocarpaceae
Sphenostemonaceae
Trimeniaceae

Group 41 11 Families
Australasia and S. Pacific

Alseuosmiaceae
Argophyllaceae
Balanopaceae
Byblidaceae
Campynemanthaceae
Carpodetaceae

Corynocarpaceae
Eupomatiaceae
Hydatellaceae
Pennantiaceae
Xeronemataceae

Group 42 13 Families
Endemic to Australia

Akaniaceae
Anarthriaceae
Aphanopetalaceae
Austrobaileyaceae
Blandfordiaceae
Boryaceae
Cephalotaceae

Dasypogonaceae
Doryanthaceae
Ecdeiocoleaceae
Emblingiaceae
Gyrostemonaceae
Xanthorrhoeaceae

Group 43 6 Families
Endemic to either New Caledonia or Fiji

Amborellaceae
Degeneriaceae
Oncotheceae

Paracryphiaceae
Phellinaceae
Strasburgeriaceae

Group 44 1 Family
New Zealand

Ixerbaceae

Group 45 5 Families
North America and into South America

Lennoaceae
Lilaeaceae
Martyniaceae

Sarraceniaceae
Themidaceae

Group 46 7 Families
Northern America

Crossosomataceae
Fouquieriaceae
Koeberliniaceae
Limnanthaceae

Sarcobataceae
Setchellanthaceae
Simmondsiaceae

Group 47 4 Families
Tropical Northern America

Agdestidaceae
Plocospermataceae

Stegnospermataceae
Ticodendraceae

Group 48 3 Families
Neotropics and warm temperate America

Cannaceae
Cyrillaceae

Picramniaceae

Group 49 13 Families
Neotropical

Achatocarpaceae
Alstroemeriaceae
Alzateaceae
Brunelliaceae
Caryocaraceae
Cyclanthaceae
Lacistemataceae

Marcgraviaceae
Muntingiaceae
Phyllonomaceae
Theophrastaceae
Tovariaceae
Tropaeolaceae

Group 50 4 Families
Tropical and southern South America

Calyceraceae
Columelliaceae

Quillajaceae
Vivaniaceae

Group 51 4 Families
Tropical South America

Euphroniaceae
Goupiaceae

Peridiscaceae
Rhabdodendraceae

Group 52 7 Families
Southern South America

Aextoxicaceae
Gomortegaceae
Halophytaceae
Lactoridaceae

Misodendraceae
Philesiaceae
Tribelaceae

Group 53 1 Family
Mediterranean region, eastern Asia to Pacific, Neotropics
Coriariaceae

Group 54 1 Family
Tropical Africa, eastern Asia, North America
Iteaceae

Group 55 6 Families
Tropical Africa, Neotropics

Canellaceae
Humiriaceae
Lepidobotryaceae

Rapateaceae
Schlegeliaceae
Thumiaceae

Group 56 5 Families
Widespread in tropical and warm temperate America, also in tropical Africa

Bromeliaceae
Caricaceae
Mayacaceae

Siparunaceae
Vochysiaceae

Group 57 3 Families
Tropical to South Africa, Arabia, SW. U.S.A., southern South America

Hydnoraceae
Melianthaceae

Tecophilaeaceae

Group 58 1 Family
Southern Africa, Madagascar, tropical South America
Strelitziaceae

Group 59 3 Families
Madagascar (1), Eastern and tropical Asia to Australasia and Pacific, warm temperate and tropical America

Chloranthaceae
Elaeocarpaceae

Symplocaceae

Group 60 6 Families

APPENDIX 3

Global floristic elements for all angiosperm genera

Results based on recursive *k*-means partitioning of a non-metric multidimensional scaling ordination (Chapter 6)

Global floristic elements for all angiosperm genera

- Element 1** **91 genera**
Cosmopolitan
- Element 2** **103 genera**
North temperate regions south into tropical regions
- Element 3** **143 genera**
North temperate regions extending into tropical regions
- Element 4** **28 genera**
North temperate regions and into tropical Asia and tropical America south to Southern South America
- Element 5** **30 genera**
North temperate regions and into tropical Asia and tropical America
- Element 6** **11 genera**
North temperate regions south to Northeast tropical Africa and Himalaya, in America south along the Andes into Southern South America
- Element 7** **25 genera**
Mediterranean region; Southern Africa; temperate and tropical Asia; temperate and tropical America
- Element 8** **11 genera**
Europe and north temperate Asia, North America and south into Andean South America
- Element 9** **8 genera**
Circum-arctic and temperate mountains; 1 outlier in Andes of Argentina
- Element 10** **1 genus**
Endemic to Subarctic America
- Element 11** **24 genera**
Temperate eastern Asia to northern Europe and widespread through North America; Andes of South America
- Element 12** **115 genera**
Central Asia reaching Eastern Europe and Himalaya and into Indo-China
- Element 13** **44 genera**
North temperate Asia reaching Eastern Europe and Himalaya and into Indo-China and Malesia
- Element 14** **35 genera**
China and Mongolia, reaching to Eastern Europe, Russian Far East and Eastern Asia
- Element 15** **7 genera**
Endemic to Siberia

- Element 16** **1 genus**
Endemic to Mongolia
- Element 17** **79 genera**
Temperate eastern Asia
- Element 18** **3 genera**
Endemic to Russian Far East
- Element 19** **168 genera**
Endemic to China
- Element 20** **46 genera**
Endemic to Eastern Asia
- Element 21** **20 genera**
Throughout most temperate and tropical regions of the Old World, with an outlier in NW. U.S.A.
- Element 22** **11 genera**
Throughout temperate and into tropical regions of the Old World
- Element 23** **47 genera**
Throughout temperate Eurasia and into tropical Africa
- Element 24** **9 genera**
Throughout temperate Eurasia and tropical Africa
- Element 25** **19 genera**
Europe and Mediterranean region and into tropical Africa, east to Indian Subcontinent
- Element 26** **18 genera**
Mediterranean region and throughout tropical Africa east to Indian Subcontinent and into Indo-China
- Element 27** **9 genera**
Europe and tropical Africa extending east to W. China
- Element 28** **61 genera**
Temperate Eurasia south to Mediterranean region and Himalaya and into Indo-China; outliers in Australia and New Zealand
- Element 29** **17 genera**
Throughout temperate Eurasia and reaching North Africa and into Malesia
- Element 30** **45 genera**
Europe and Mediterranean region east to Himalaya and W. China and into Indo-China
- Element 31** **25 genera**
Europe and Mediterranean region east to W. Himalaya
- Element 32** **15 genera**
Mediterranean region east to Indian Subcontinent
- Element 33** **88 genera**
Mediterranean region and reaching Northern Europe, Macaronesia, Caucasus and Arabian Peninsula

- Element 34** **21 genera**
Mediterranean region east to China and Mongolia
- Element 35** **114 genera**
Europe and Mediterranean region east into Siberia and Middle Asia and south into Arabian Peninsula and tropical Africa
- Element 36** **9 genera**
Europe and Mediterranean region
- Element 37** **54 genera**
Europe and North Africa to Macaronesia
- Element 38** **47 genera**
Endemic to Northern Africa
- Element 39** **38 genera**
Endemic to Macaronesia
- Element 40** **41 genera**
Europe
- Element 41** **32 genera**
Endemic to Southwestern Europe
- Element 42** **25 genera**
Endemic to Southeastern Europe
- Element 43** **23 genera**
Mediterranean region and Northeast tropical Africa east to W. Himalaya
- Element 44** **14 genera**
Mediterranean region to Arabian Peninsula, Northeast Tropical Africa and Southern Africa
- Element 45** **27 genera**
Central Asia to SE. Europe, W. China and Himalaya and into Indo-China
- Element 46** **1 genus**
Endemic to Eastern Europe
- Element 47** **39 genera**
SE. Europe to Western Asia, reaching SW. Europe and Arabian Peninsula
- Element 48** **33 genera**
North and Northeast tropical Africa east to Indian Subcontinent and into Indo-China; 1 outlier in Australia
- Element 49** **40 genera**
Northeast Tropical Africa and Arabian Peninsula, reaching North Africa and Macaronesia and eastward to Indian Subcontinent
- Element 50** **14 genera**
Macaronesia and North Africa to Western Asia and Arabian Peninsula
- Element 51** **12 genera**
Northeast and East tropical Africa to Arabian Peninsula

- Element 52** **7 genera**
Endemic to Arabian Peninsula
- Element 53** **91 genera**
Western and Central Asia, reaching North Africa and Siberia
- Element 54** **56 genera**
Endemic to Middle Asia
- Element 55** **13 genera**
Endemic to Caucasus
- Element 56** **103 genera**
Endemic to Western Asia
- Element 57** **33 genera**
Western Asia and Indian Subcontinent to Central Asia and China, and extending into northern and tropical Africa
- Element 58** **1 genus**
Northern, South Tropical and Southern Africa, Western Asia, Arabia; Australia, New Zealand, New Caledonia; Southern South America.
- Element 59** **1 genus**
Mediterranean region; Australia.
- Element 60** **1 genus**
Spain, North Africa; South Africa.
- Element 61** **2 genera**
SW. Europe and Macaronesia; E. North America, Mexico
- Element 62** **1 genus**
SE. Europe, Caucasus; NE. and C. Mexico.
- Element 63** **1 genus**
Macaronesia; S. Brazil and Southern South America
- Element 64** **1 genus**
Madagascar and W. Indian Ocean islands; Mexico.
- Element 65** **1 genus**
Cameroon; Japan
- Element 66** **1 genus**
South tropical and Southern Africa; Texas
- Element 67** **146 genera**
Throughout tropical and into most temperate regions
- Element 68** **58 genera**
Throughout tropical regions and reaching temperate regions
- Element 69** **88 genera**
Throughout tropical regions and extending into temperate regions

- Element 70** **7 genera**
Throughout tropical regions and into north temperate regions, in America north to Canada
- Element 71** **81 genera**
Tropical Africa and Madagascar, extending to Arabian Peninsula; tropical America north into North America
- Element 72** **40 genera**
Throughout tropical regions and north into North America
- Element 73** **44 genera**
Tropical Africa and Madagascar; tropical America north into southern and western U.S.A.
- Element 74** **4 genera**
Southern Africa and Madagascar; Papuasia, Australasia and the Pacific; Central America and tropical South America
- Element 75** **14 genera**
Madagascar; China and Eastern Asia through tropical Asia to Australasia and the Pacific; tropical America north to Canada and south to Southern South America
- Element 76** **6 genera**
West and Central Africa; S. China and Eastern Asia through to Australasia and SW. Pacific; Mexico south to Southern South America
- Element 77** **74 genera**
Tropical Asia to Russian Far East and through tropical Asia to Australasia and the Pacific; tropical America north to Subarctic America and south to Southern South America and Subantarctic Islands
- Element 78** **36 genera**
China and Eastern Asia to Siberia and through tropical Asia to Australasia and SW. Pacific; eastern U.S.A. to Subarctic America and Central America and Caribbean, also in South America
- Element 79** **37 genera**
China and Eastern Asia to Siberia and Malesia; SE. U.S.A. to Subarctic America and Mexico and Caribbean
- Element 80** **28 genera**
Australasia, extending to Malesia and the southern Pacific; Southern South America and the Subantarctic Islands
- Element 81** **2 genera**
New Zealand; Subantarctic Islands
- Element 82** **27 genera**
Throughout Palaeotropical regions and into temperate Asia, with 1 outlier in Mexico
- Element 83** **7 genera**
Throughout Palaeotropical regions and north into the Mediterranean region and temperate Asia
- Element 84** **112 genera**
Throughout Palaeotropical regions and into temperate Asia, also reaching Subantarctic Islands
- Element 85** **157 genera**
Tropical Africa and Madagascar, tropical Asia through to Australasia and the Pacific and north into temperate Asia

- Element 86** **53 genera**
Africa and Madagascar, S. China and Eastern Asia and tropical Asia through to Australasia and the Pacific
- Element 87** **35 genera**
Tropical Africa and Madagascar, Arabian Peninsula and through tropical Asia
- Element 88** **38 genera**
Africa and Madagascar eastward to Indian Subcontinent and into Indo-China
- Element 89** **38 genera**
Africa and Madagascar, Arabian Peninsula and eastward to Indian Subcontinent; 1 outlier in Australia
- Element 90** **66 genera**
Africa and Madagascar, extending to Arabian Peninsula and Western Asia and also to Subantarctic Islands
- Element 91** **126 genera**
Tropical Africa and Madagascar, also reaching Macaronesia, Arabian Peninsula, St. Helena and Subantarctic Islands
- Element 92** **403 genera**
Endemic to Western Indian Ocean
- Element 93** **8 genera**
Tropical Africa; Australasia, 2 also reaching Arabian Peninsula
- Element 94** **500 genera**
Throughout tropical Africa, 1 also in Macaronesia
- Element 95** **587 genera**
Endemic to Southern Africa
- Element 96** **69 genera**
Tropical Africa and Madagascar
- Element 97** **343 genera**
Tropical Africa, reaching St. Helena
- Element 98** **35 genera**
Endemic to West Tropical Africa
- Element 99** **100 genera**
Endemic to West-Central Tropical Africa
- Element 100** **49 genera**
Endemic to Northeast Tropical Africa
- Element 101** **51 genera**
Endemic to East Tropical Africa
- Element 102** **35 genera**
Endemic to South Tropical Africa

- Element 103** **1 genus**
South Africa; St. Helena
- Element 104** **10 genera**
Endemic to Middle Atlantic Ocean
- Element 105** **12 genera**
South Africa, Madagascar; SE. Asia, Australasia and SW. Pacific
- Element 106** **12 genera**
Widespread in temperate and tropical Asia, reaching to Eastern Europe and through the Pacific
- Element 107** **264 genera**
S. China, Indian Subcontinent and Indo-China and into Eastern Asia and Malesia
- Element 108** **115 genera**
S. China and Eastern Asia and through tropical Asia to Australasia and the Pacific
- Element 109** **197 genera**
S. China and Eastern Asia to Papuasia, and extending to Australasia and the Pacific
- Element 110** **14 genera**
Scattered through eastern and tropical Asia to Australia and the Pacific
- Element 111** **197 genera**
S. China and Eastern Asia to Malesia and reaching Papuasia
- Element 112** **137 genera**
S. China and E. Himalaya to Indo-China and Malesia
- Element 113** **164 genera**
Endemic to Indian Subcontinent
- Element 114** **107 genera**
Endemic to Indo-China
- Element 115** **89 genera**
Malesia, Papuasia and NE. Australia, reaching Indo-China, New Zealand and the Pacific
- Element 116** **150 genera**
Indo-China and Malesia to Australasia and the Pacific
- Element 117** **102 genera**
Indo-China to Malesia and Papuasia
- Element 118** **236 genera**
Endemic to Malesia
- Element 119** **91 genera**
Endemic to Papuasia
- Element 120** **51 genera**
Papuasia and SW. Pacific extending to Indo-China and Hawai'ian Islands
- Element 121** **70 genera**
Papuasia and Australia, reaching New Zealand and into the Pacific

- Element 122** **72 genera**
Australasia and the Pacific
- Element 123** **669 genera**
Endemic to Australia
- Element 124** **5 genera**
SW. Pacific and New Zealand; 1 also in Hawai'ian Islands
- Element 125** **46 genera**
Endemic to New Zealand
- Element 126** **8 genera**
Islands of the Pacific
- Element 127** **117 genera**
Endemic to Southwestern Pacific
- Element 128** **7 genera**
Endemic to South-Central Pacific
- Element 129** **2 genera**
Endemic to Northwestern Pacific
- Element 130** **33 genera**
Endemic to North-Central Pacific
- Element 131** **5 genera**
Hawai'ian Islands; U.S.A. south to southern South America
- Element 132** **27 genera**
Widespread through North and South America
- Element 133** **73 genera**
Temperate and tropical North and South America
- Element 134** **38 genera**
Western North America to Western and Southern South America
- Element 135** **4 genera**
Scattered through western North and South America
- Element 136** **6 genera**
Southern U.S.A. and Mexico; Western and Southern South America
- Element 137** **4 genera**
Eastern North America south to Southern South America
- Element 138** **10 genera**
U.S.A. south to Southern South America
- Element 139** **12 genera**
Western U.S.A. to Western South America
- Element 140** **18 genera**
SW. U.S.A. to Central America

- Element 141** **29 genera**
North America south to Central America and Caribbean
- Element 142** **50 genera**
North America south to Mexico
- Element 143** **77 genera**
Western North America and Mexico, extending into Central America
- Element 144** **107 genera**
Southern U.S.A. and Mexico
- Element 145** **12 genera**
Endemic to South-Central U.S.A.
- Element 146** **15 genera**
Widespread through North America
- Element 147** **39 genera**
Central and Eastern North America
- Element 148** **53 genera**
Central and Eastern U.S.A.
- Element 149** **2 genera**
Endemic to Northeastern U.S.A.
- Element 150** **40 genera**
Endemic to Southeastern U.S.A.
- Element 151** **37 genera**
Western and Central North America
- Element 152** **71 genera**
Western U.S.A.
- Element 153** **14 genera**
Endemic to Northwestern U.S.A.
- Element 154** **98 genera**
Endemic to Southwestern U.S.A.
- Element 155** **8 genera**
Southern U.S.A., Mexico and Caribbean reaching to Central U.S.A. and Northern South America
- Element 156** **2 genera**
Eastern U.S.A. and Caribbean
- Element 157** **3 genera**
Central and Eastern U.S.A. south into Northern and Western South America
- Element 158** **40 genera**
Southern U.S.A. south to Southern South America
- Element 159** **23 genera**
SE. U.S.A. to Brazil, reaching SW. U.S.A. and Southern South America

- Element 160** **39 genera**
Florida and Caribbean, Mexico south to Southern South America
- Element 161** **25 genera**
Florida and Caribbean, Mexico and Central America
- Element 162** **156 genera**
Mexico, Central America and Caribbean
- Element 163** **270 genera**
Endemic to Mexico
- Element 164** **76 genera**
Endemic to Central America
- Element 165** **196 genera**
Endemic to Caribbean
- Element 166** **30 genera**
Mexico and Southern South America, reaching Subantarctic Islands
- Element 167** **306 genera**
Mexico and Caribbean south to Southern South America
- Element 168** **182 genera**
Mexico south to Southern South America
- Element 169** **29 genera**
Central America south to Southern South America
- Element 170** **317 genera**
Central America and tropical South America
- Element 171** **43 genera**
Central America and Western South America
- Element 172** **50 genera**
Central America extending south into Southern South America
- Element 173** **13 genera**
Caribbean to S. Brazil and Argentina, reaching the Subantarctic Islands
- Element 174** **682 genera**
Tropical South America and northern Argentina, reaching the Caribbean
- Element 175** **100 genera**
Endemic to Northern South America
- Element 176** **311 genera**
Endemic to Western South America
- Element 177** **414 genera**
Endemic to Brazil
- Element 178** **2 genera**
Andes, S. Brazil and southern South America extending to the Subantarctic Islands

Element 179 **116 genera**
Western and Southern South America, extending to the Subantarctic Islands

Element 180 **235 genera**
Endemic to Southern South America

Element 181 **3 genera**
Endemic to Subantarctic Islands

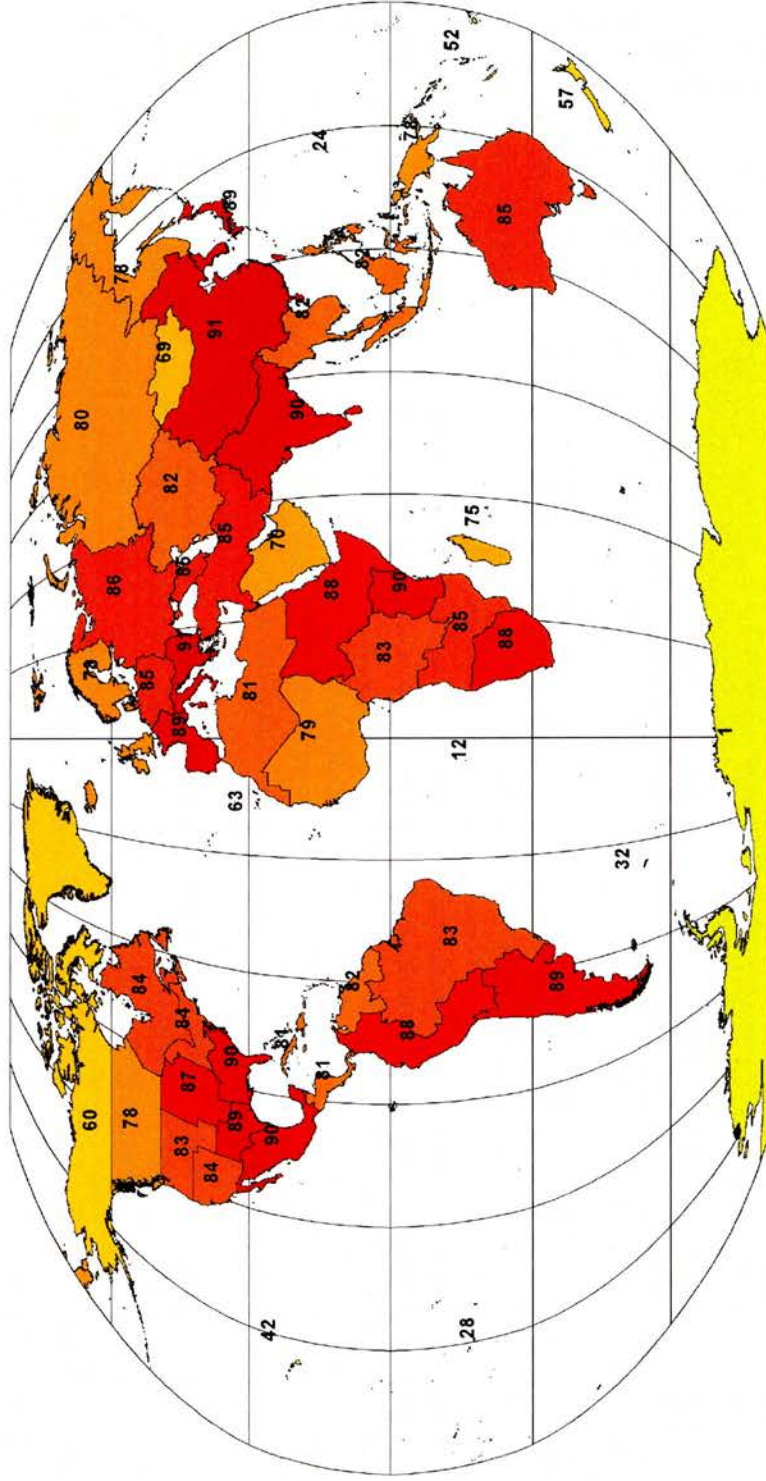
APPENDIX 4

Choropleth maps for each global floristic element of all angiosperm genera

Maps are based on a standard Robinson projection for the world;
for all maps, graduated colours range from yellow (low diversity) to red (high diversity),
while regions with no genera for a particular floristic element are left blank;
actual numbers of genera within each region are shown for each floristic element.

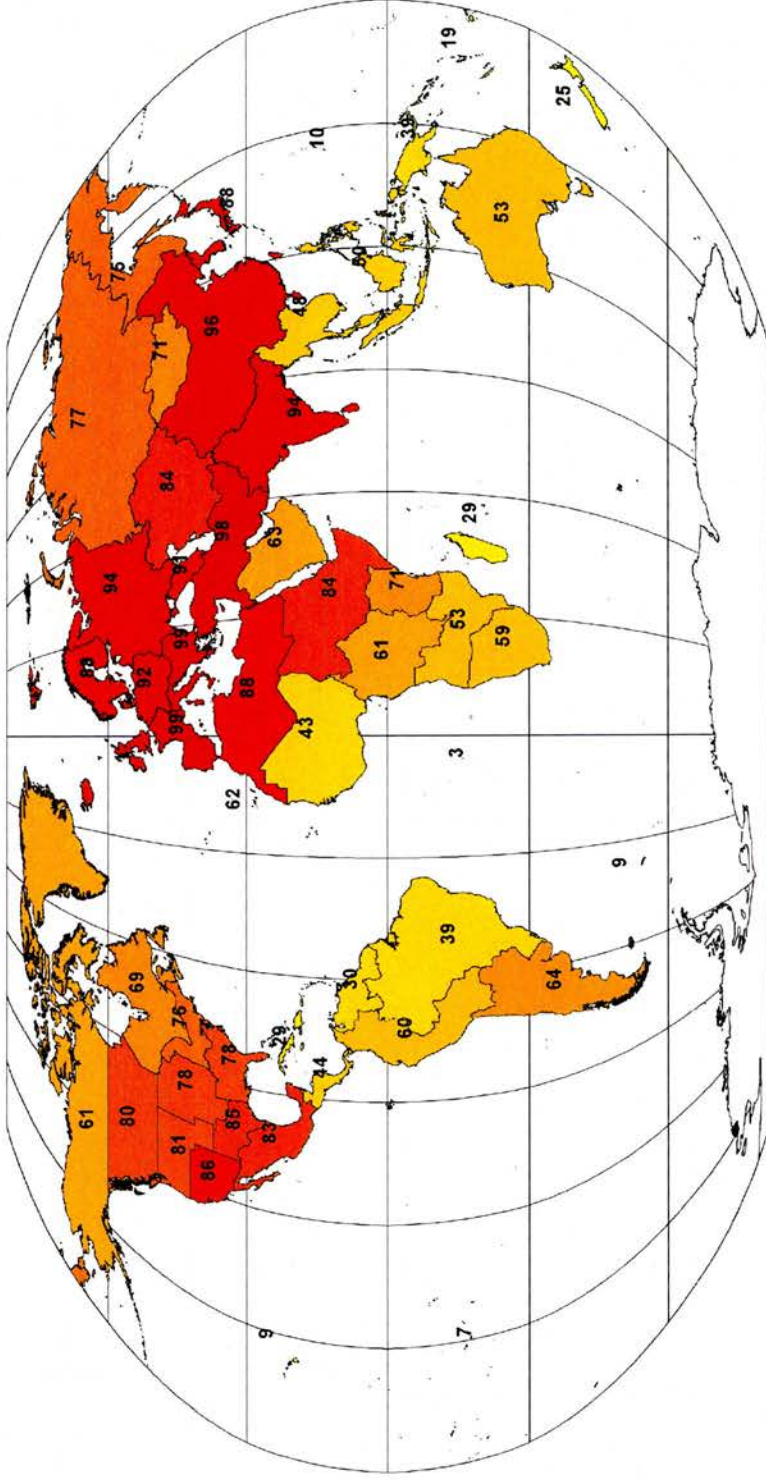
Element 1 91 genera

Cosmopolitan



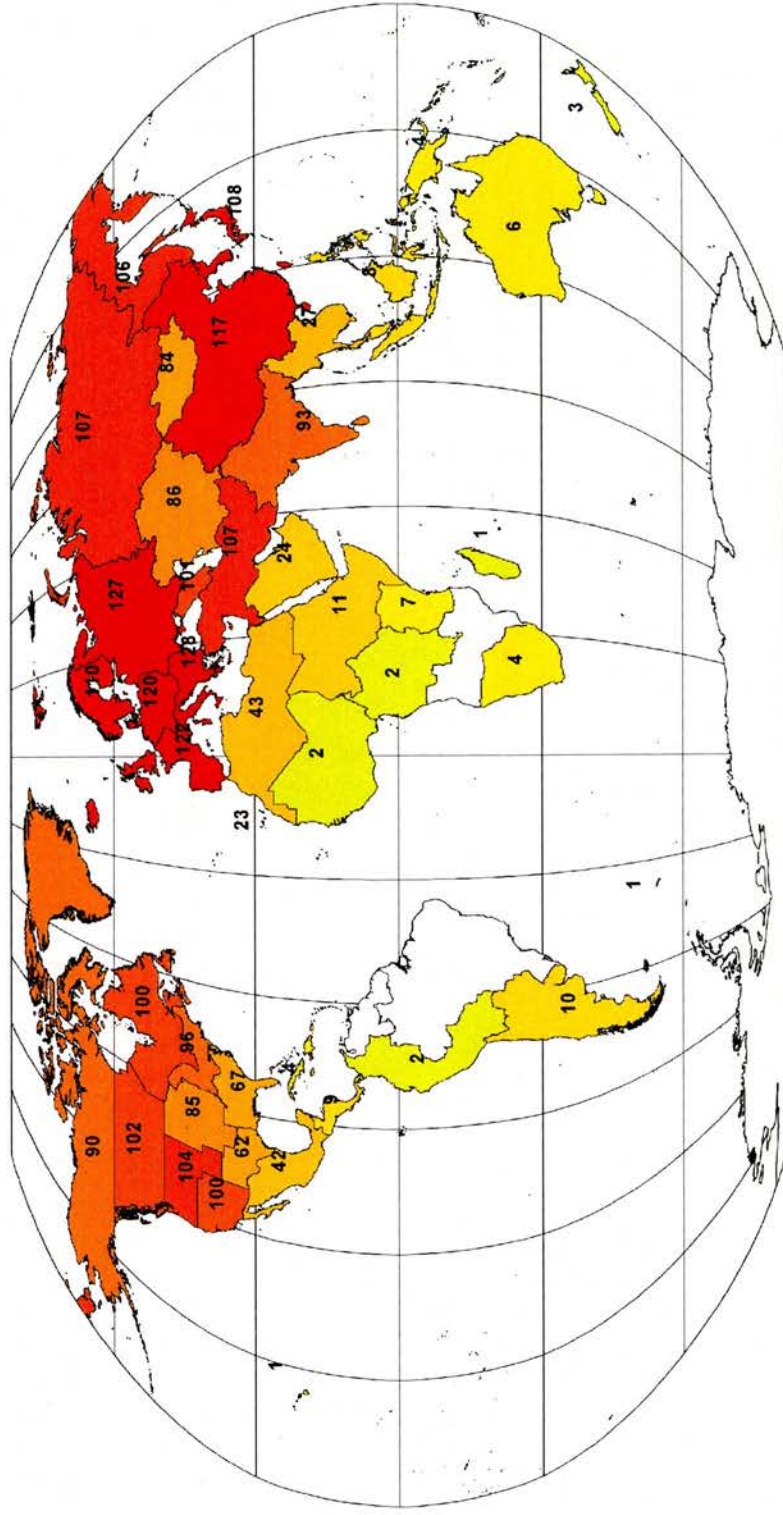
Element 2 **103 genera**

North temperate regions south into tropical regions



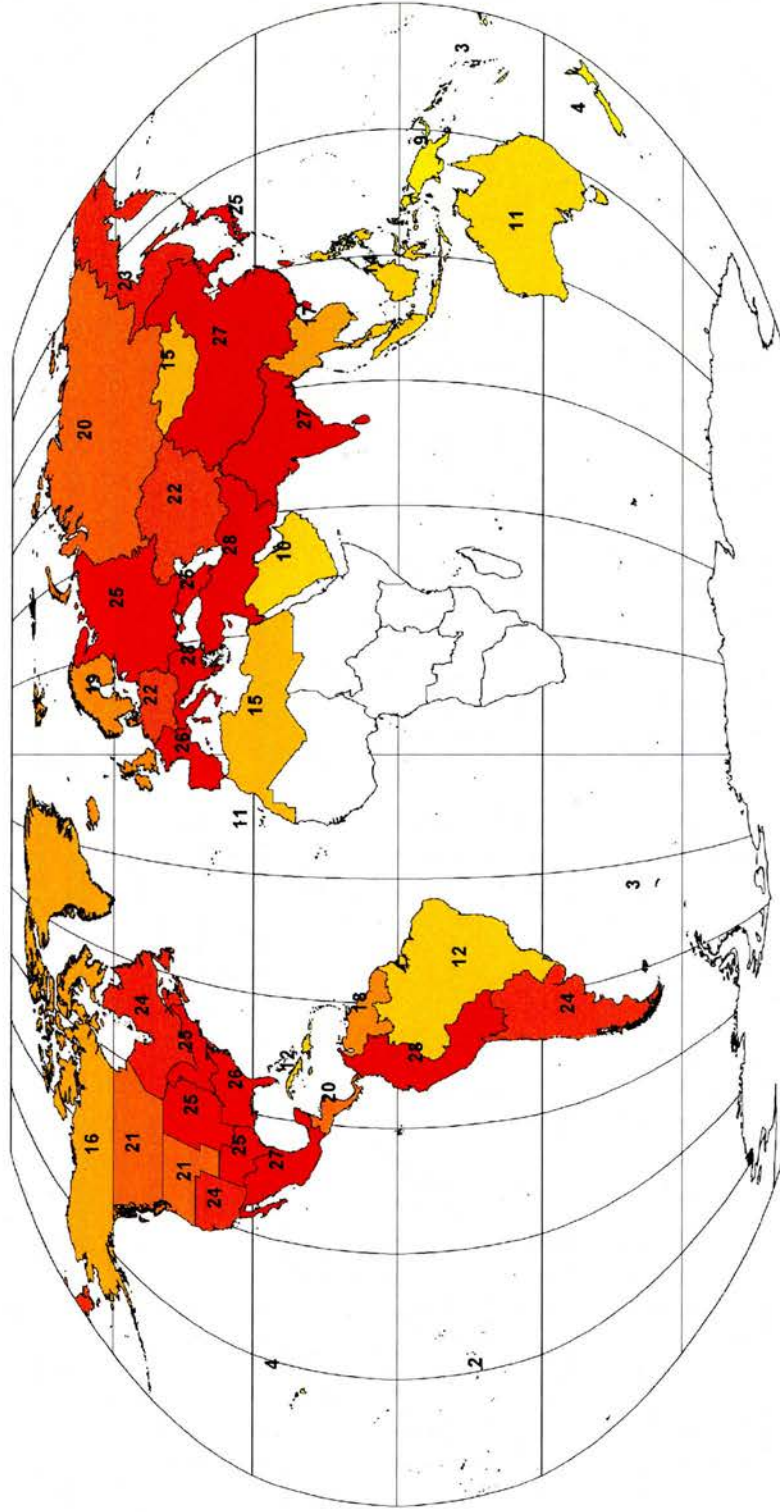
Element 3 **143 genera**

North temperate regions extending into tropical regions



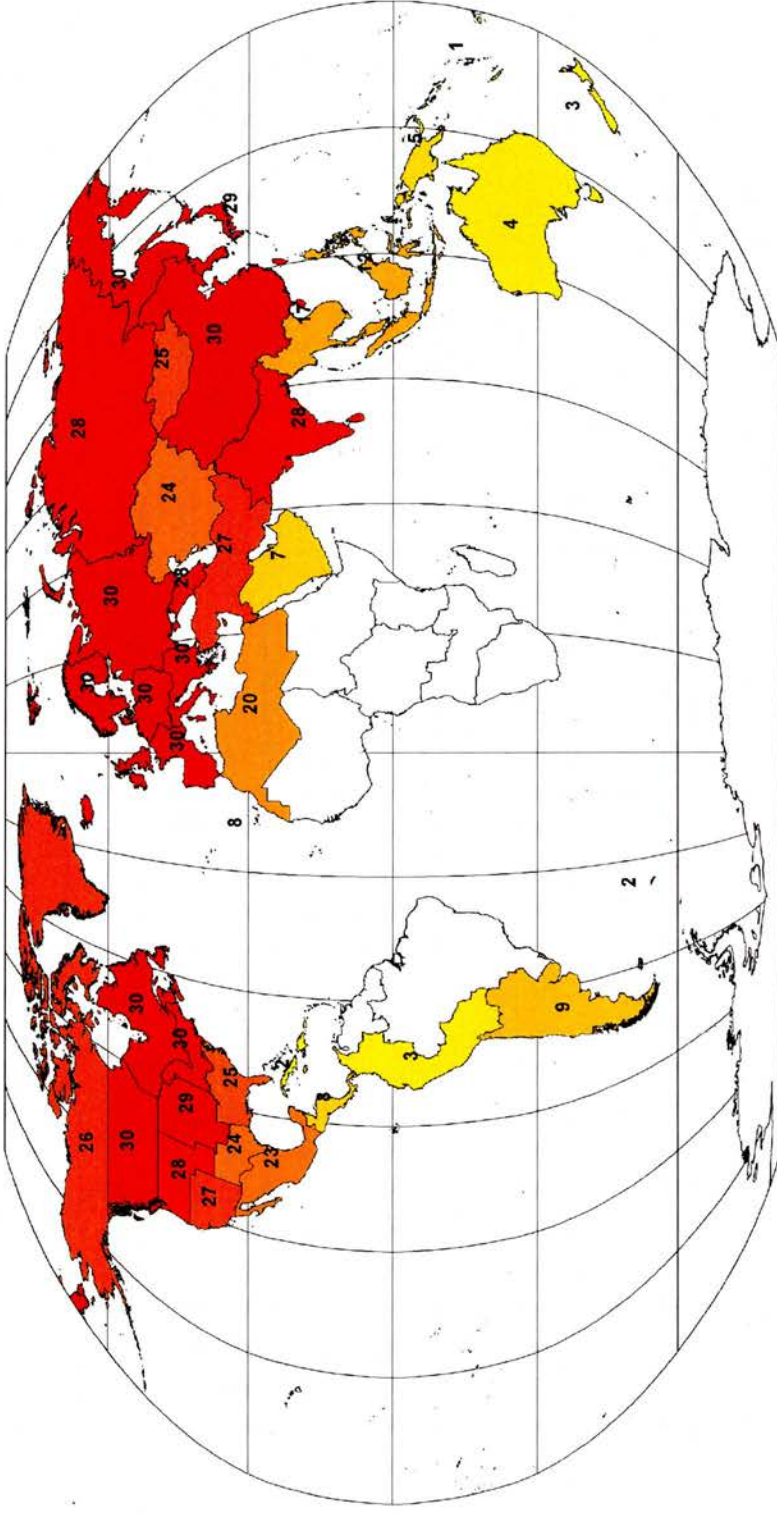
Element 4 **28 genera**

North temperate regions and into tropical Asia and tropical America south to Southern South America



Element 5 **30 genera**

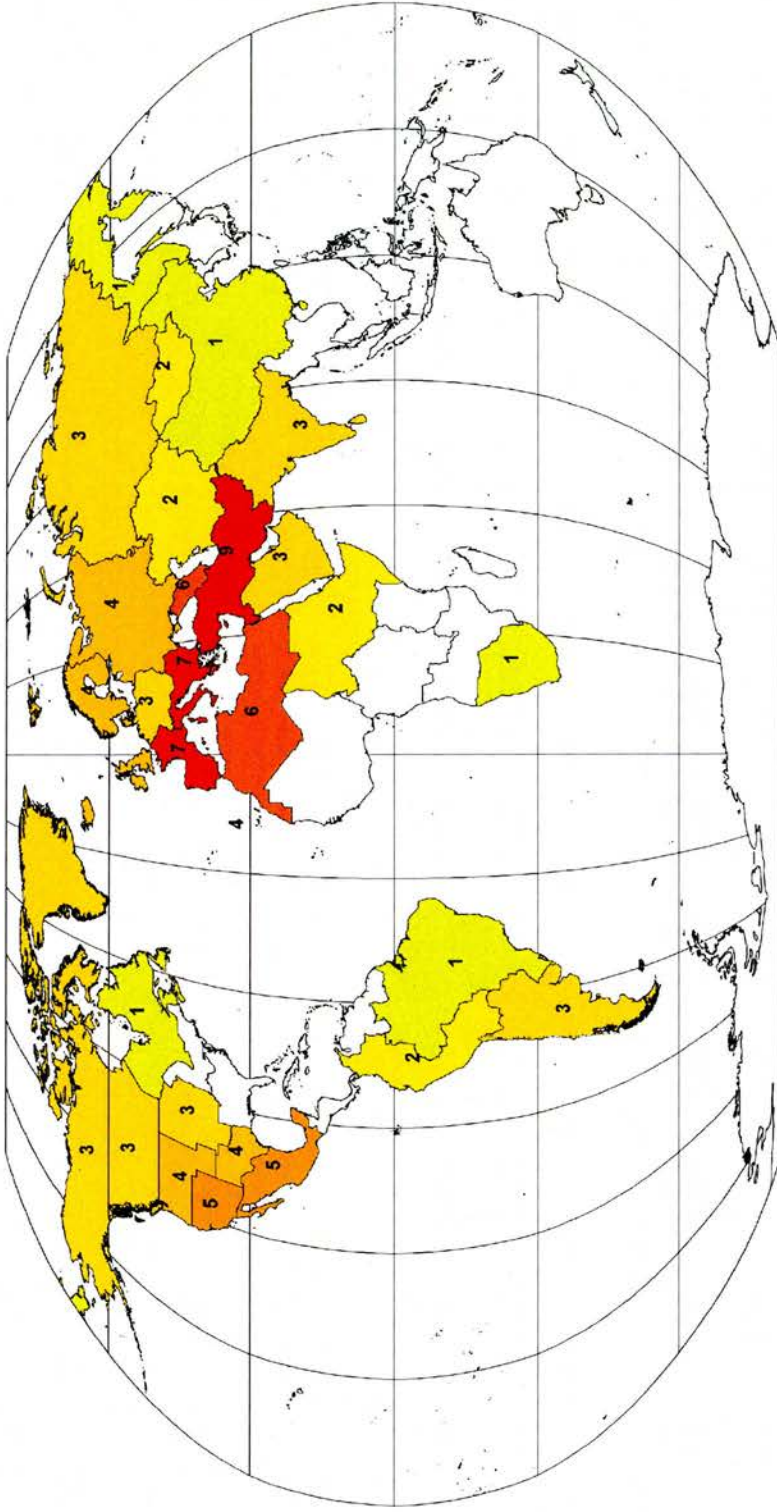
North temperate regions and into tropical Asia and tropical America



Element 6

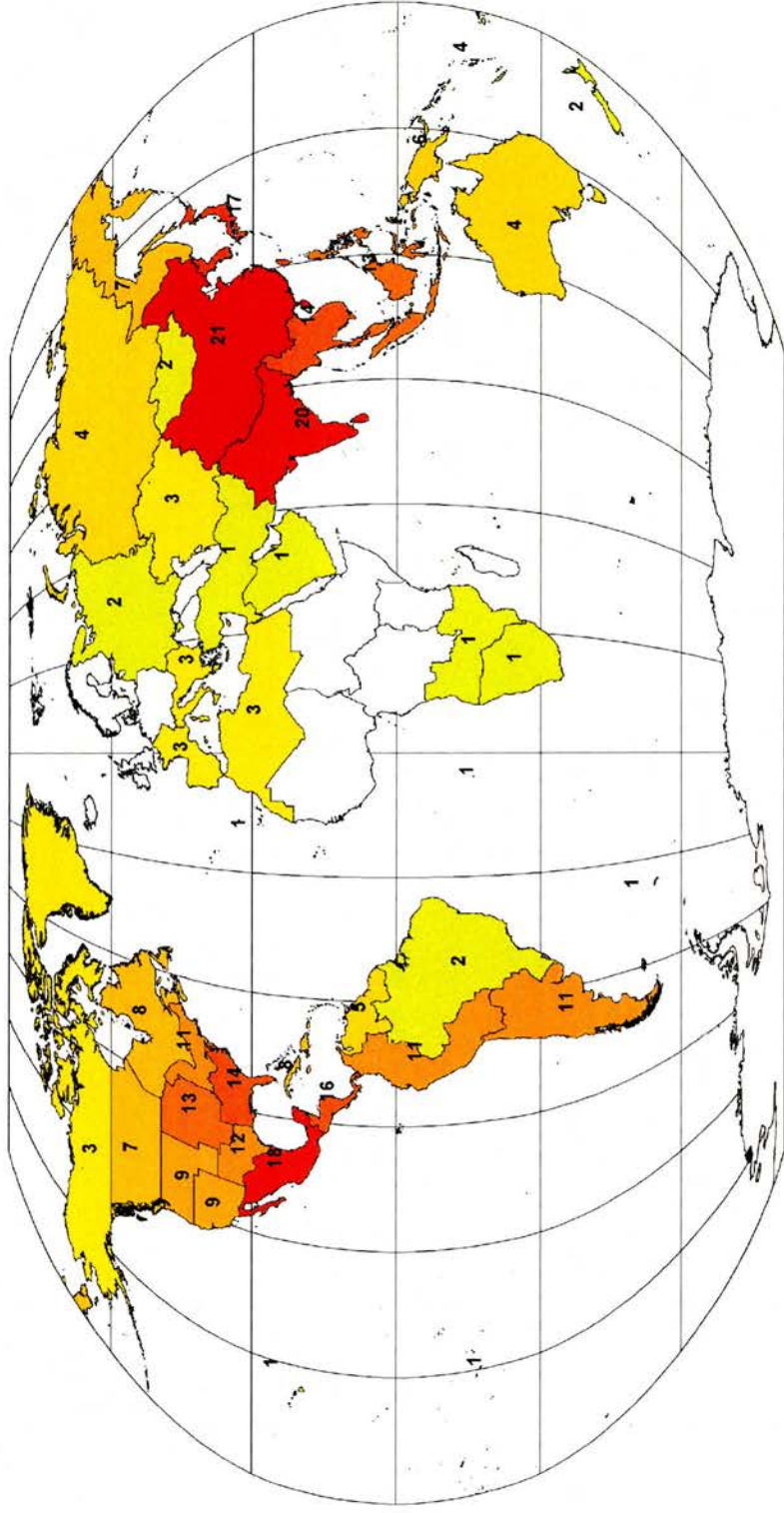
11 genera

North temperate regions south to Northeast tropical Africa and Himalaya, in America south along the Andes into Southern South America



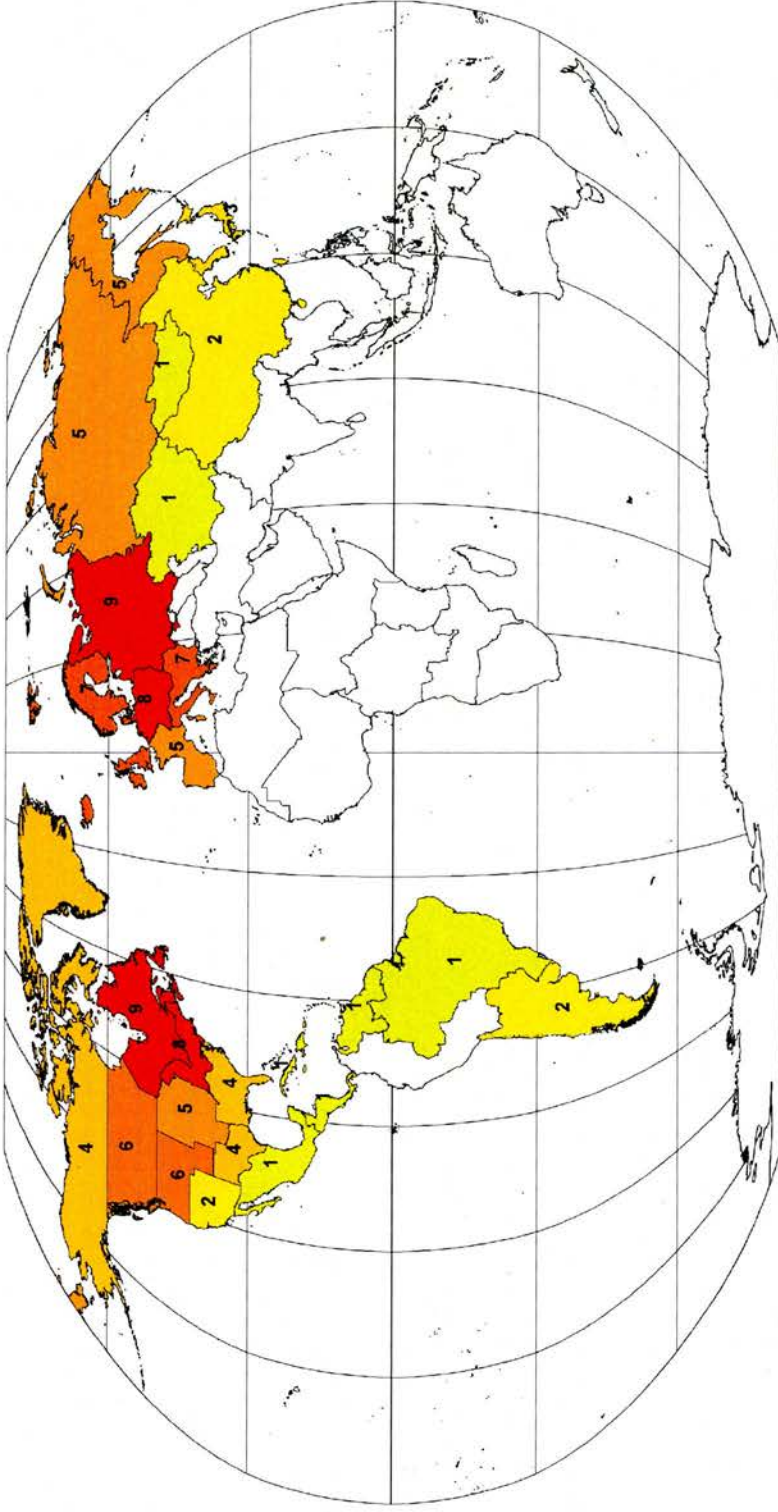
Element 7 **25 genera**

Mediterranean region; Southern Africa; temperate and tropical Asia; temperate and tropical America



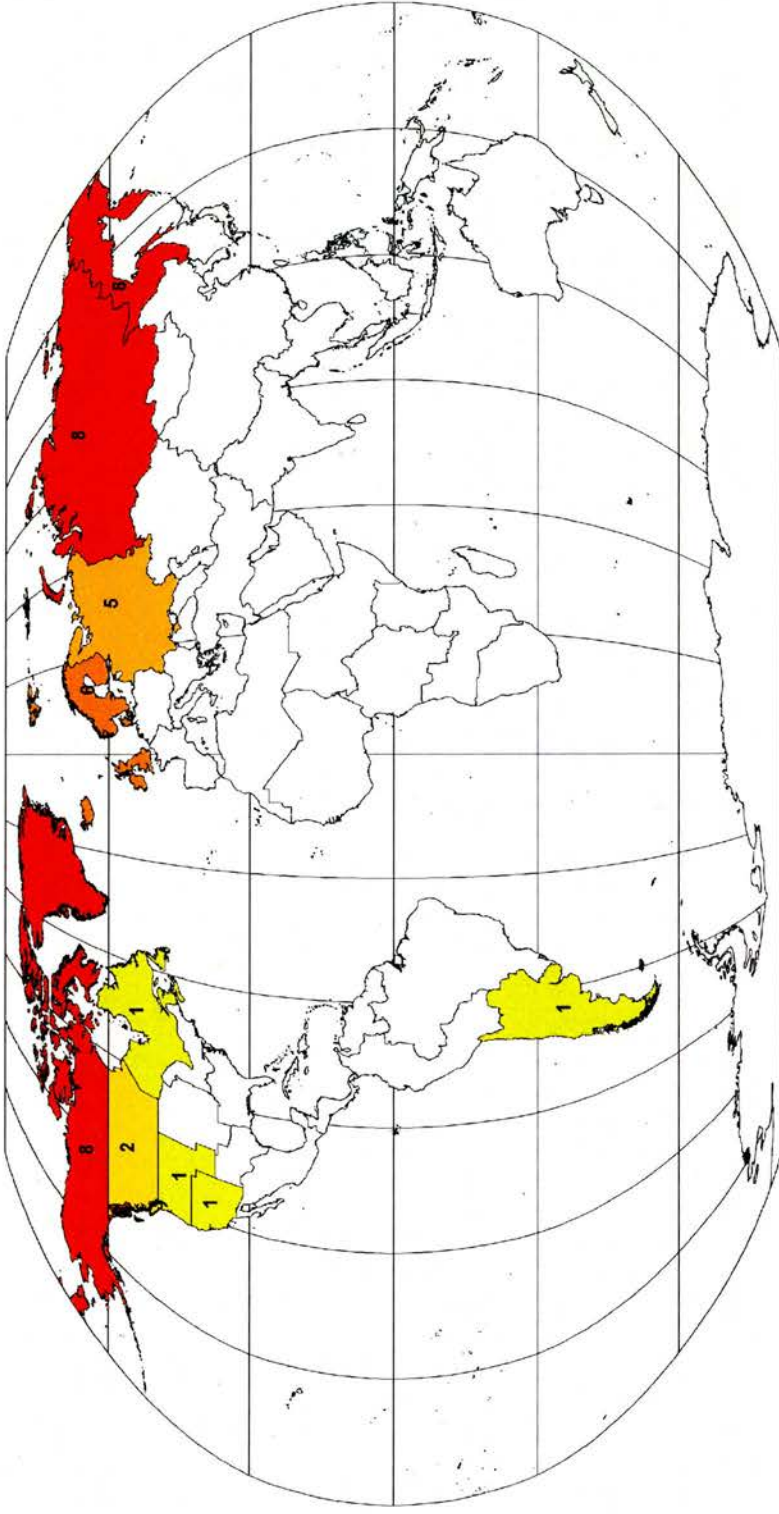
Element 8 **11 genera**

Europe and north temperate Asia, North America and south into tropical South America

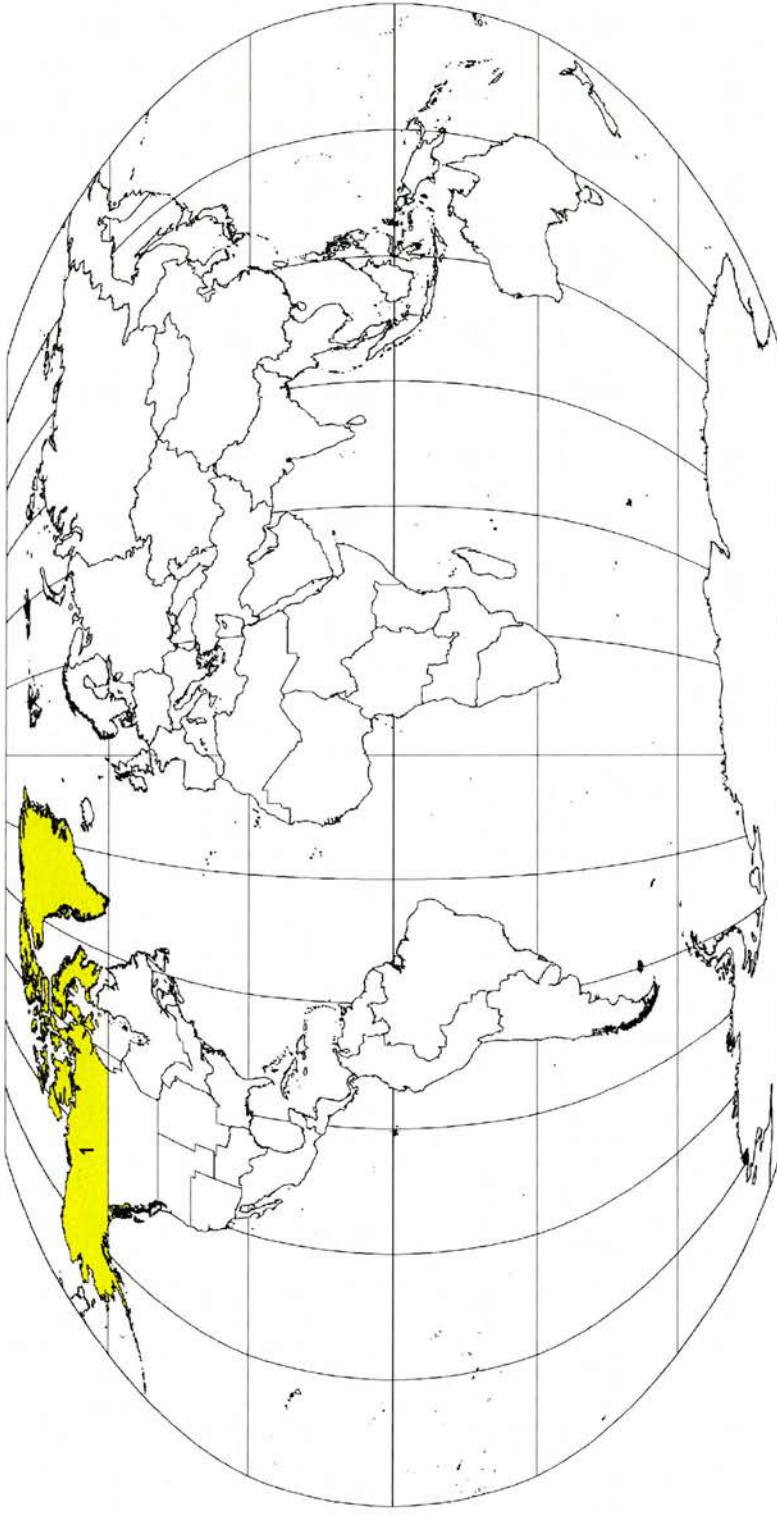


Element 9 **8 genera**

Circum-arctic and temperate mountains; 1 outlier in Andes of Argentina



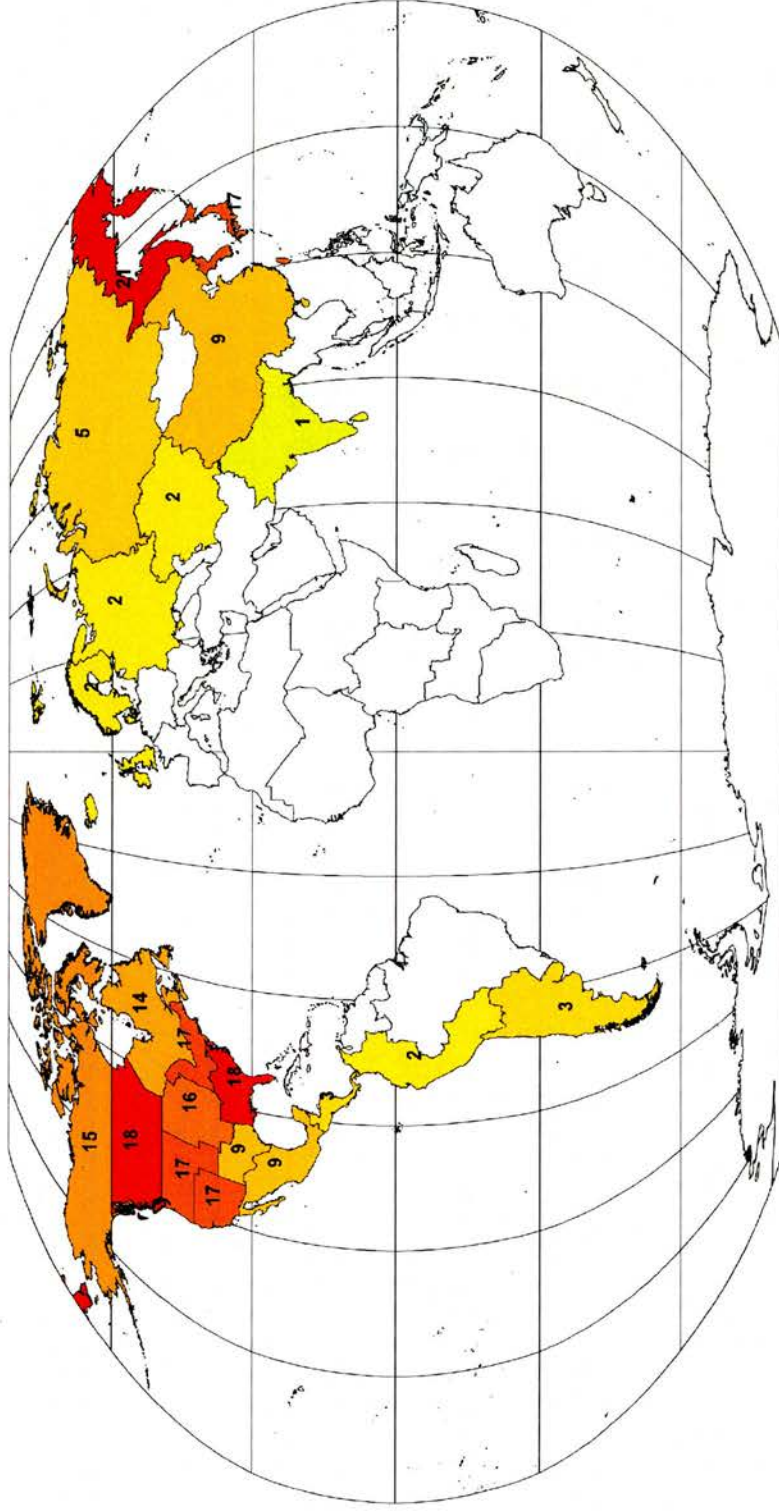
Element 10 **1 genus**
Endemic to Subarctic America



Element 11

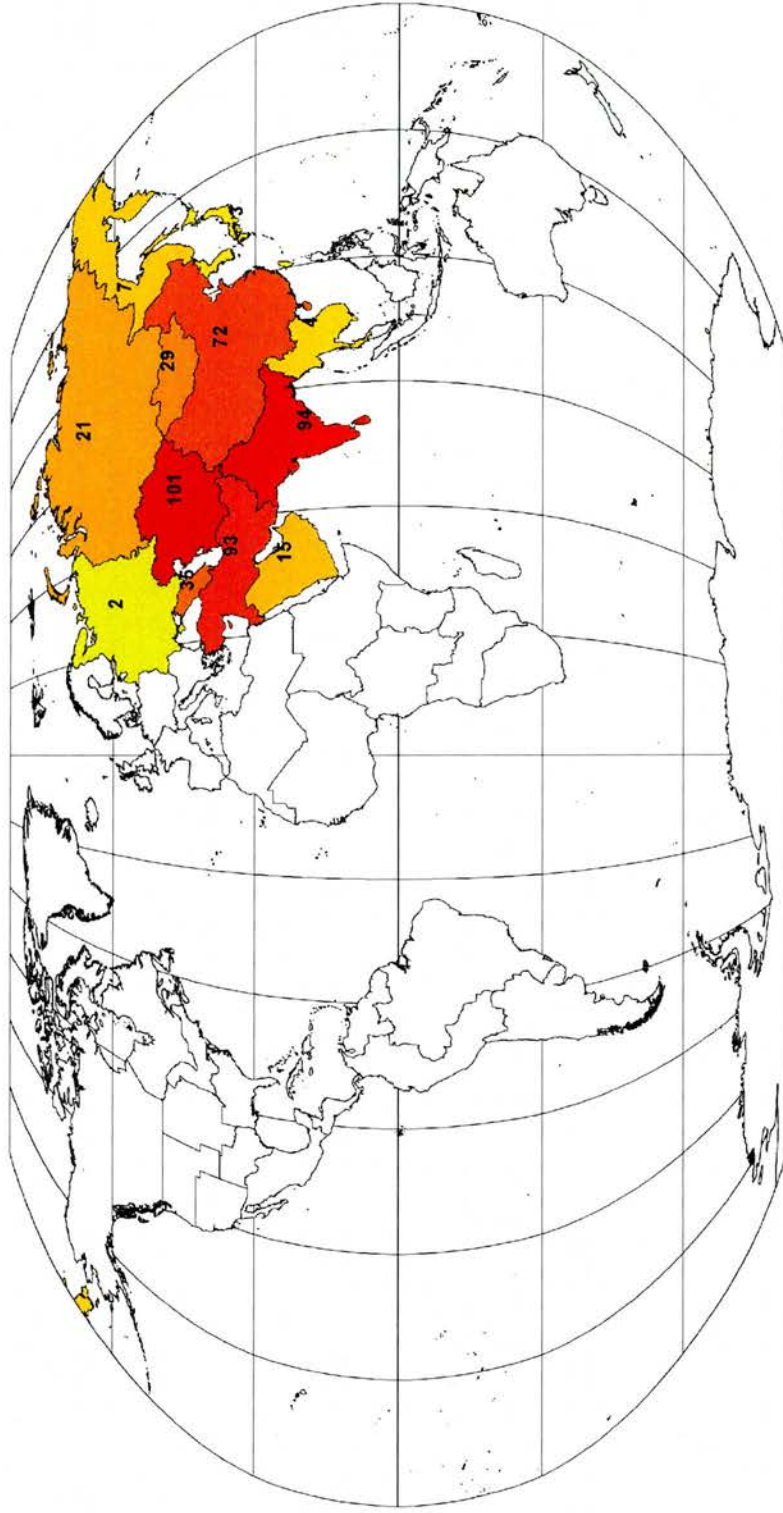
24 genera

Temperate eastern Asia to northern Europe and widespread through North America; Andes of South America



Element 12 **115 genera**

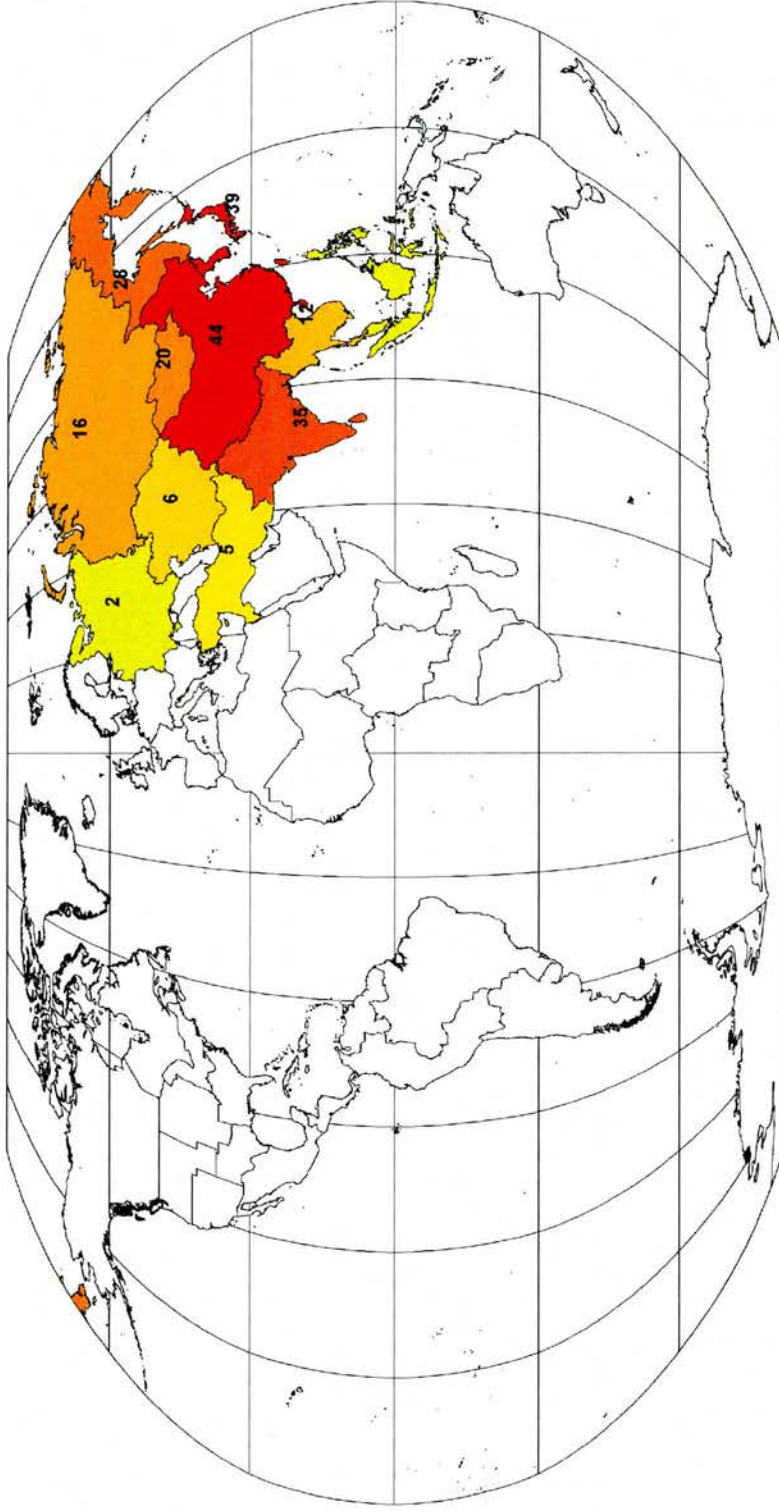
Central Asia reaching Eastern Europe and Himalaya and into Indo-China



Element 13

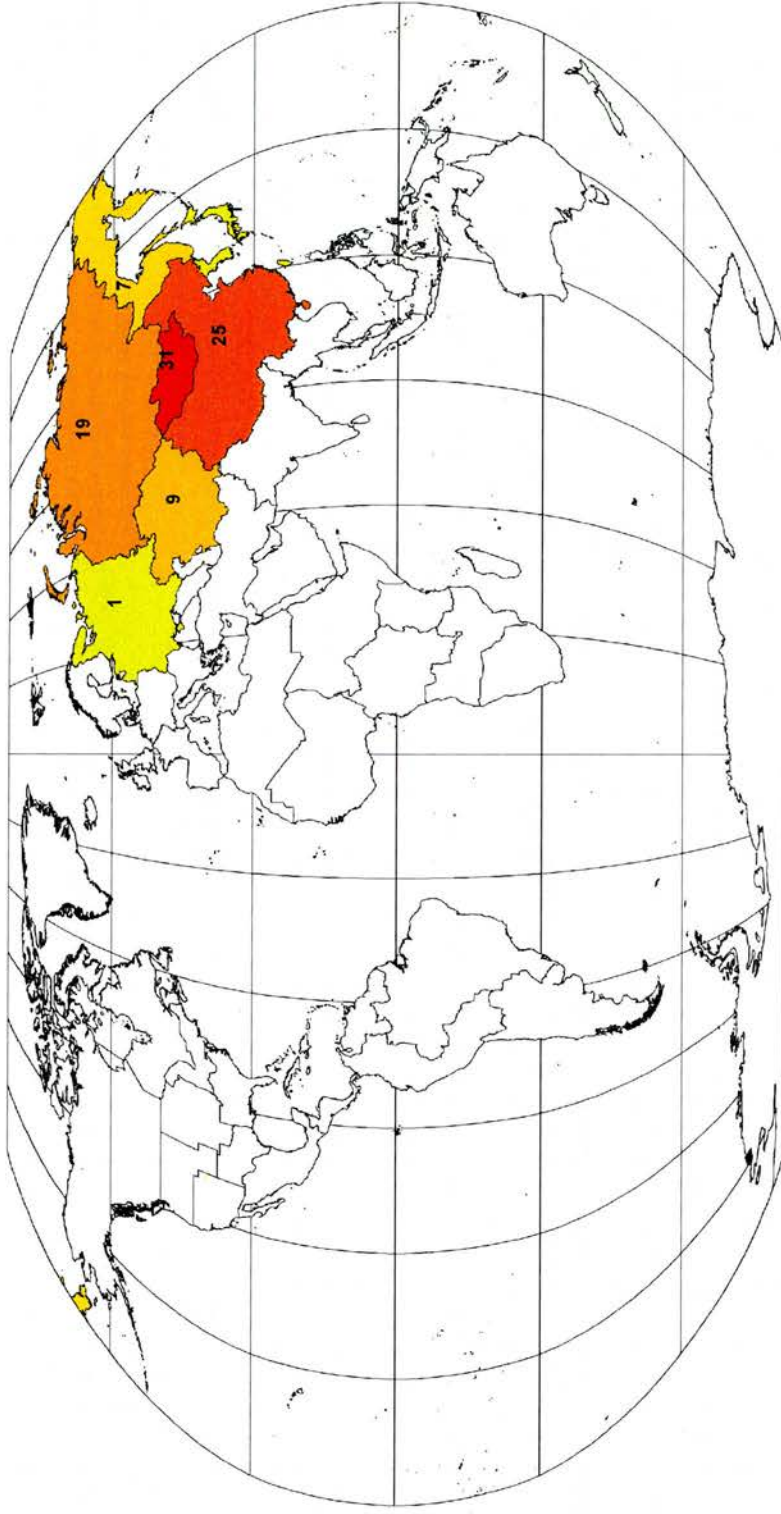
44 genera

North temperate Asia reaching Eastern Europe and Himalaya and into Indo-China and Malasia



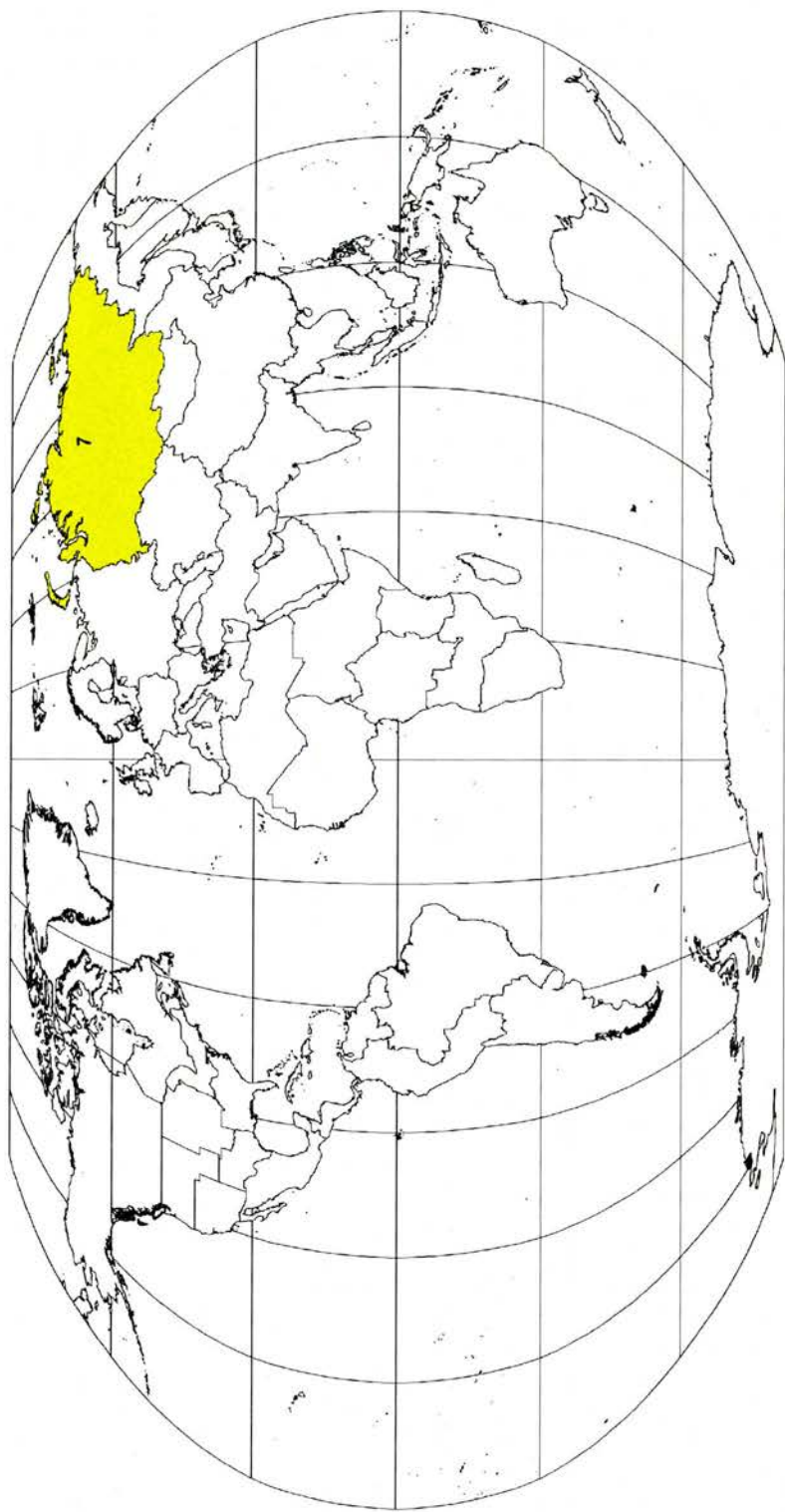
Element 14 **35 genera**

China and Mongolia, reaching to Eastern Europe, Russian Far East and Eastern Asia



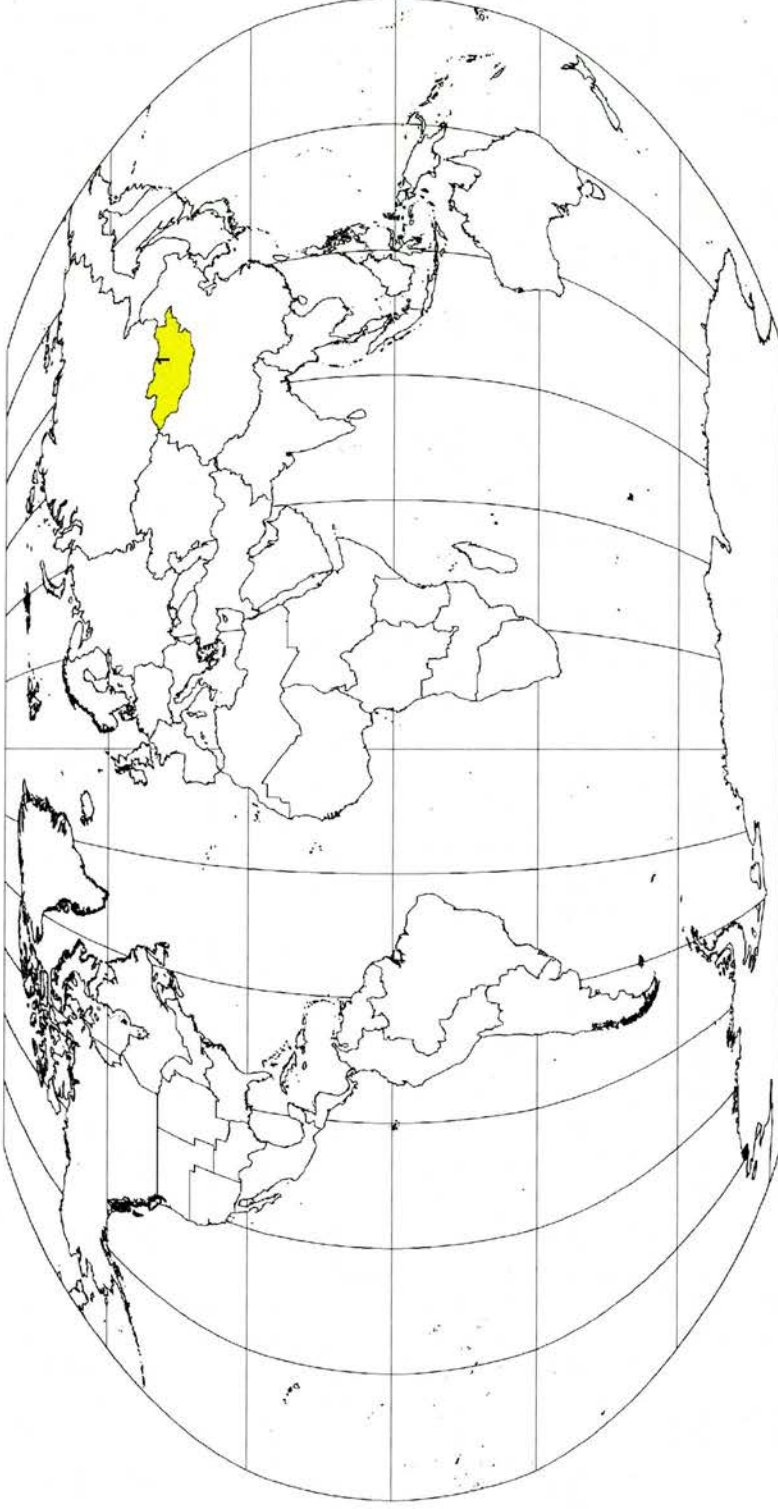
Element 15 7 genera

Endemic to Siberia



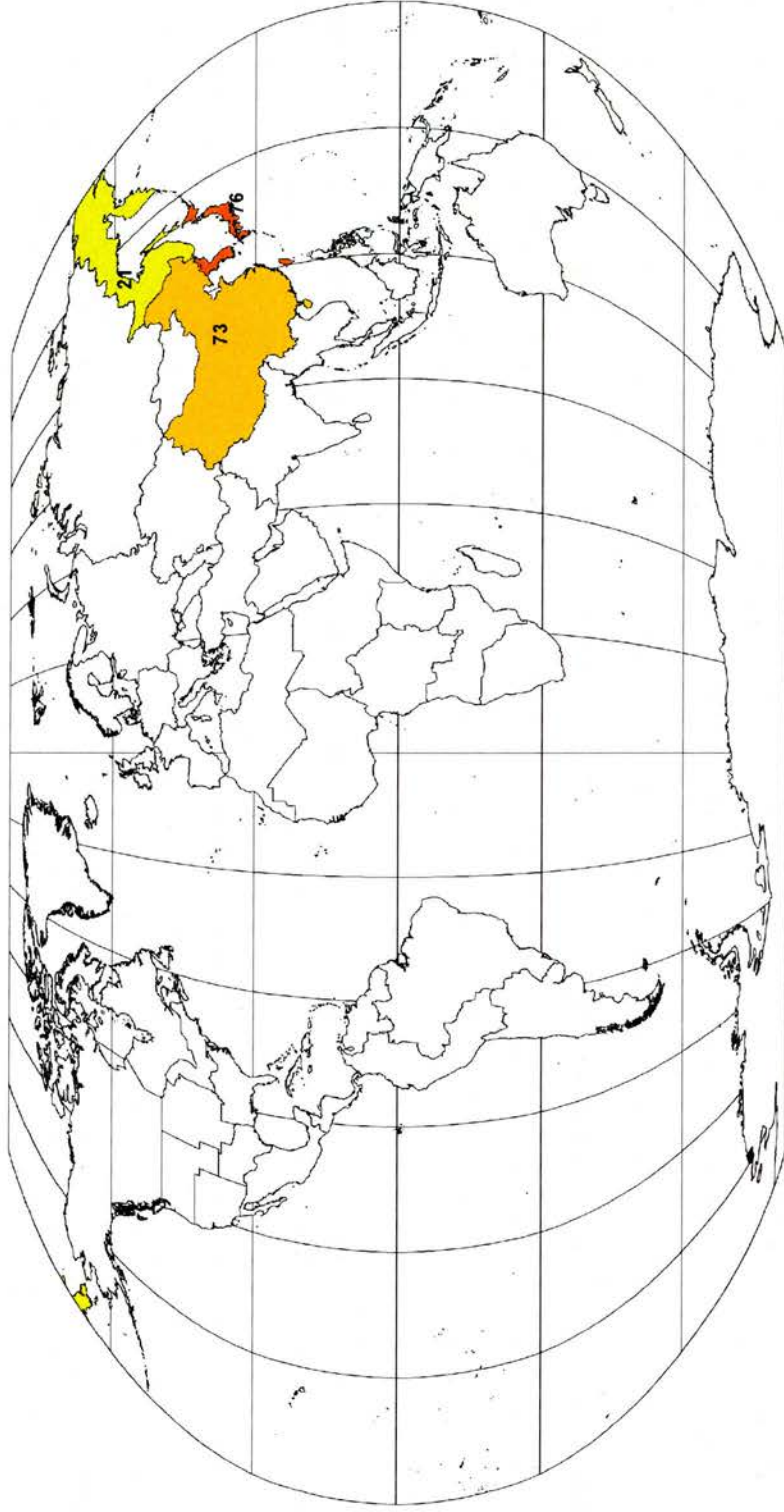
Element 16 **1 genus**

Endemic to Mongolia

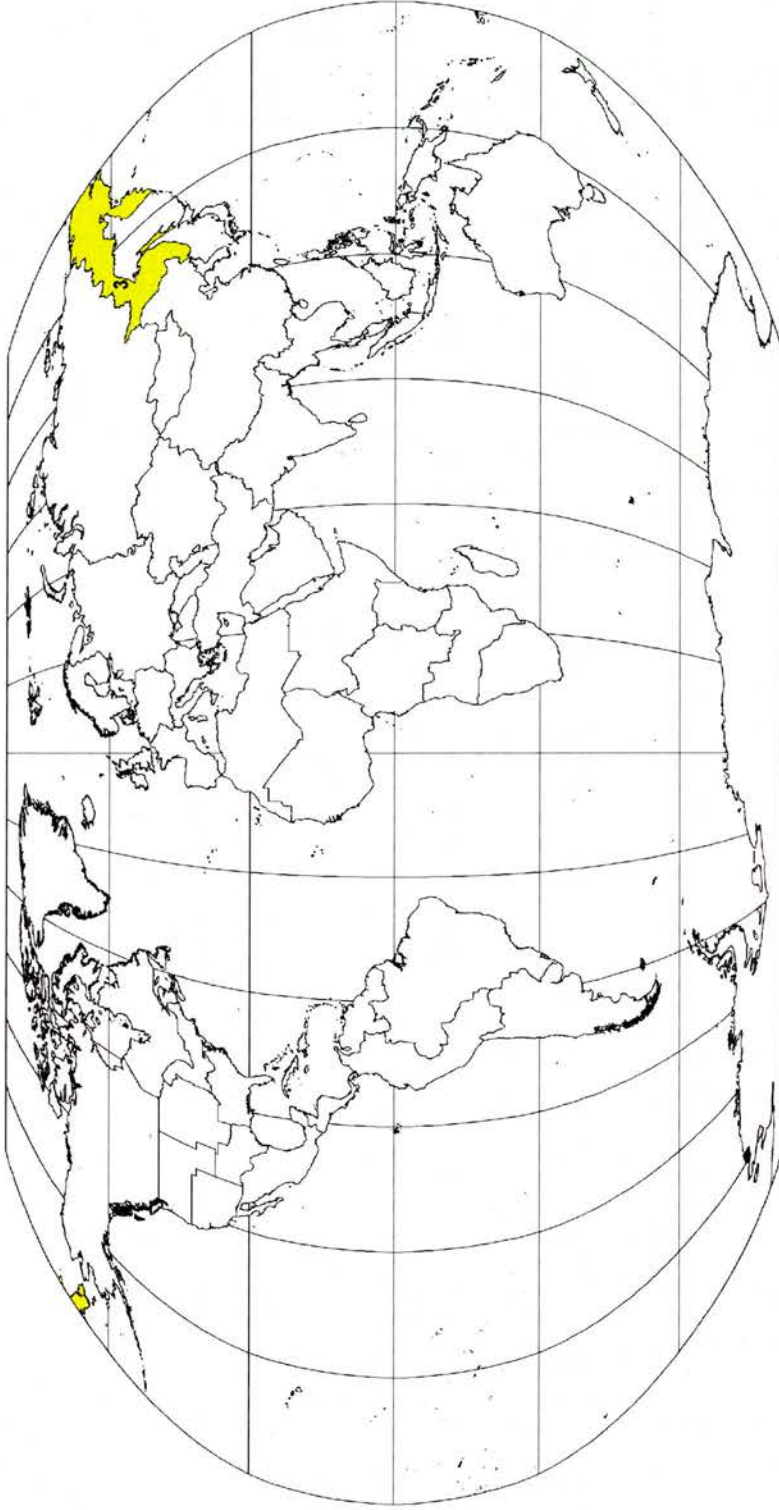


Element 17 **79 genera**

Temperate eastern Asia

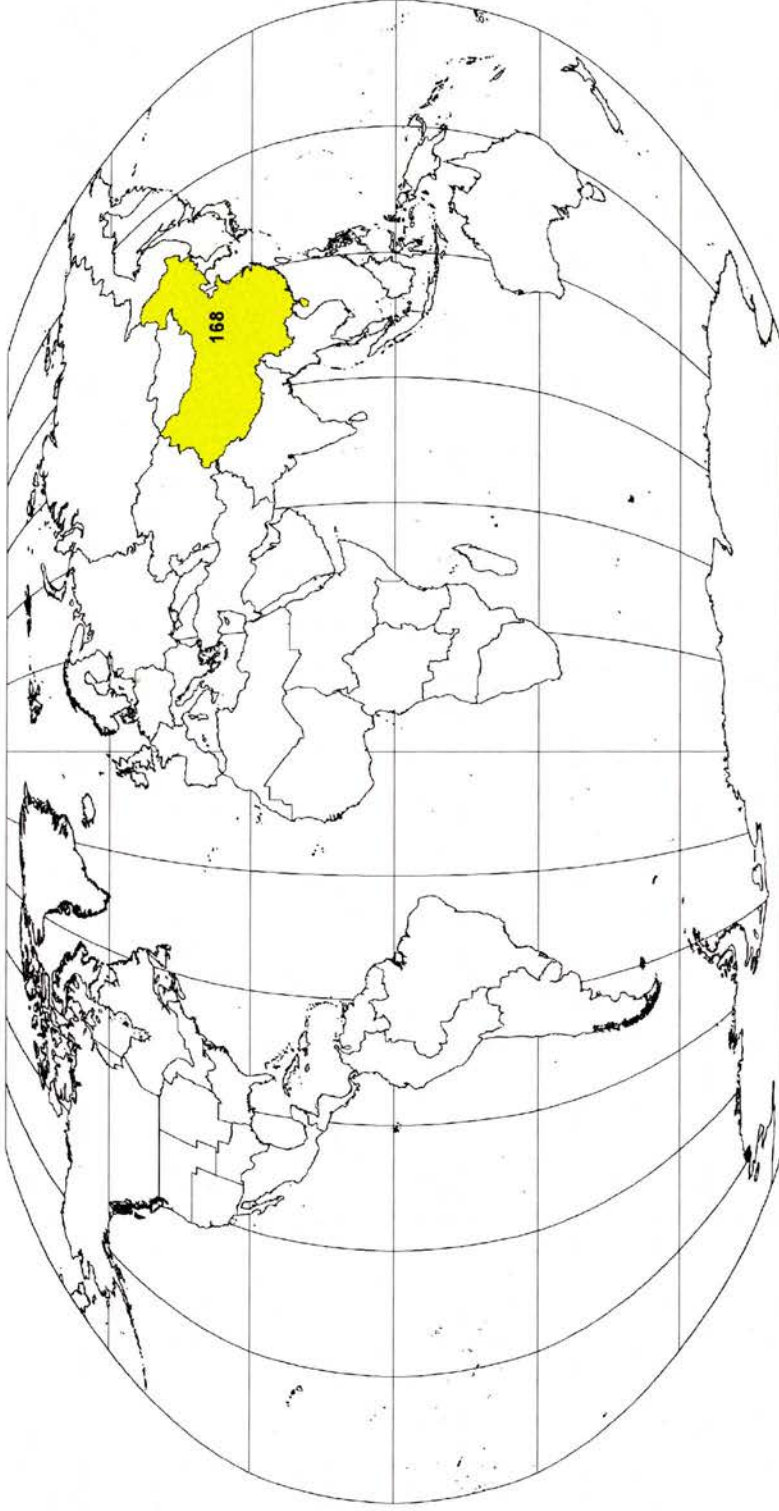


Element 18 **3 genera**
Endemic to Russian Far East



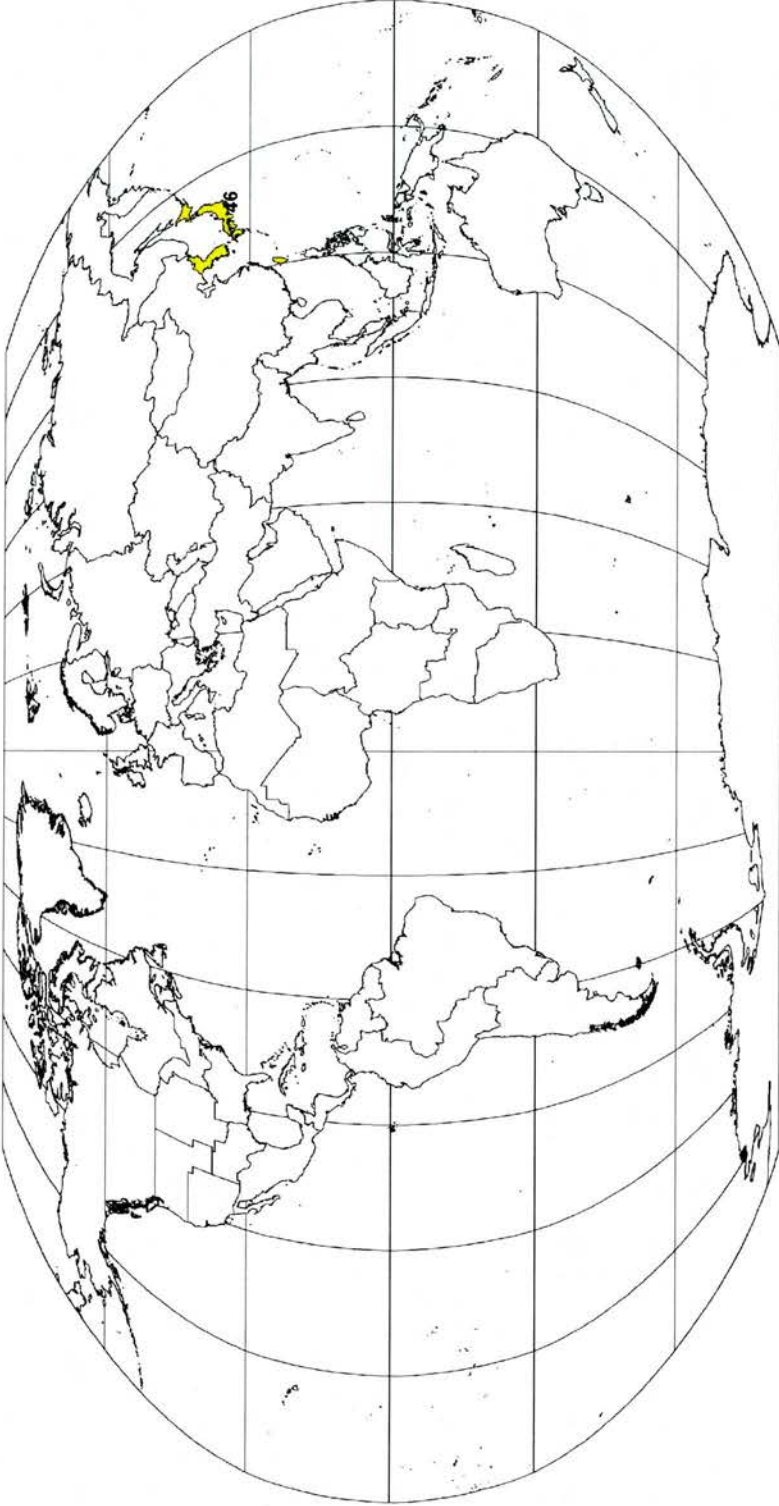
Element 19 **168 genera**

Endemic to China



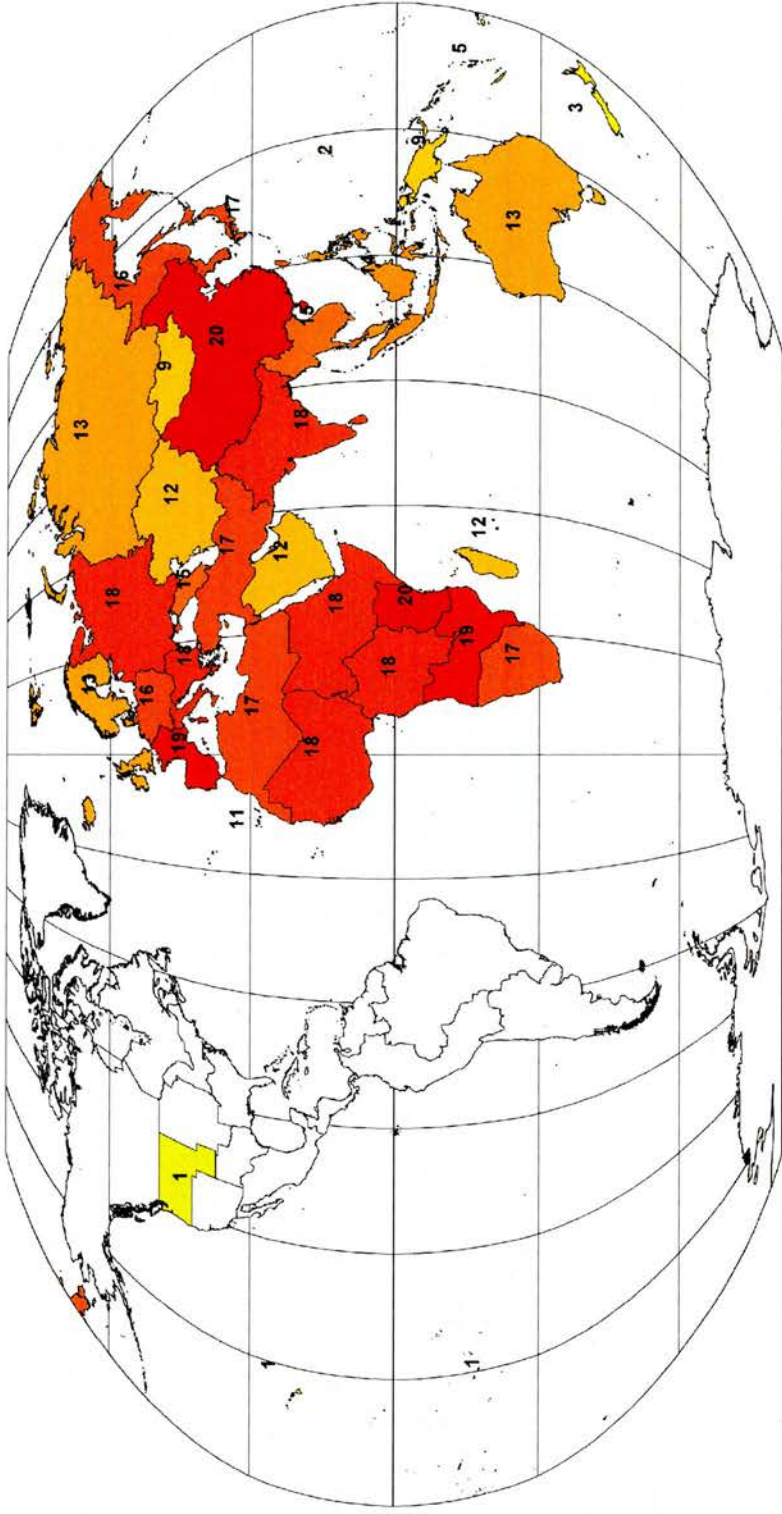
Element 20 **46 genera**

Endemic to Eastern Asia



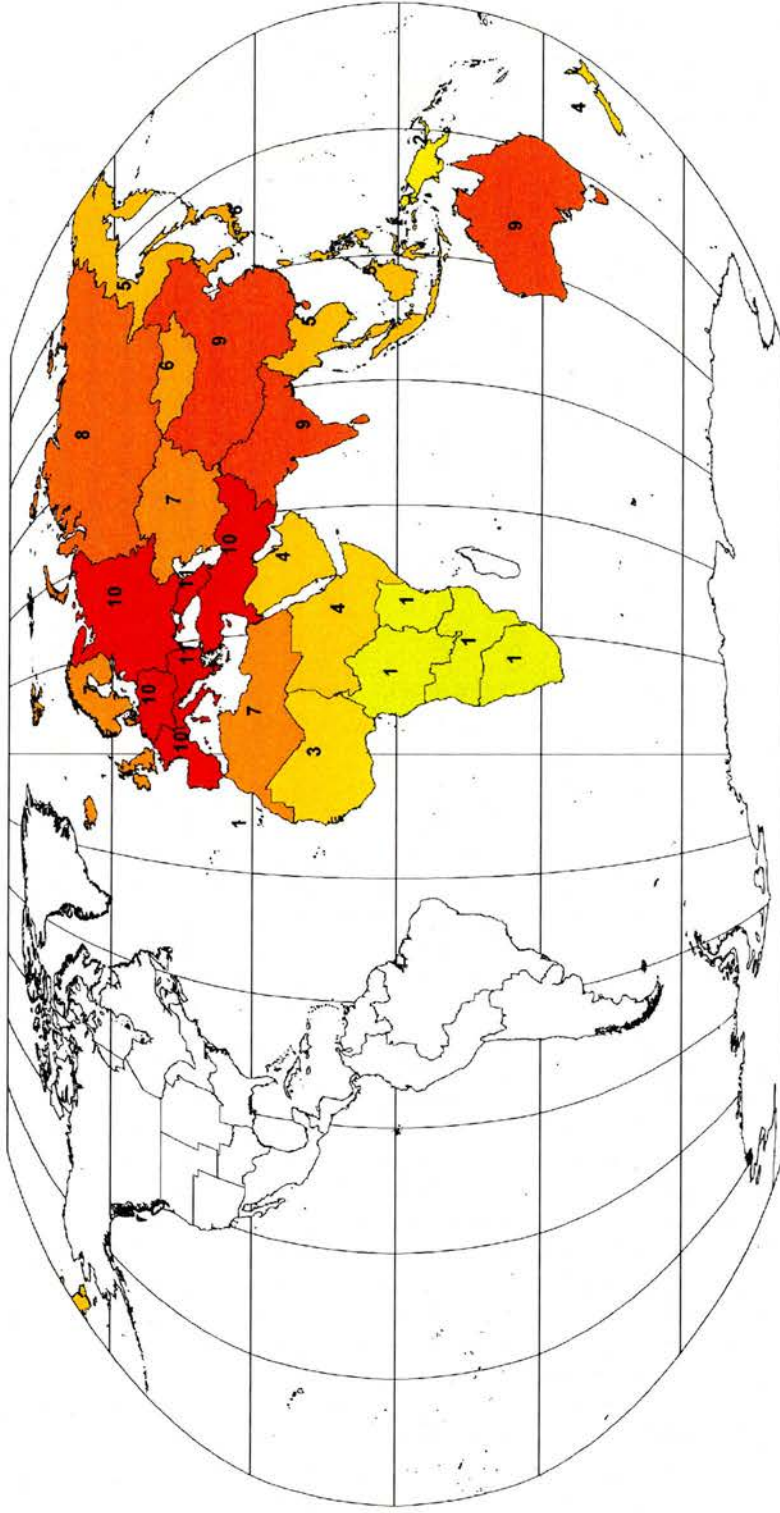
Element 21 **20 genera**

Throughout most temperate and tropical regions of the Old World, with an outlier in NW. U.S.A.



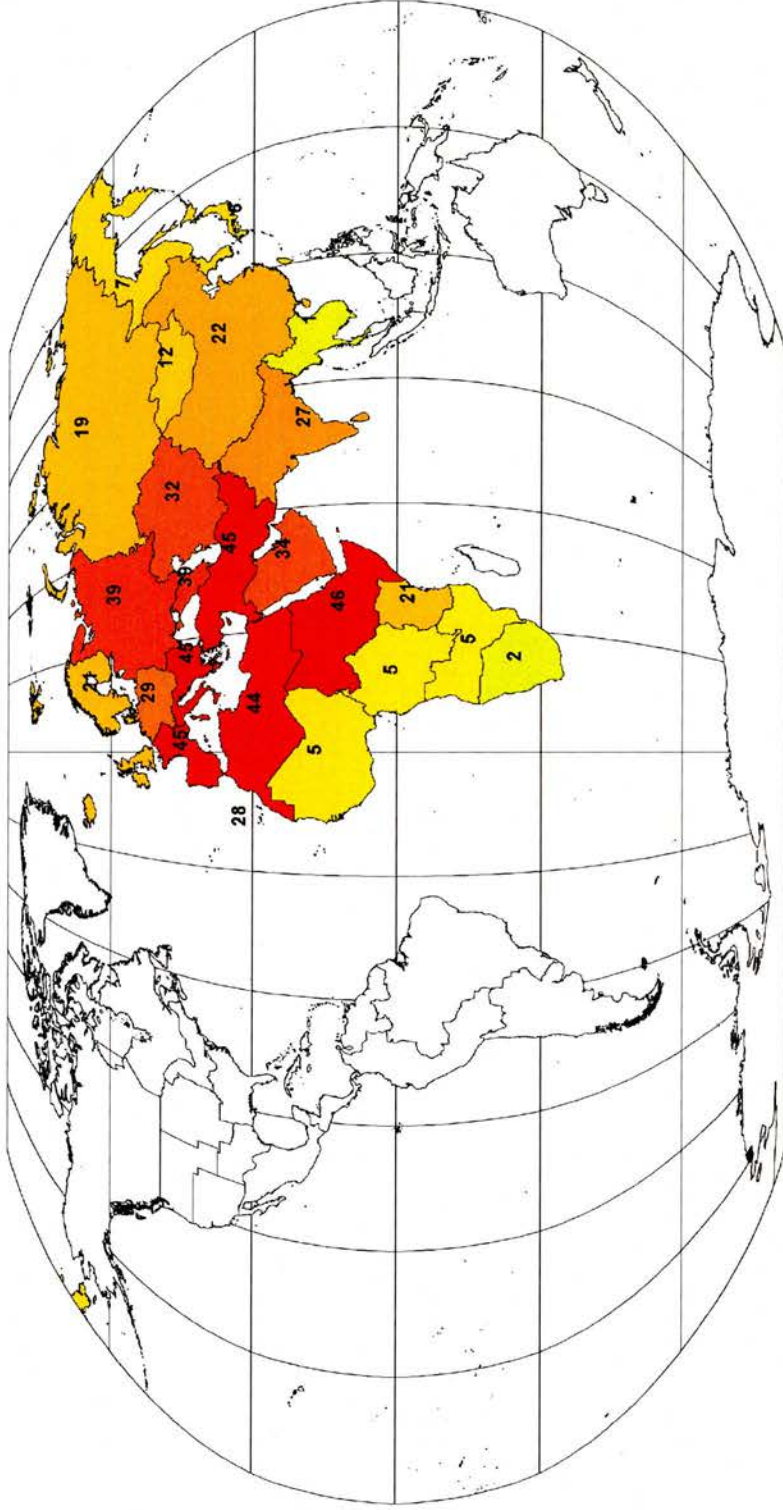
Element 22 **11 genera**

Throughout temperate and into tropical regions of the Old World



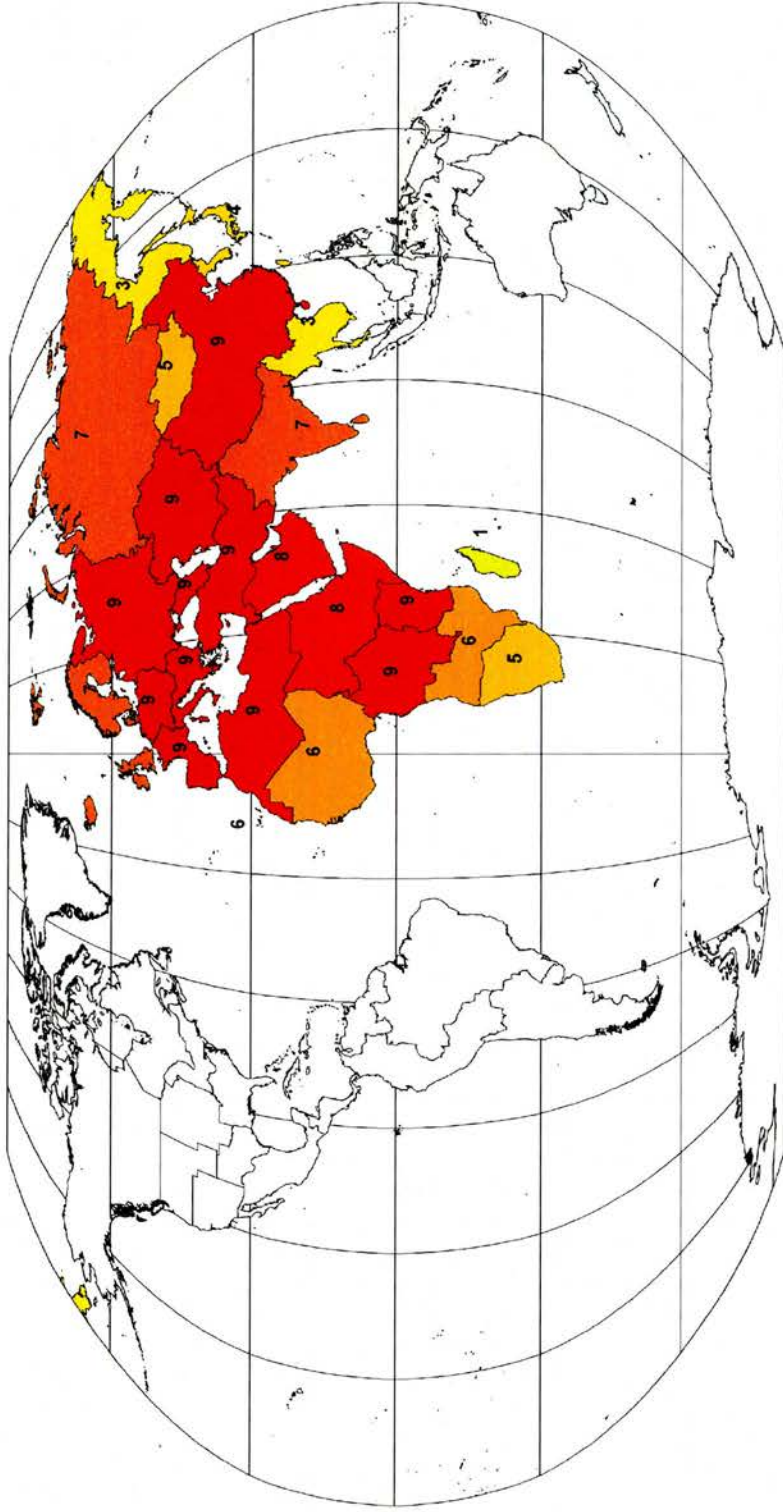
Element 23 **47 genera**

Throughout temperate Eurasia and into tropical Africa



Element 24 **9 genera**

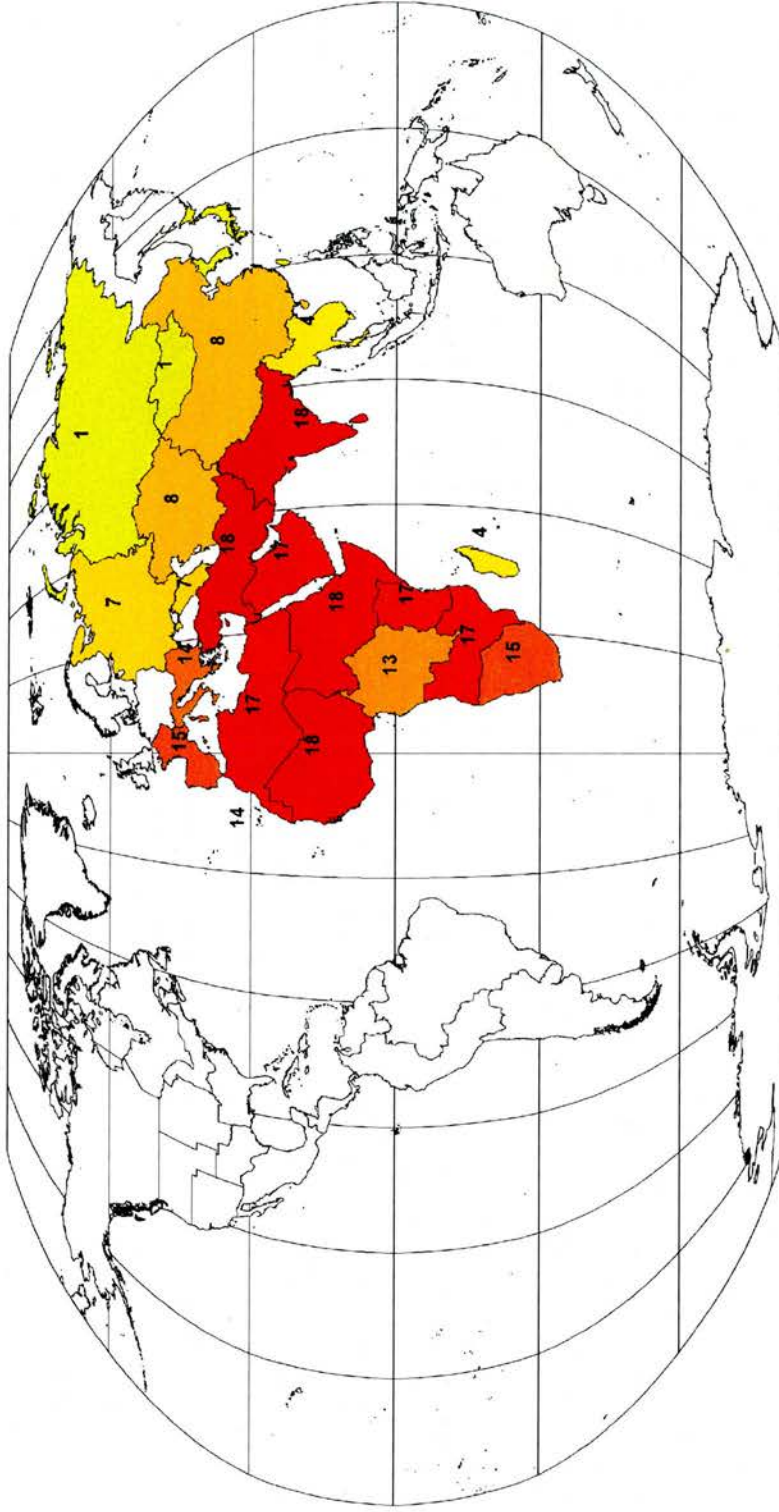
Throughout temperate Eurasia and tropical Africa



Element 26

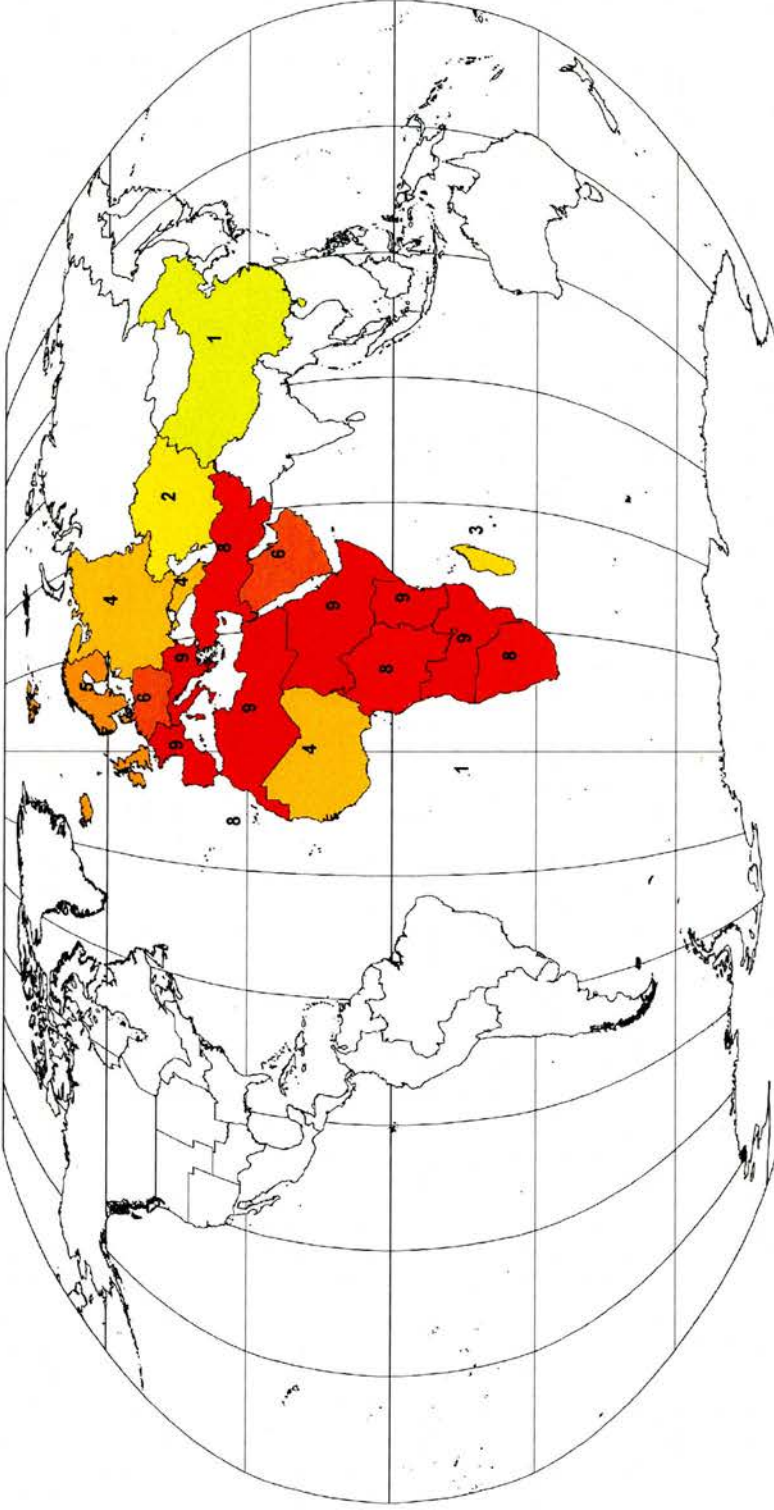
18 genera

Mediterranean region and throughout tropical Africa east to Indian Subcontinent and into Indo-China



Element 27 **9 genera**

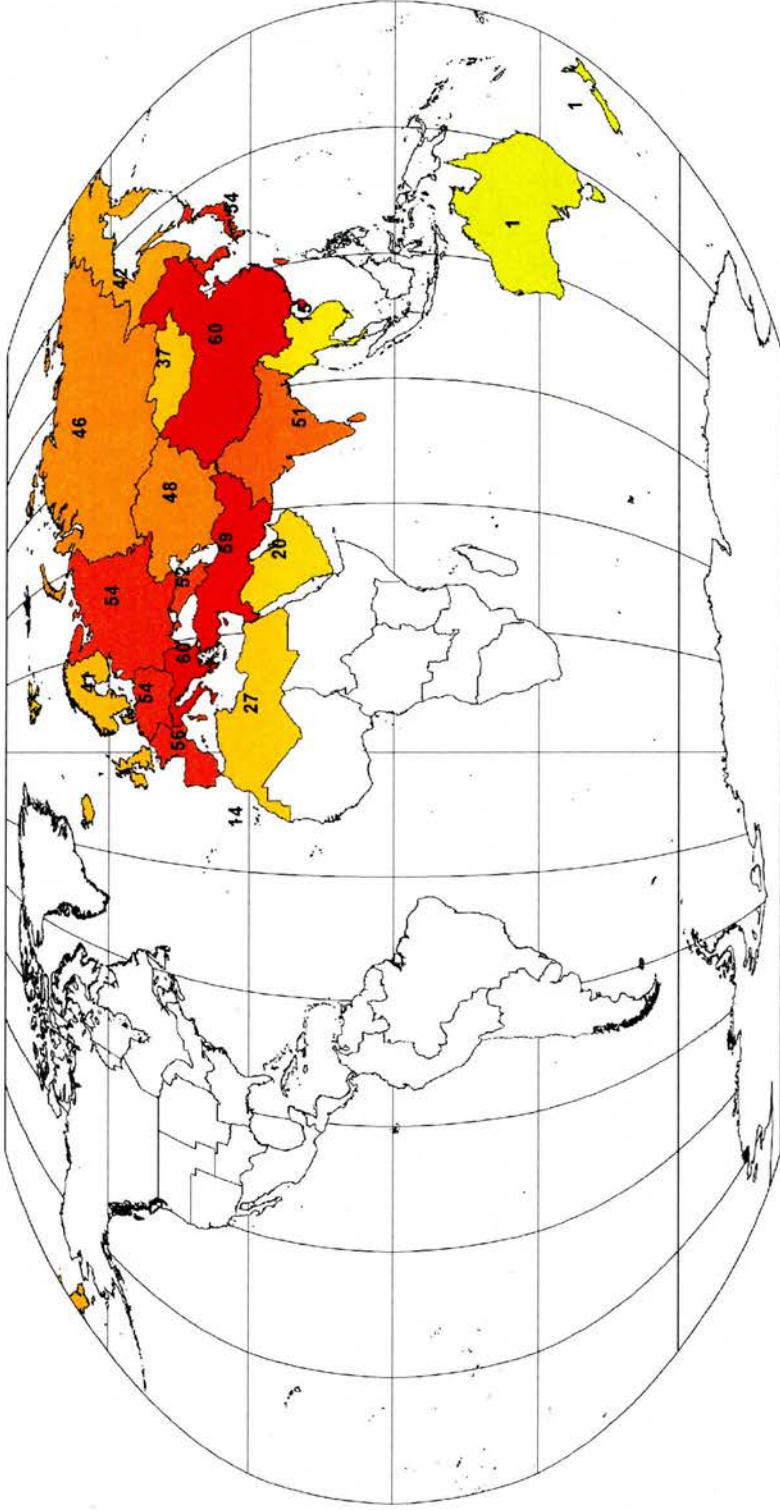
Europe and tropical Africa extending east to W. China



Element 28

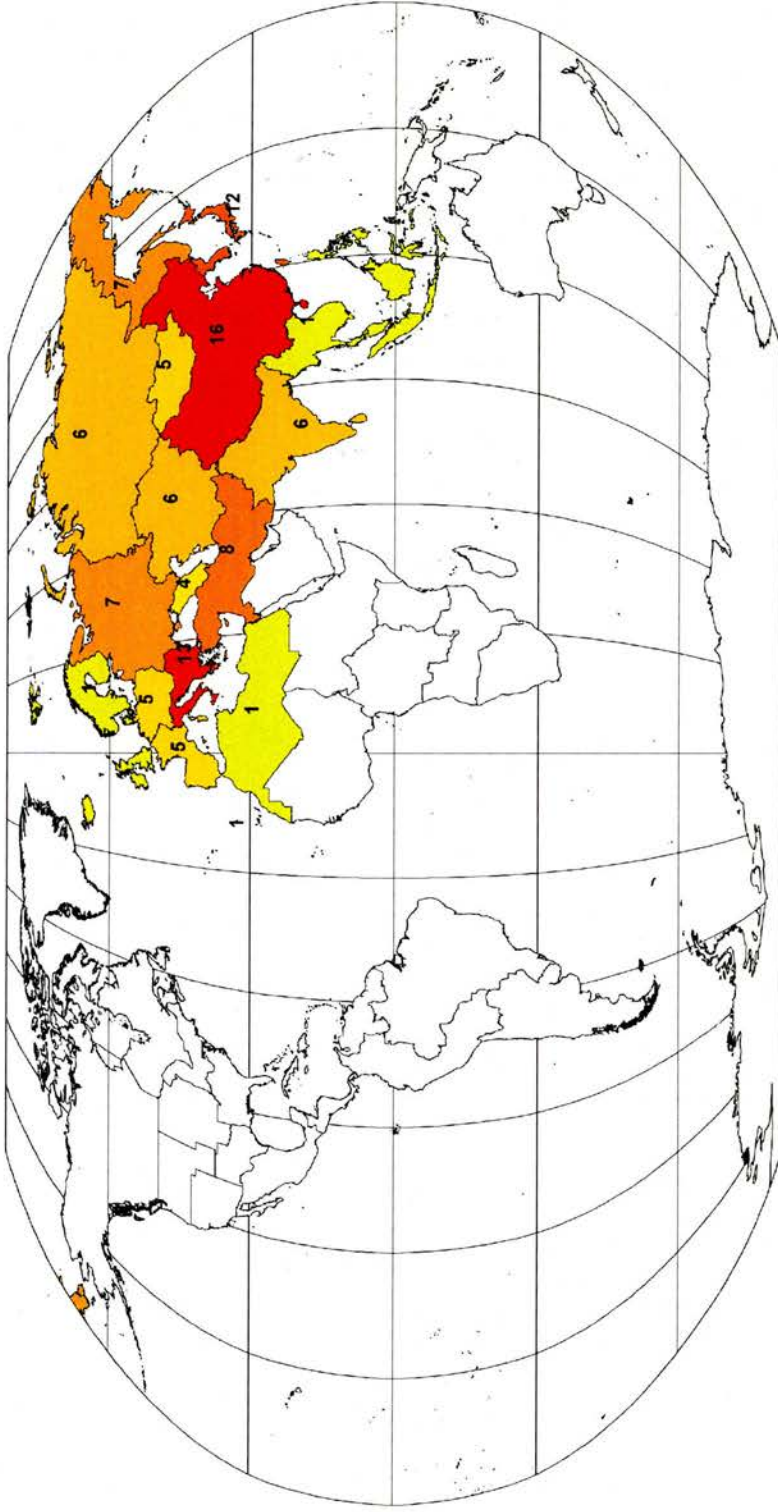
61 genera

Temperate Eurasia south to Mediterranean region and Himalaya and into Indo-China; outliers in Australia and New Zealand



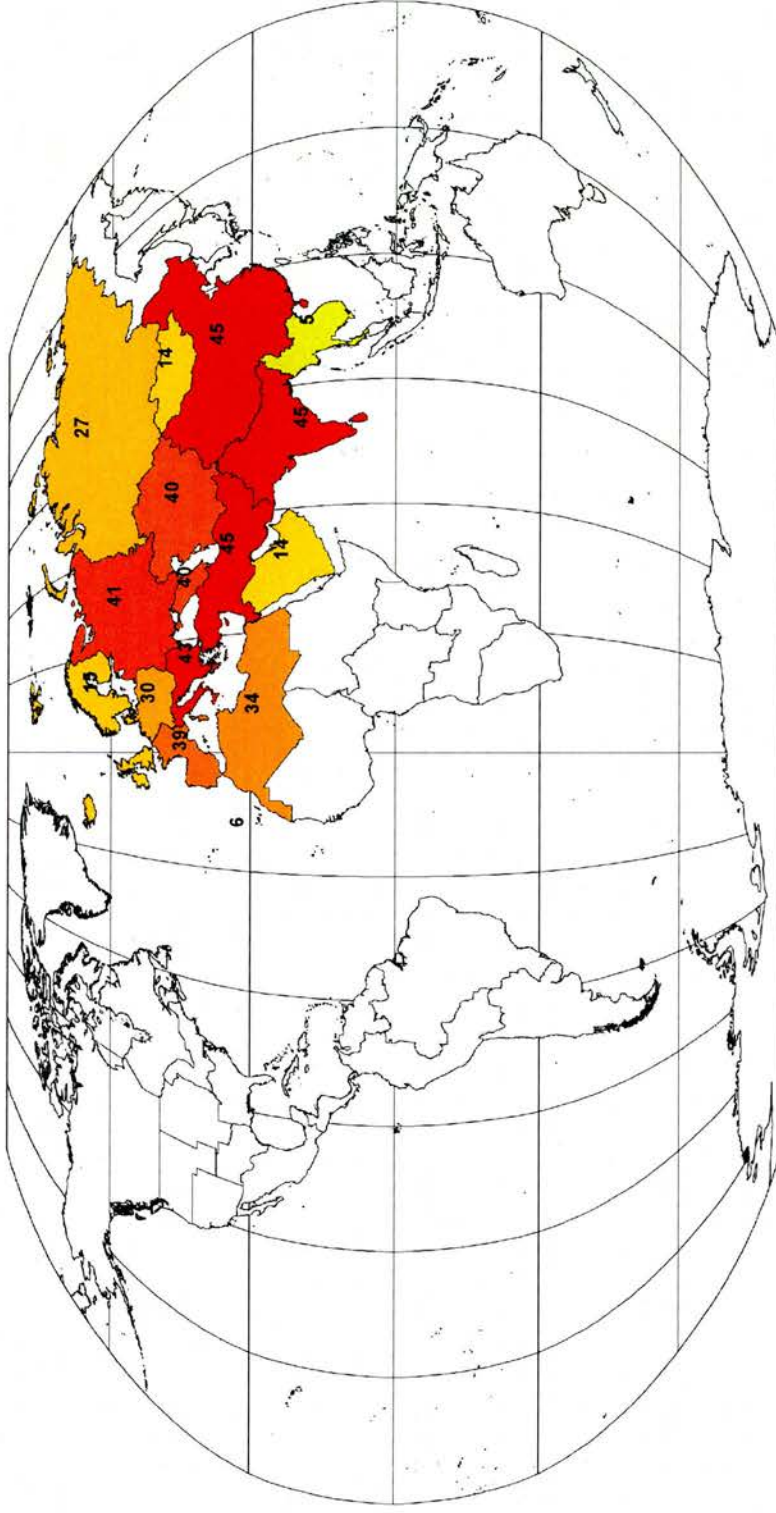
Element 29 **17 genera**

Throughout temperate Eurasia and reaching North Africa and into Malasia



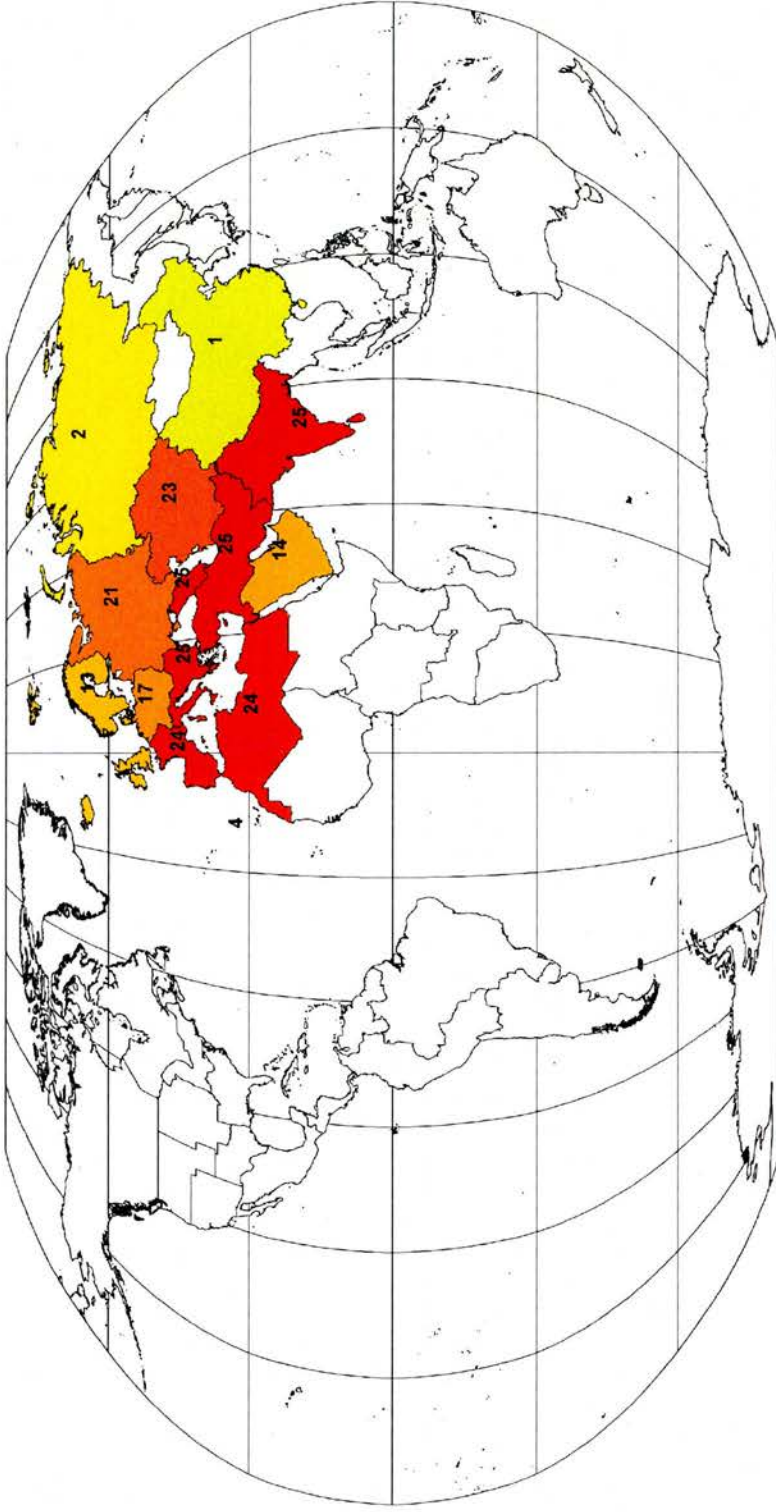
Element 30 **45 genera**

Europe and Mediterranean region east to Himalaya and W. China and into Indo-China

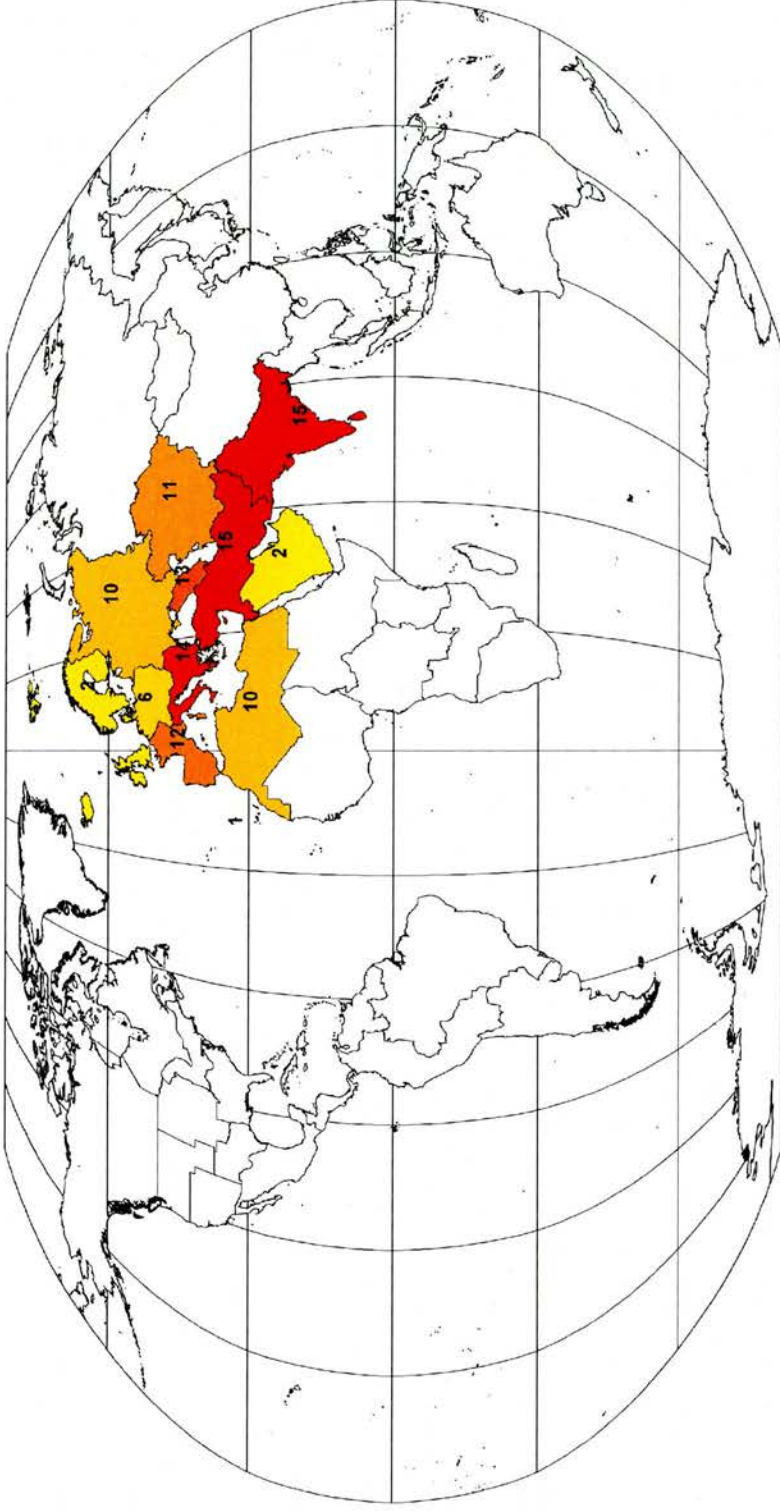


Element 31 **25 genera**

Europe and Mediterranean region east to W. Himalaya



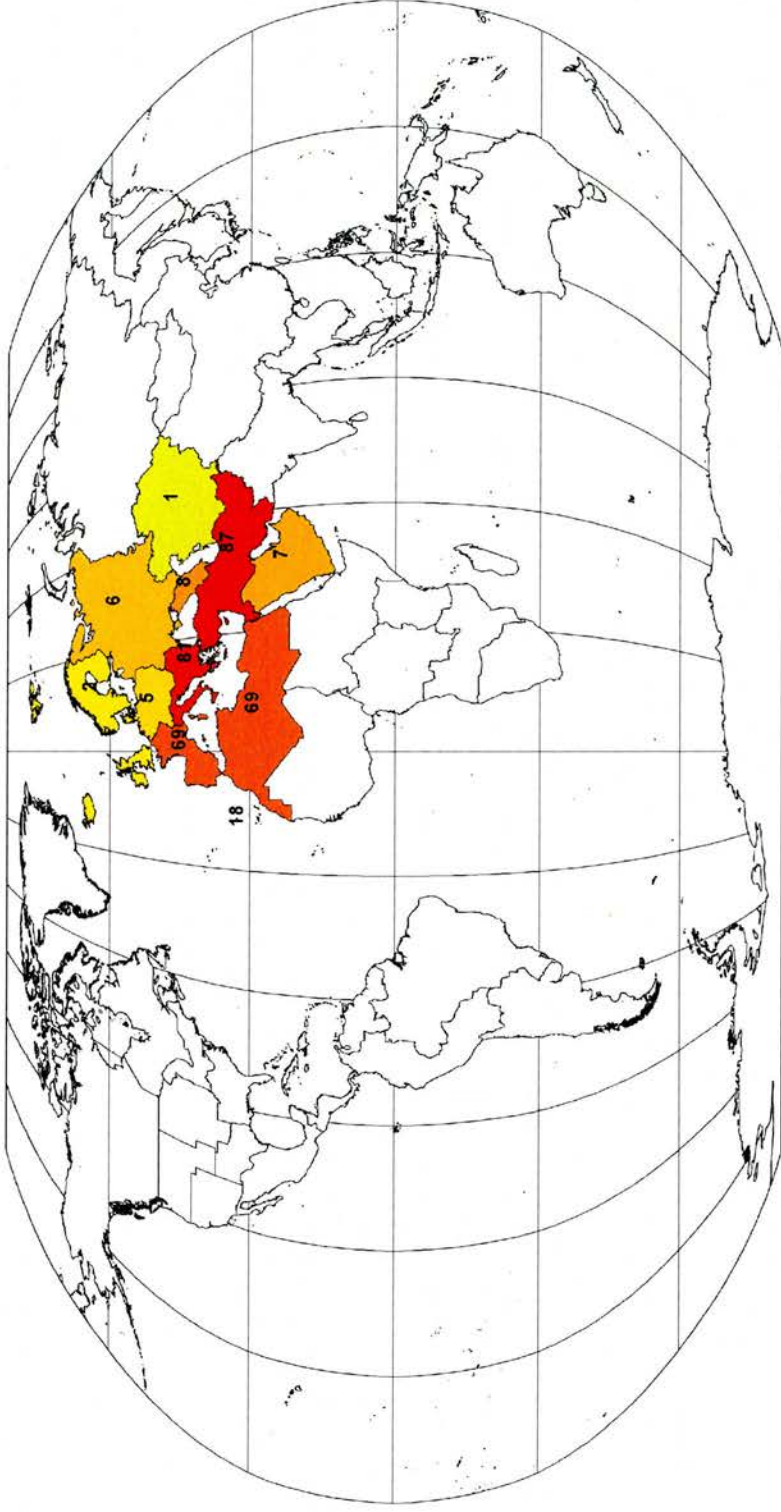
Element 32 **15 genera**
Mediterranean region east to Indian Subcontinent



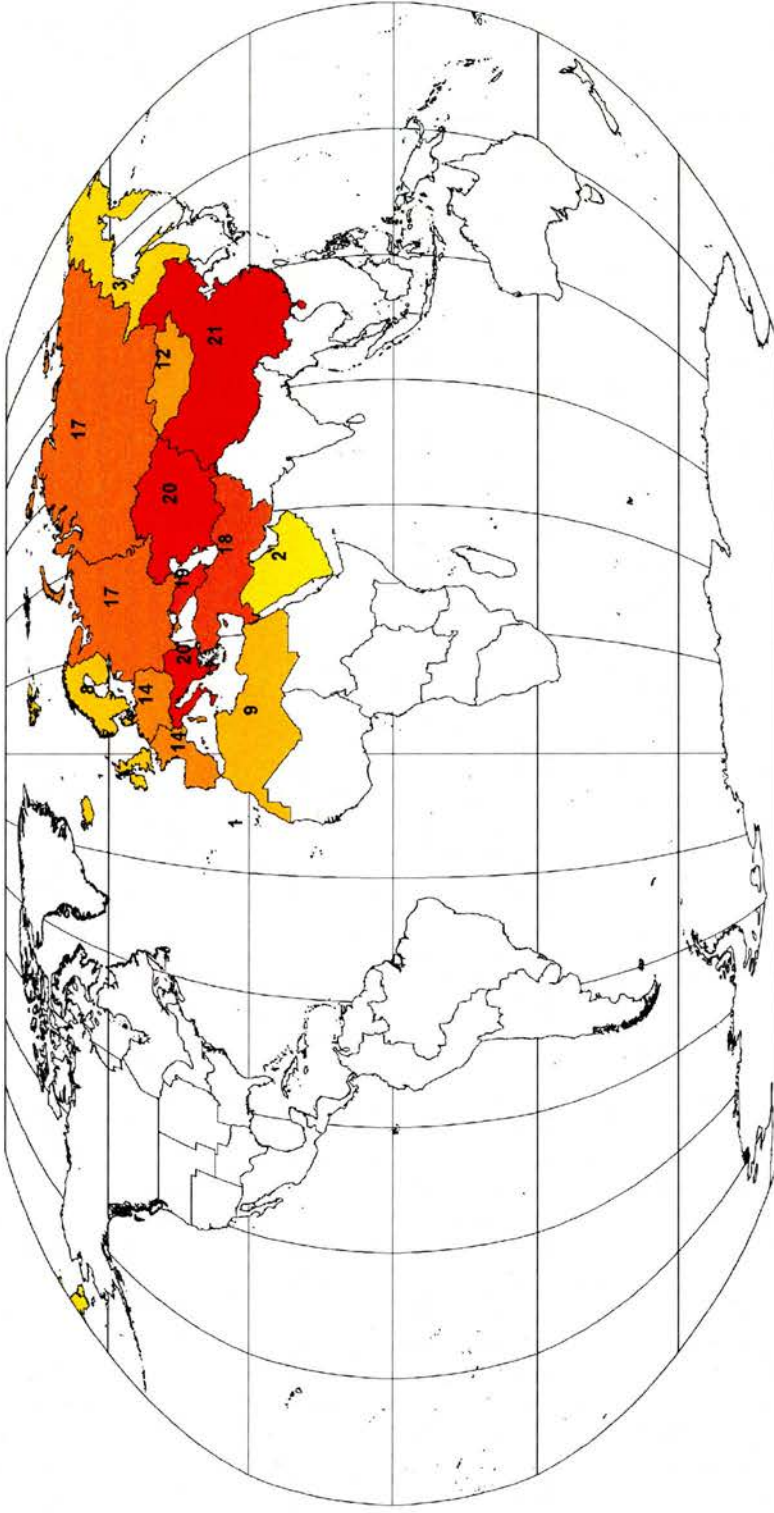
Element 33

88 genera

Mediterranean region and reaching Northern Europe, Macaronesia, Caucasus and Arabian Peninsula

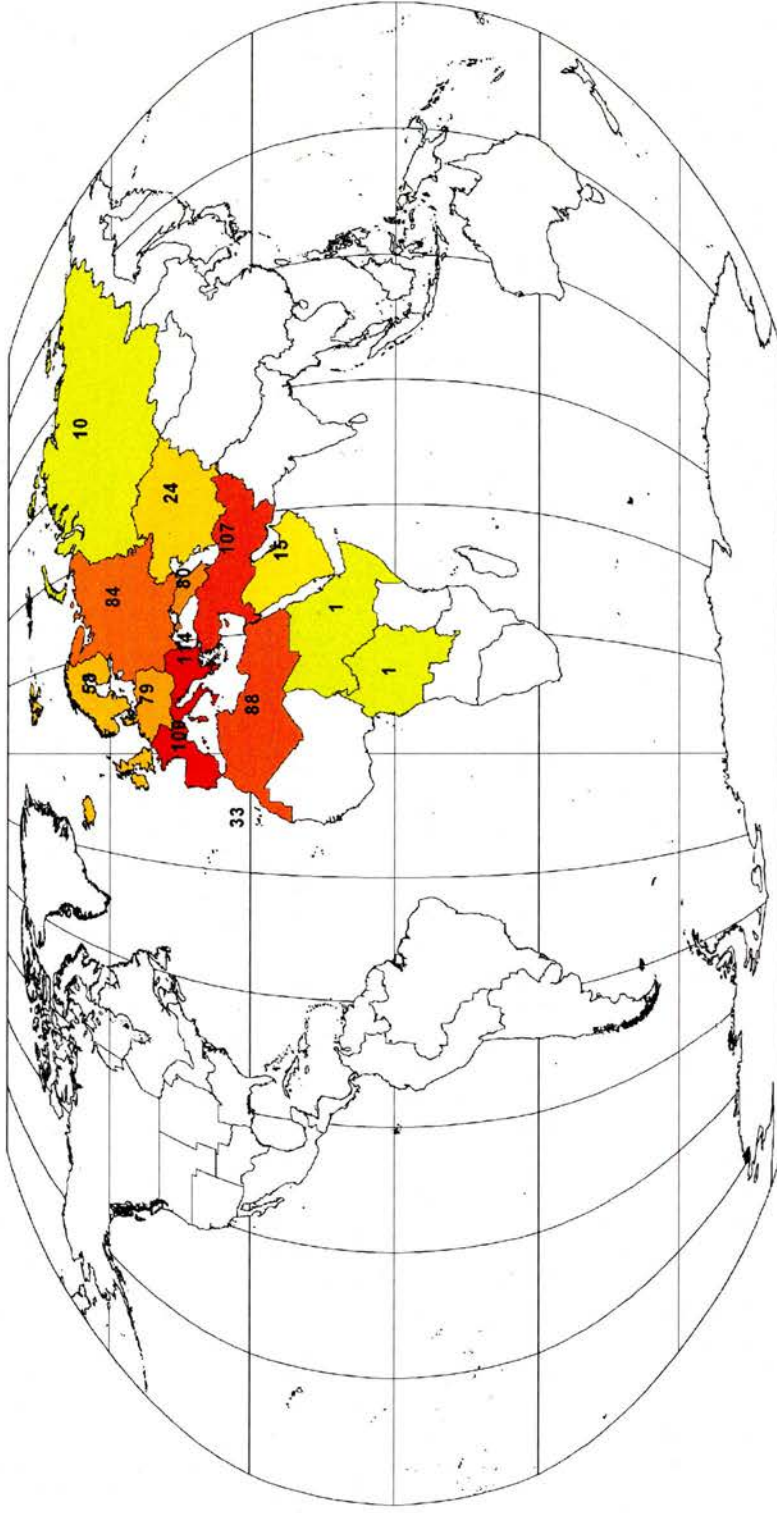


Element 34 **21 genera**
Mediterranean region east to China and Mongolia

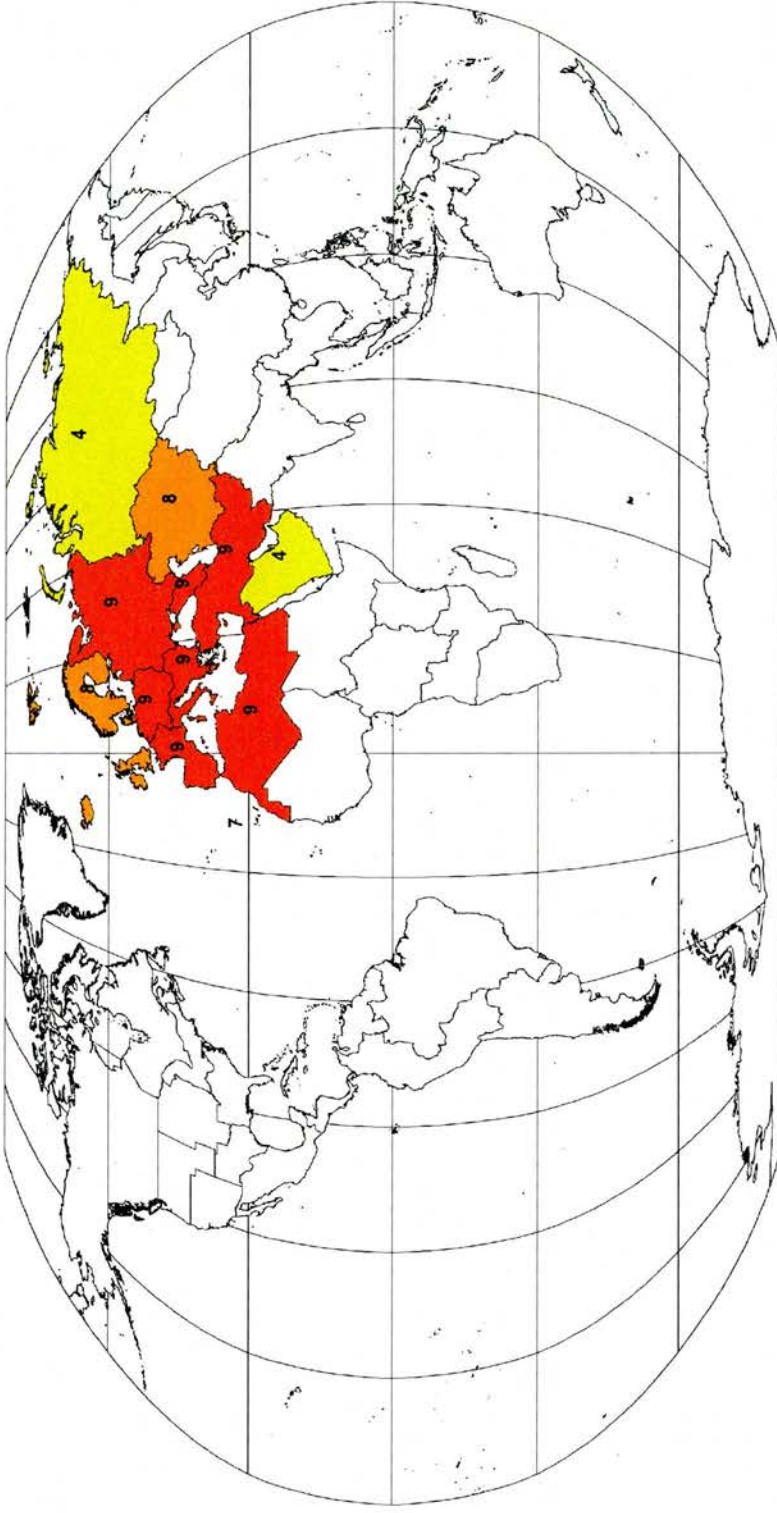


Element 35 **114 genera**

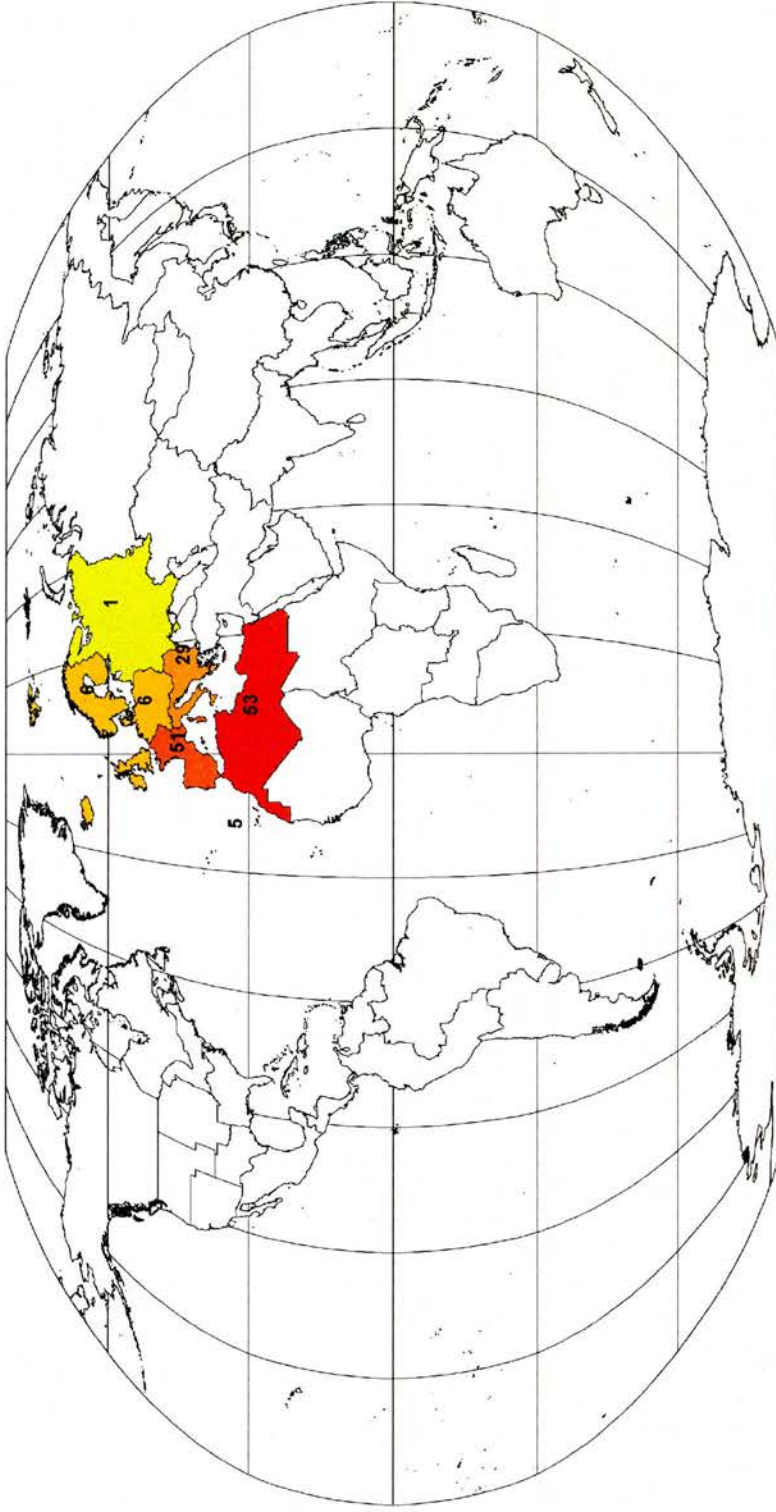
Europe and Mediterranean region east into Siberia and Middle Asia and south into Arabian Peninsula and tropical Africa



Element 36 **9 genera**
Europe and Mediterranean region

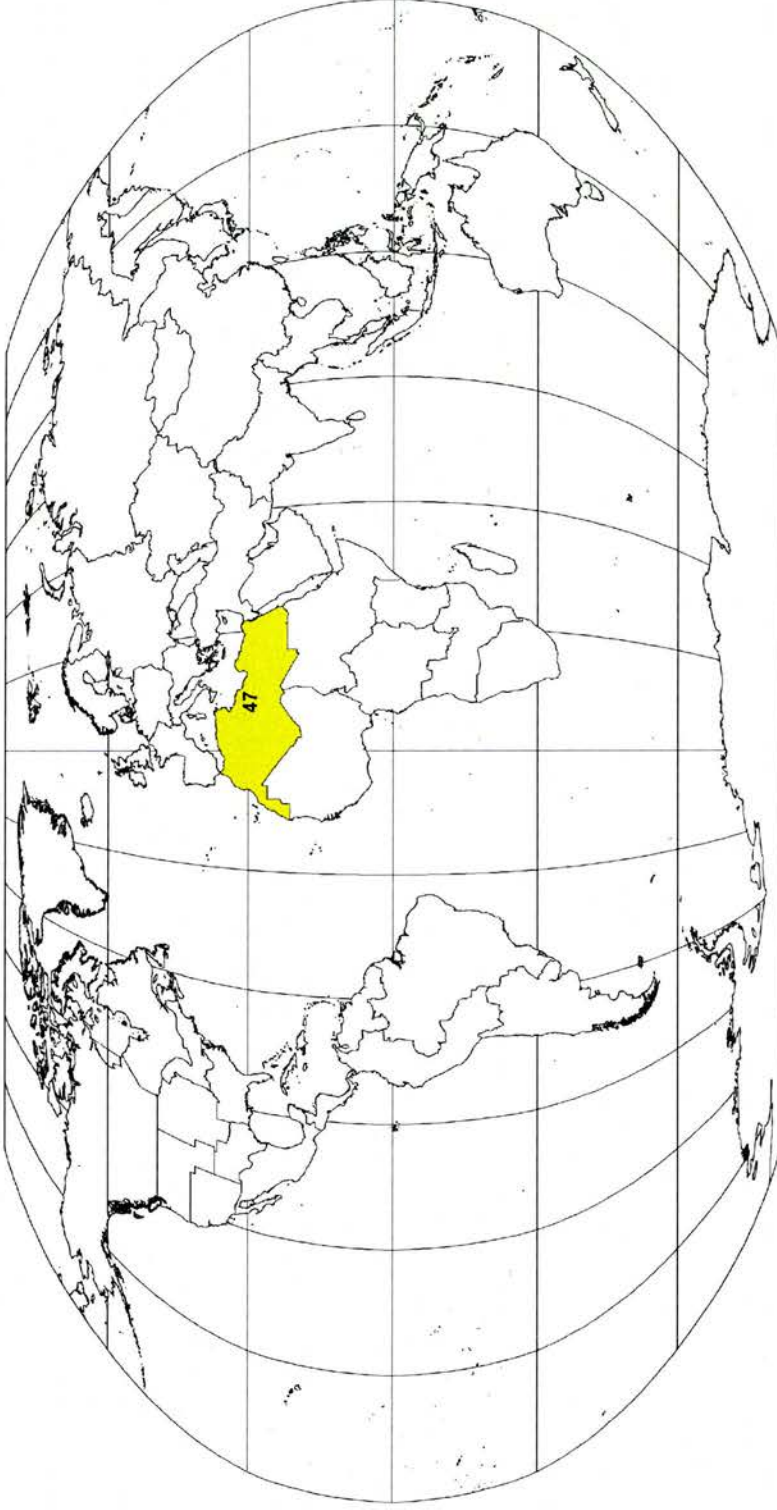


Element 37 **54 genera**
Europe and North Africa to Macaronesia



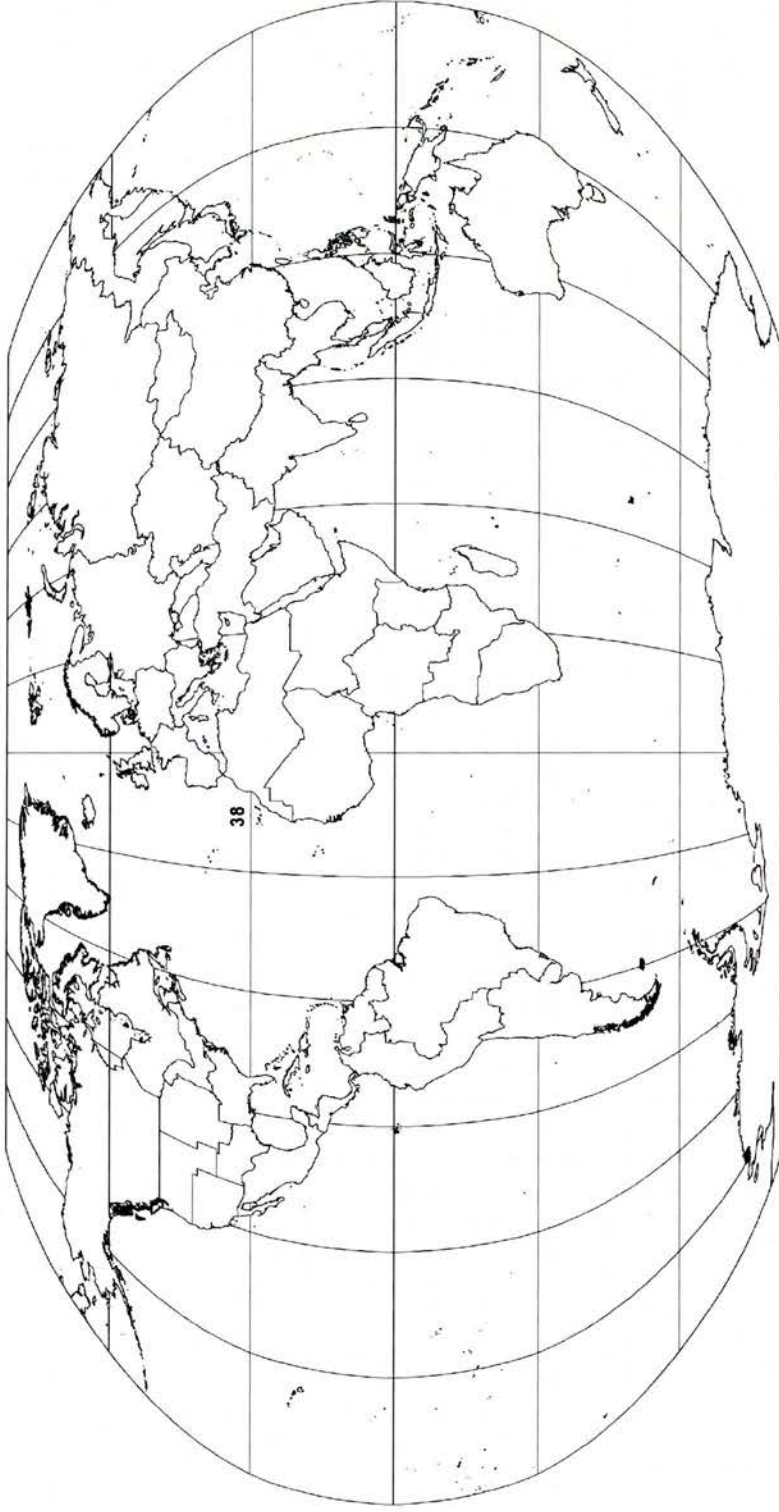
Element 38 **47 genera**

Endemic to Northern Africa



Element 39 **38 genera**

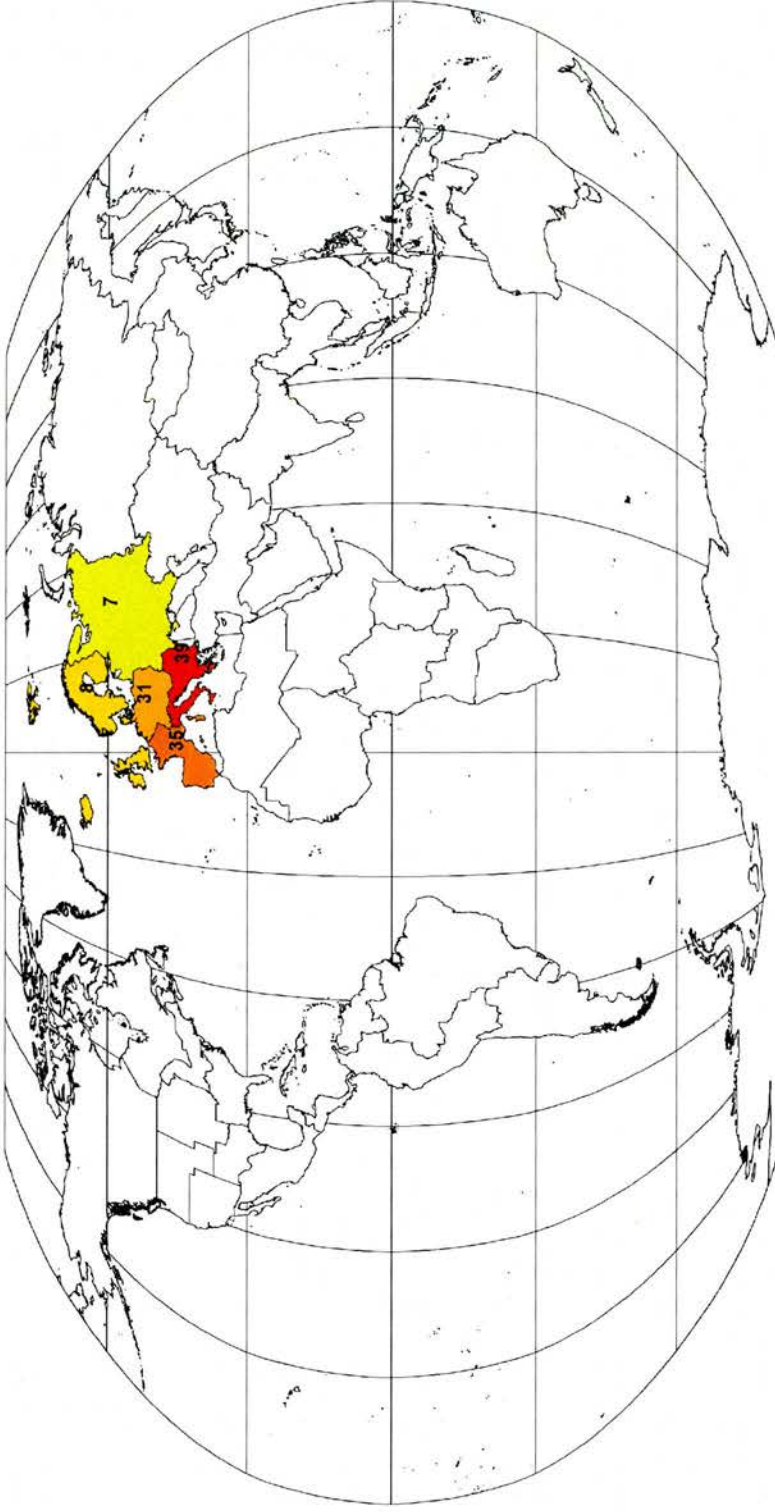
Endemic to Macaronesia



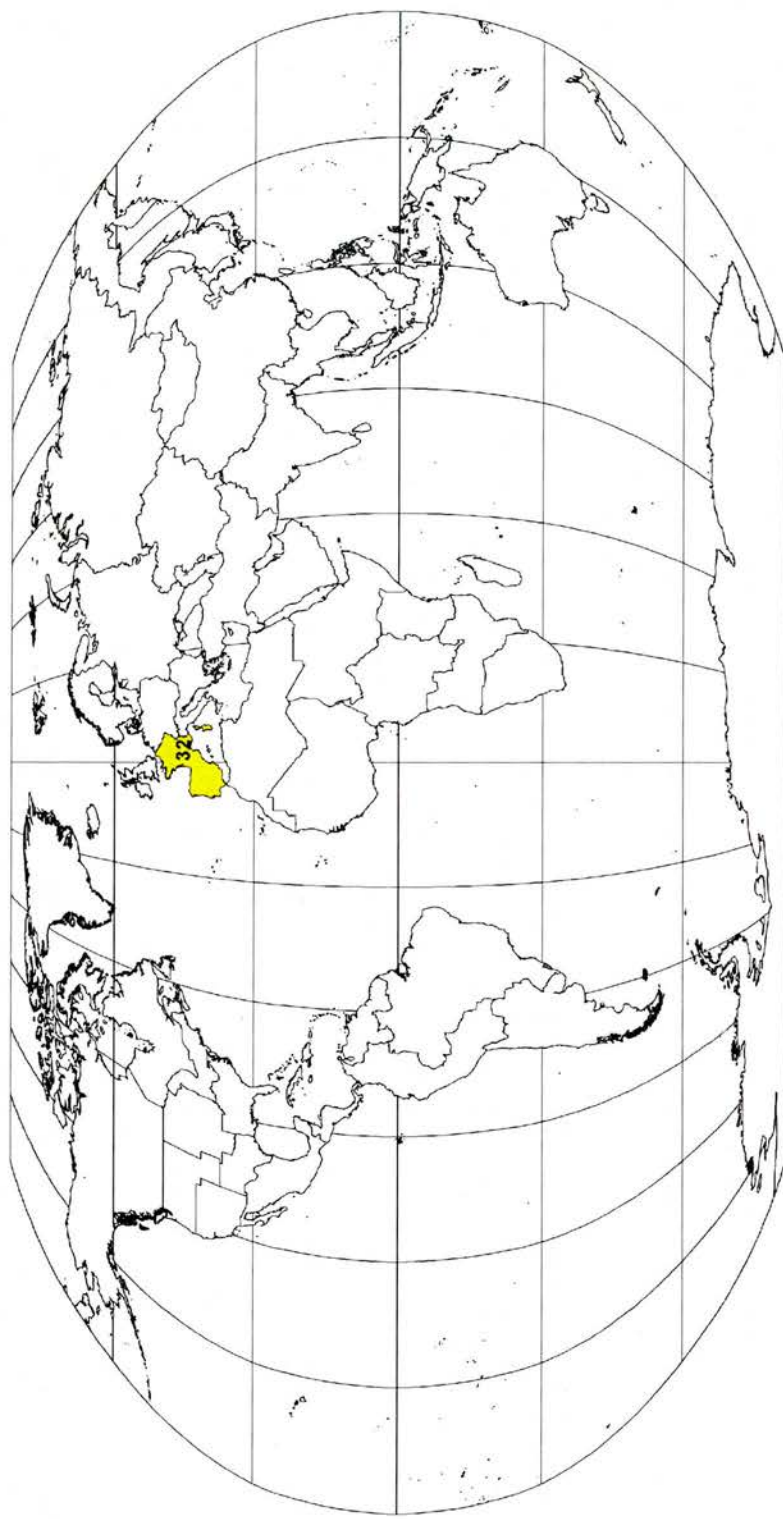
Element 40

41 genera

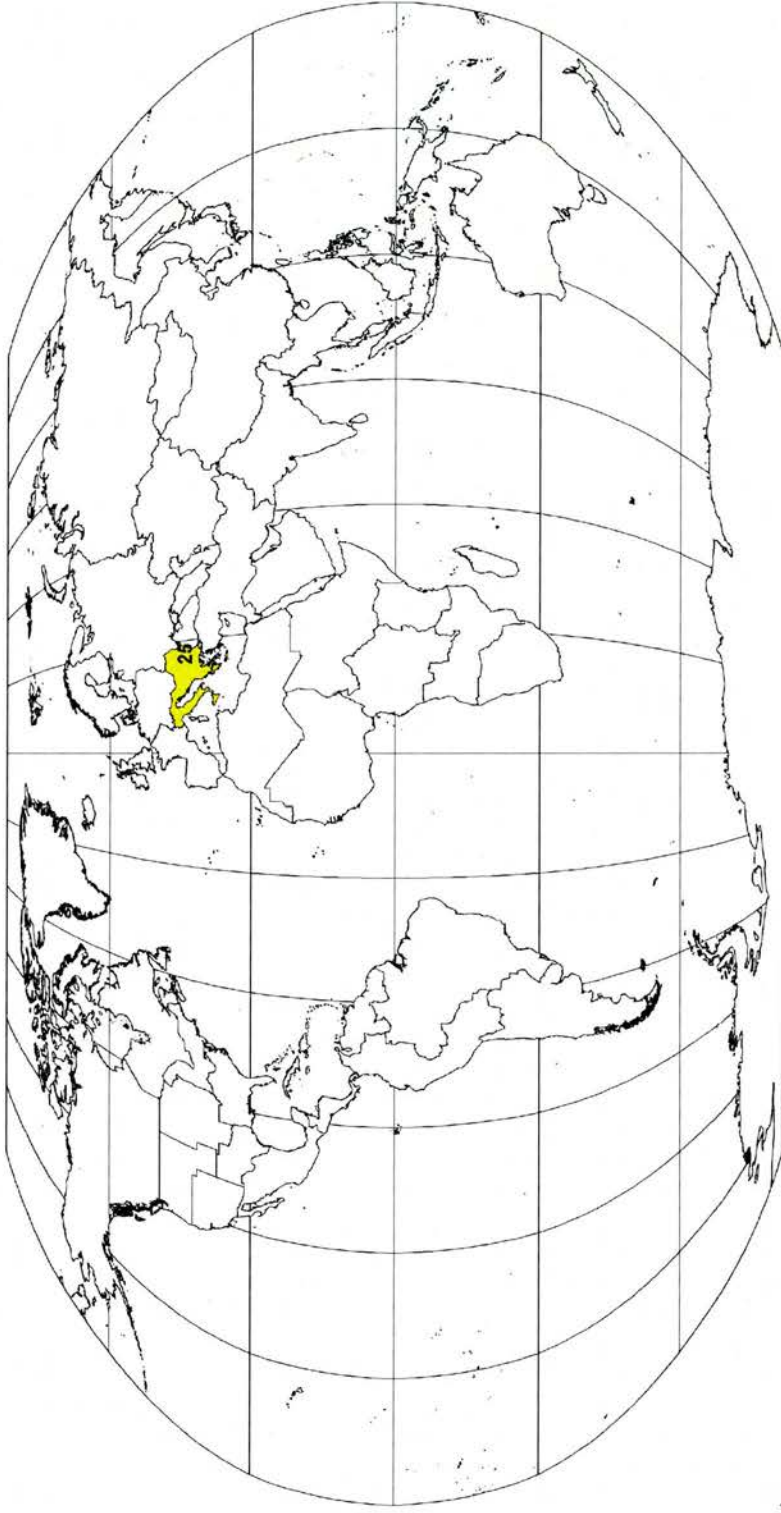
Europe



Element 41 **32 genera**
Endemic to Southwestern Europe



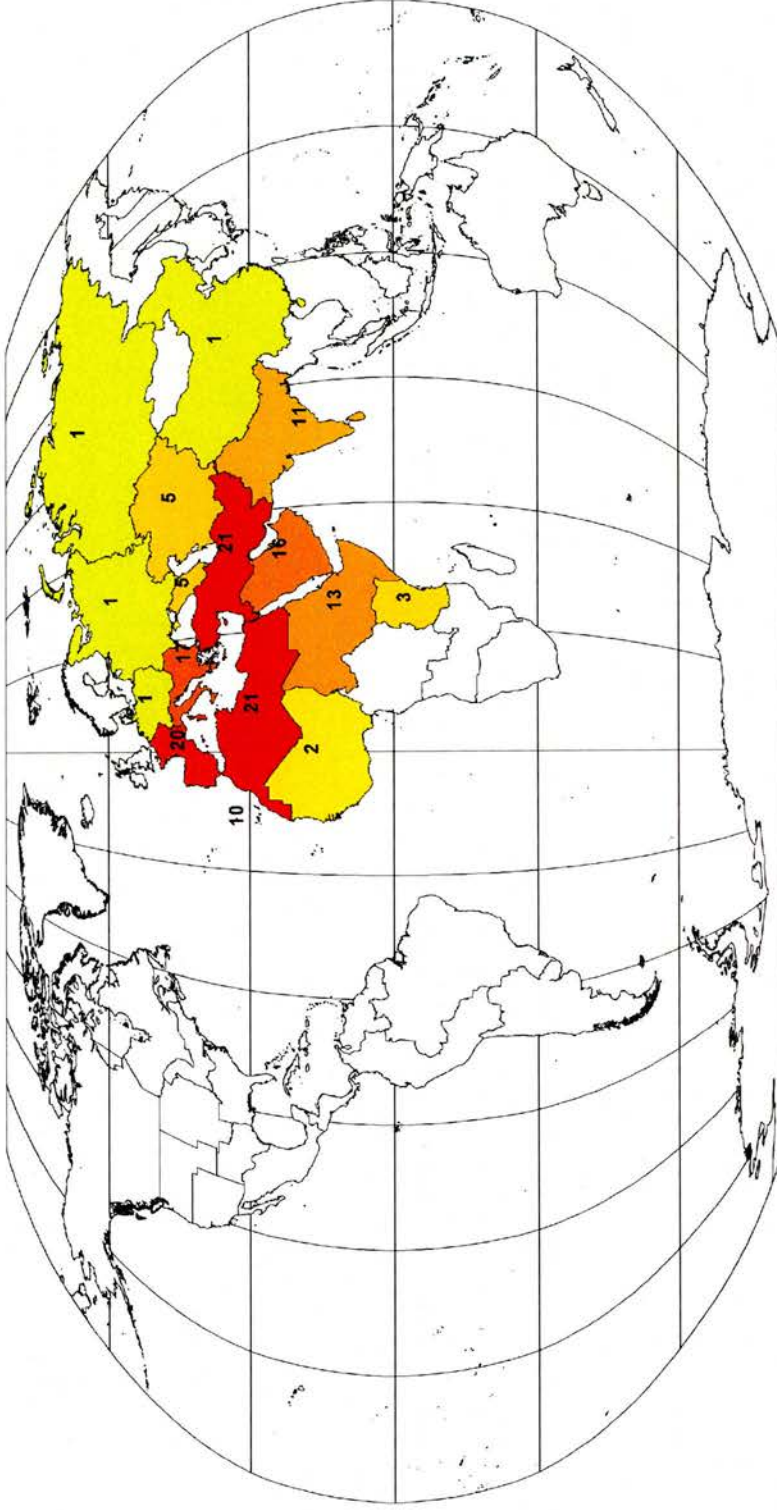
Element 42 **25 genera**
Endemic to Southeastern Europe



Element 43

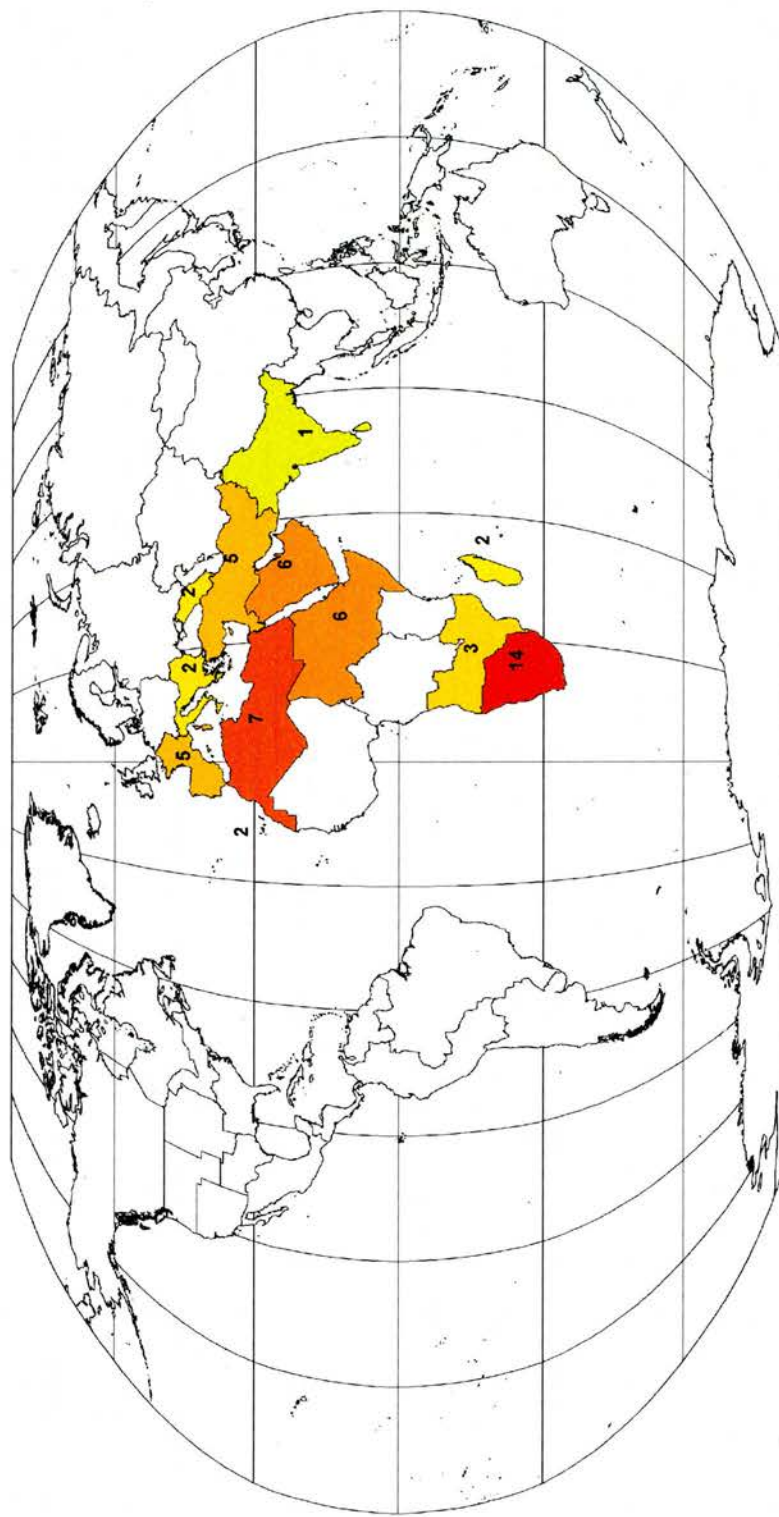
23 genera

Mediterranean region and Northeast tropical Africa east to W. Himalaya



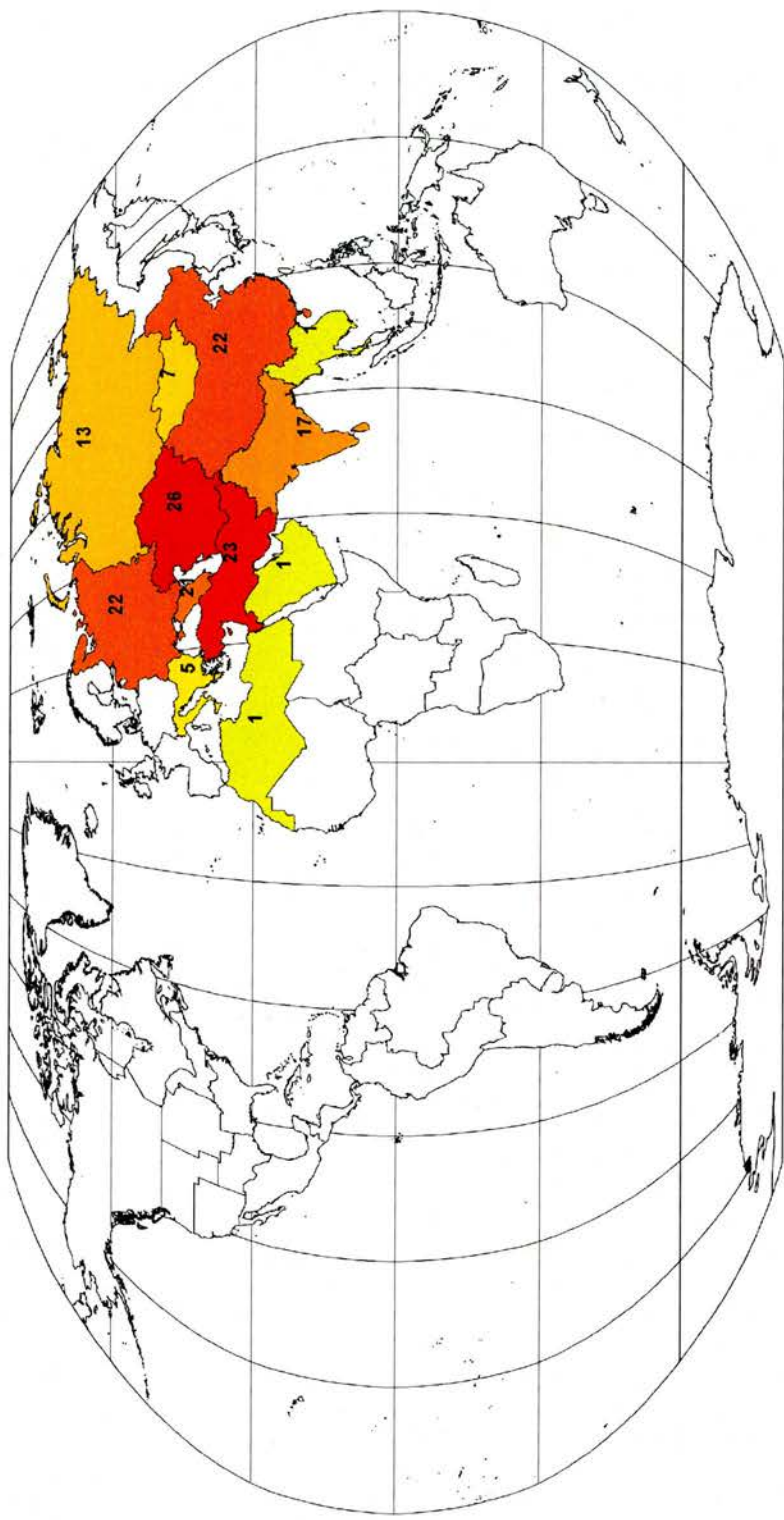
Element 44 **14 genera**

Mediterranean region to Arabian Peninsula, Northeast Tropical Africa and Southern Africa

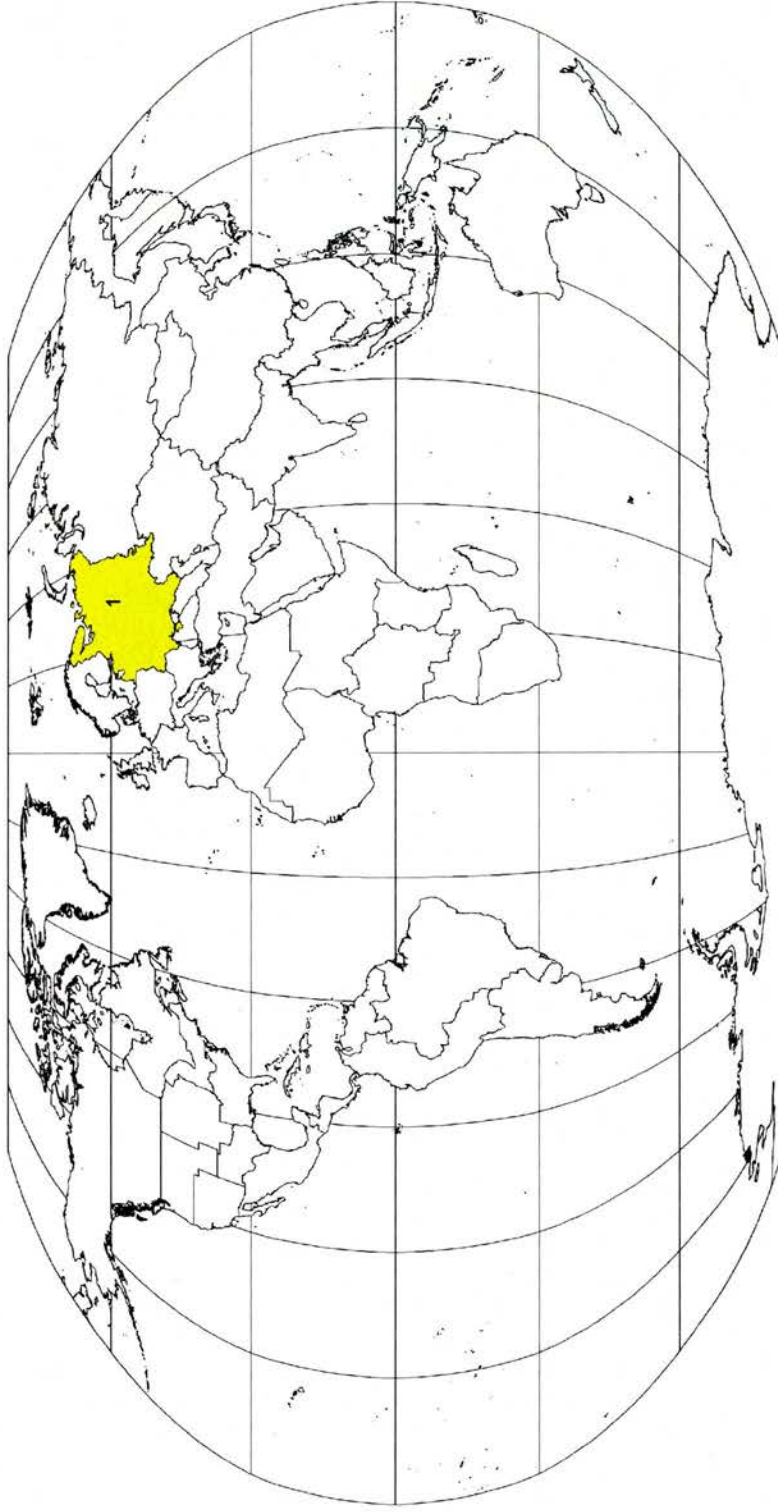


Element 45 **27 genera**

Central Asia to SE. Europe, W. China and Himalaya and into Indo-China

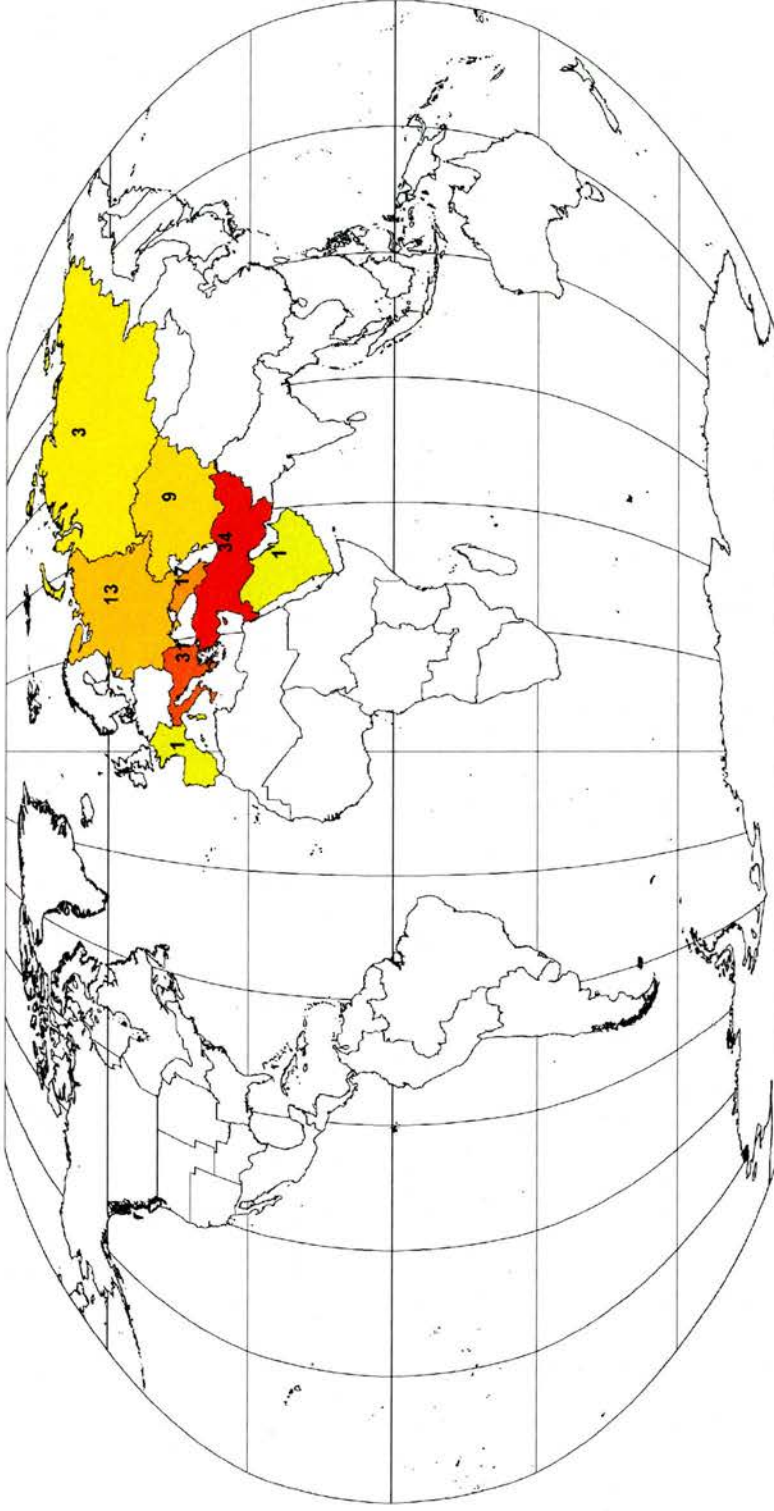


Element 46 **1 genus**
Endemic to Eastern Europe



Element 47 **39 genera**

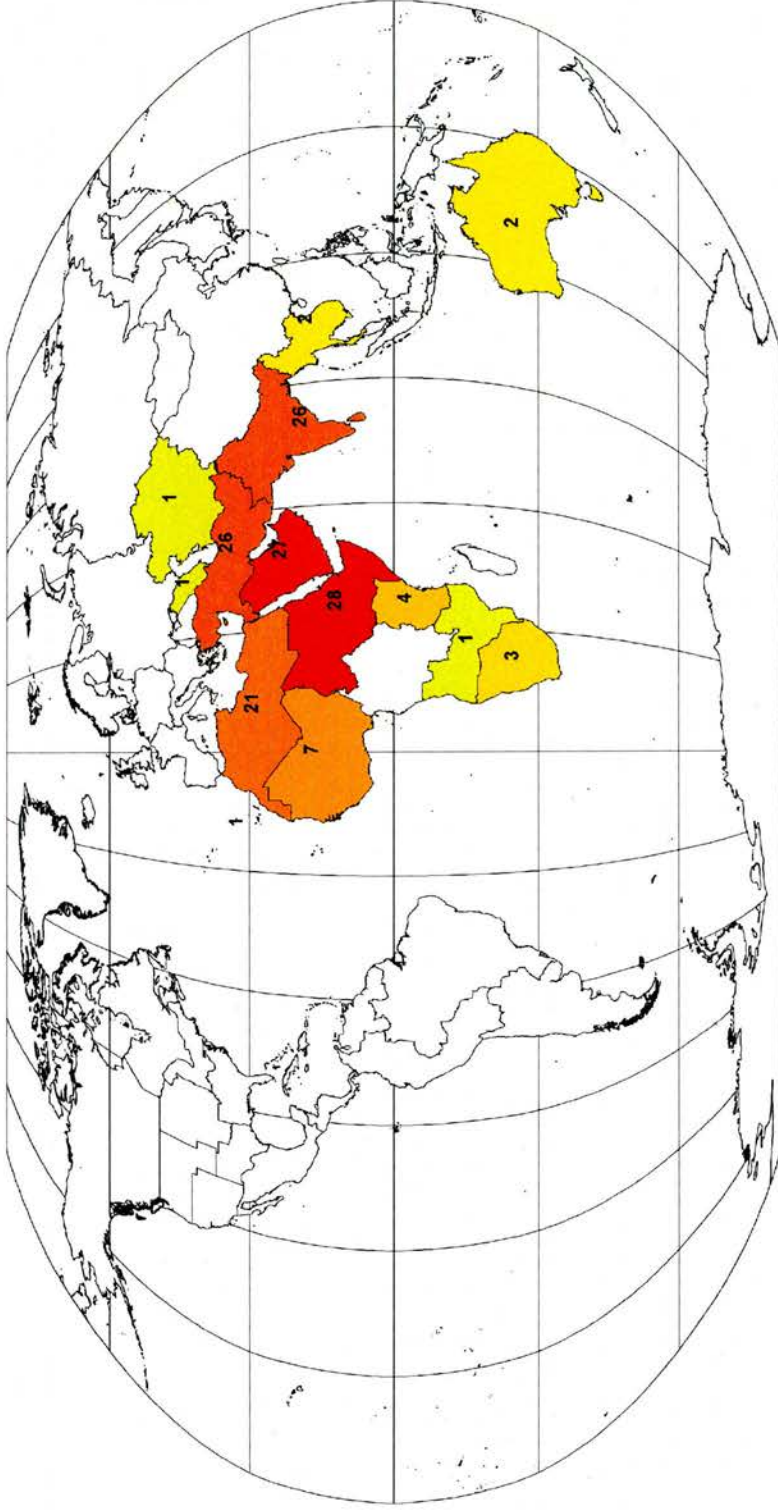
SE. Europe to Western Asia, reaching SW. Europe and Arabian Peninsula



Element 48

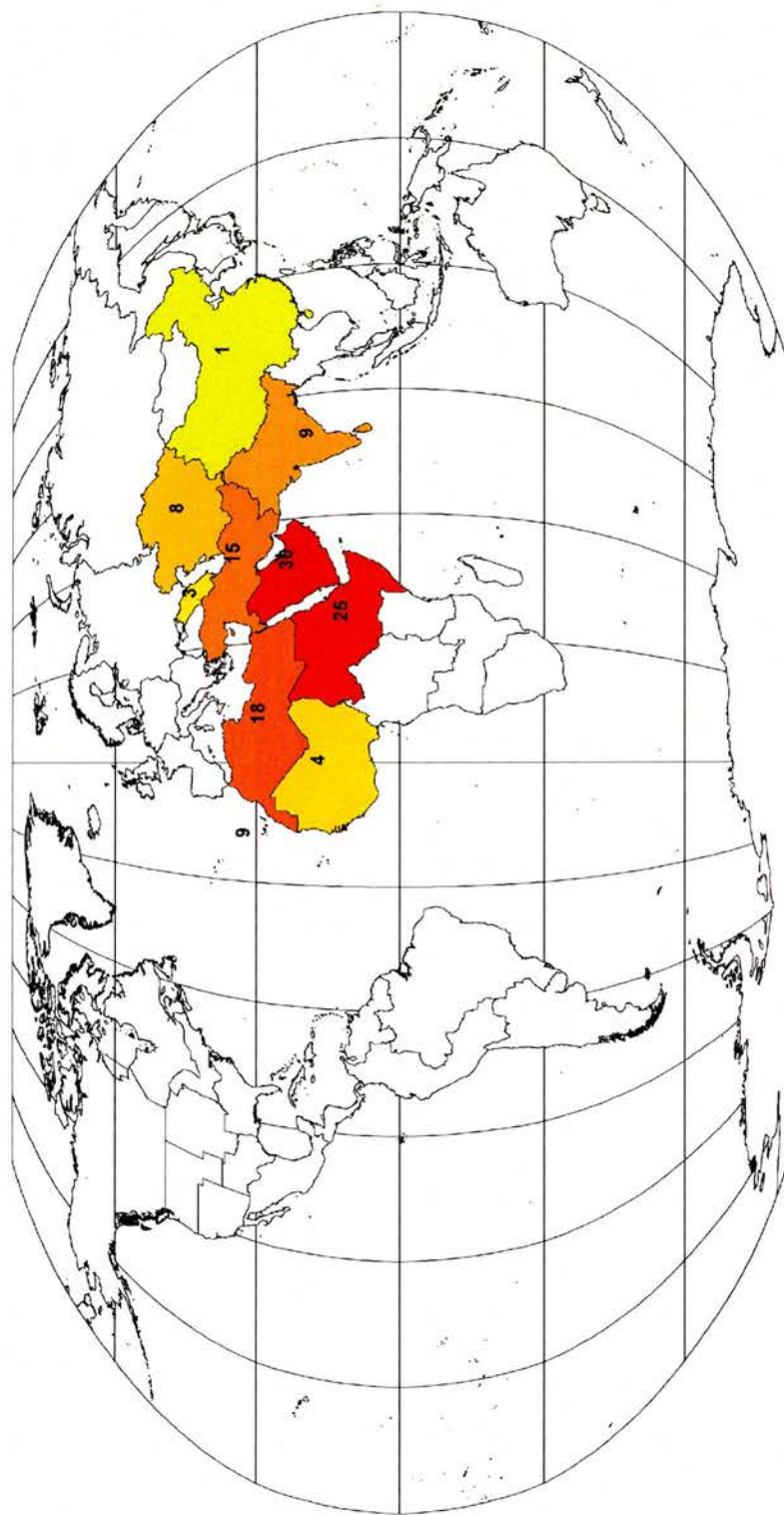
33 genera

North and Northeast tropical Africa east to Indian Subcontinent and into Indo-China; 1 outlier in Australia



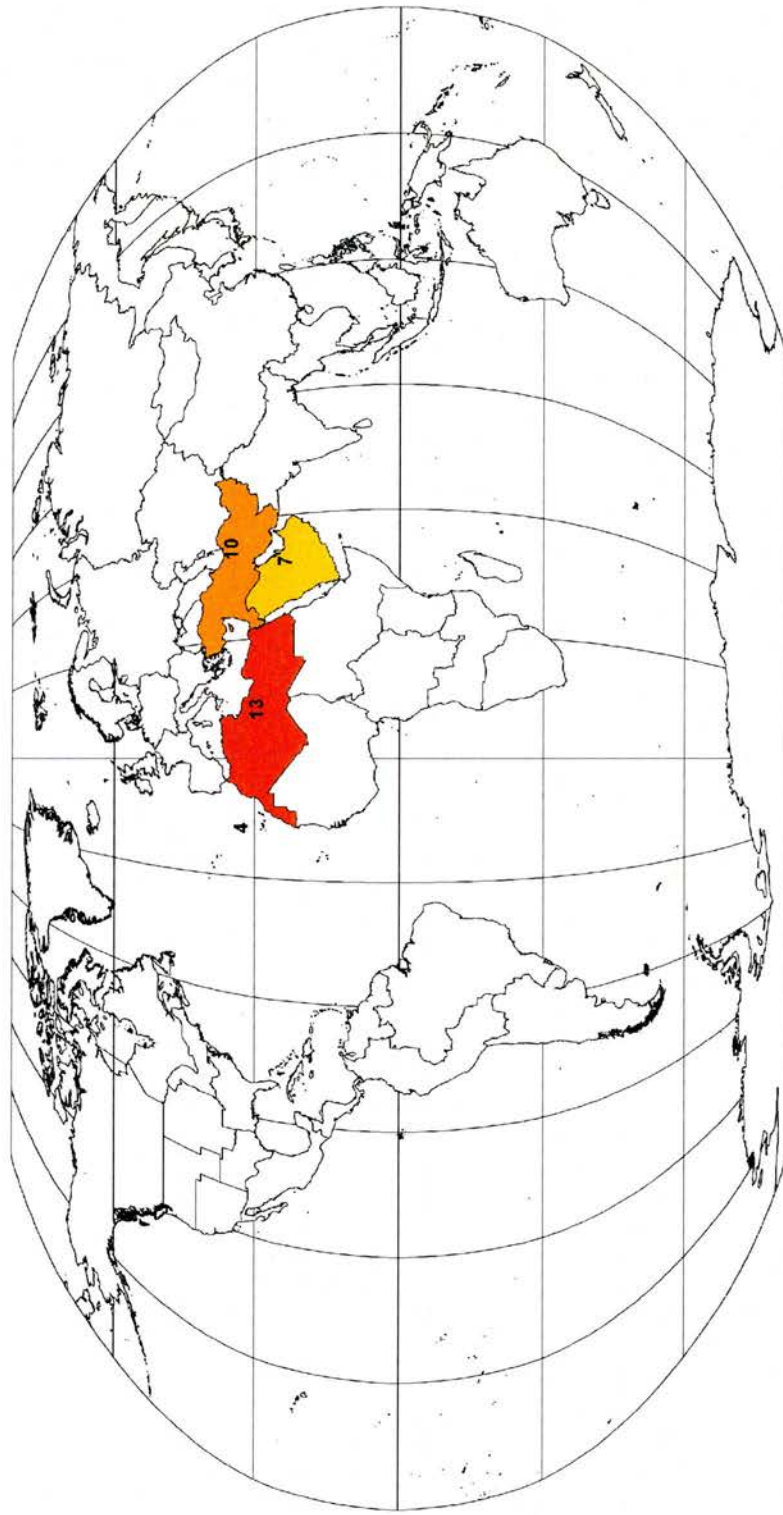
Element 49 **40 genera**

North-east Tropical Africa and Arabian Peninsula, reaching North Africa and Macaronesia and eastward to Indian Subcontinent



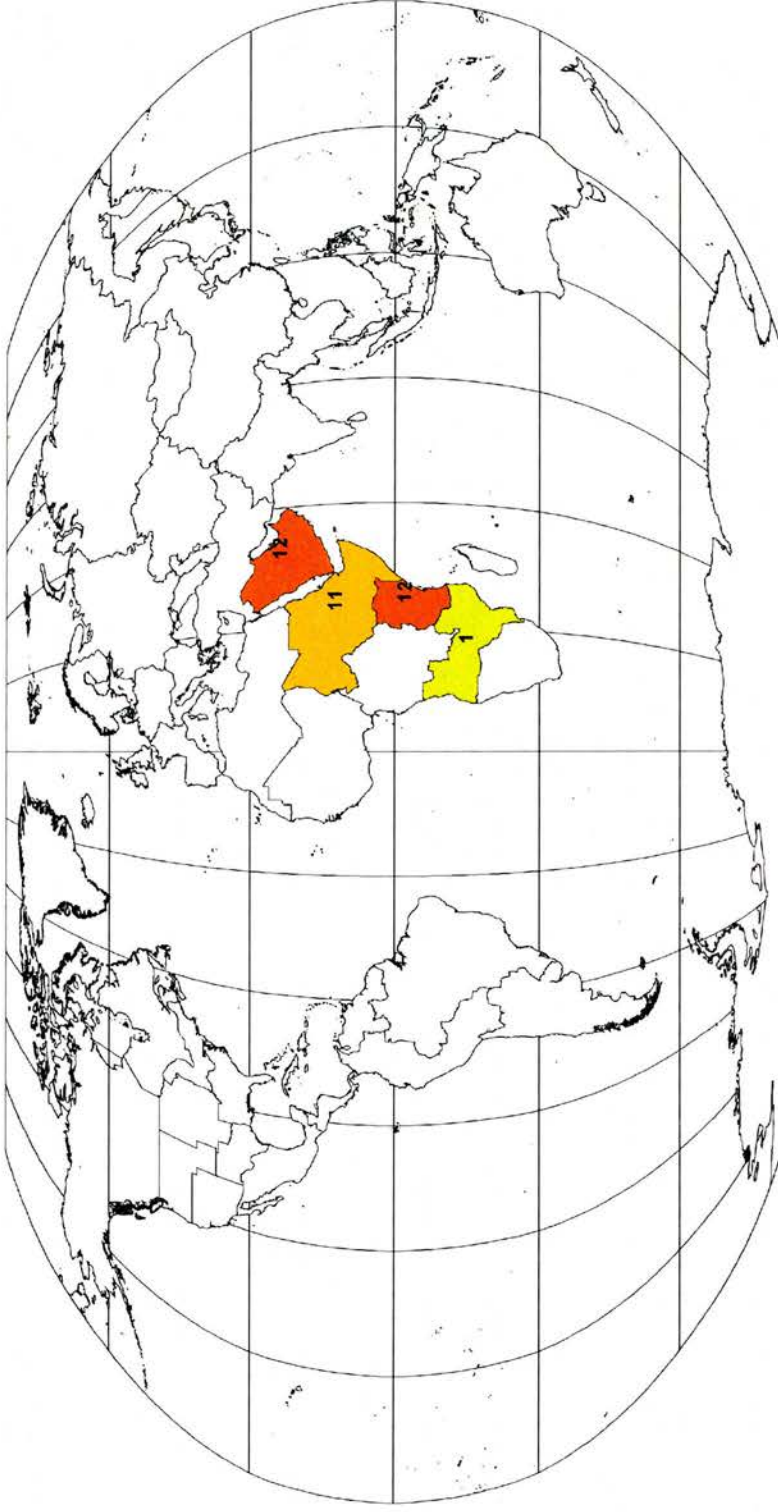
Element 50 **14 genera**

Macaronesia and North Africa to Western Asia and Arabian Peninsula

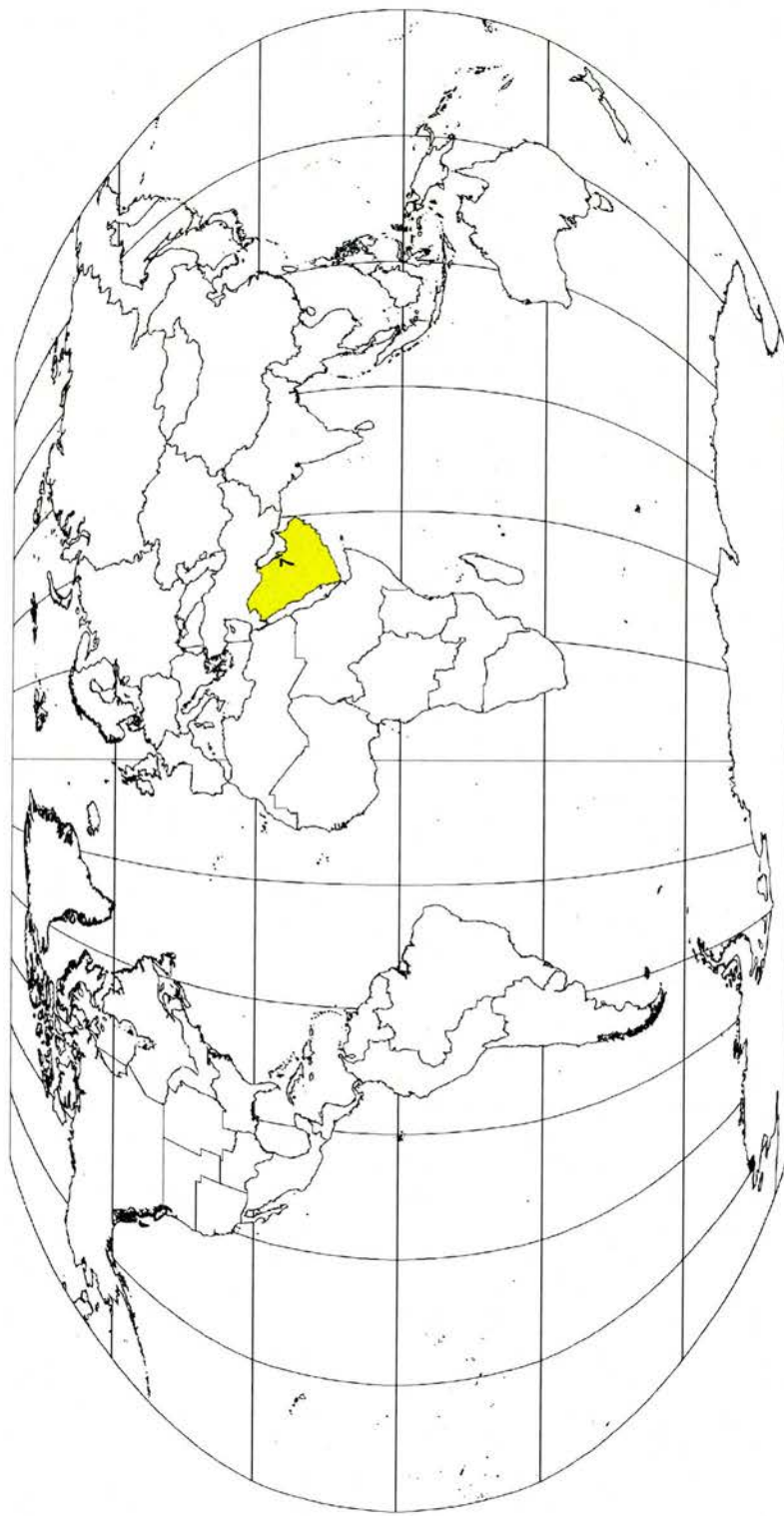


Element 51 **12 genera**

Northeast and East tropical Africa to Arabian Peninsula

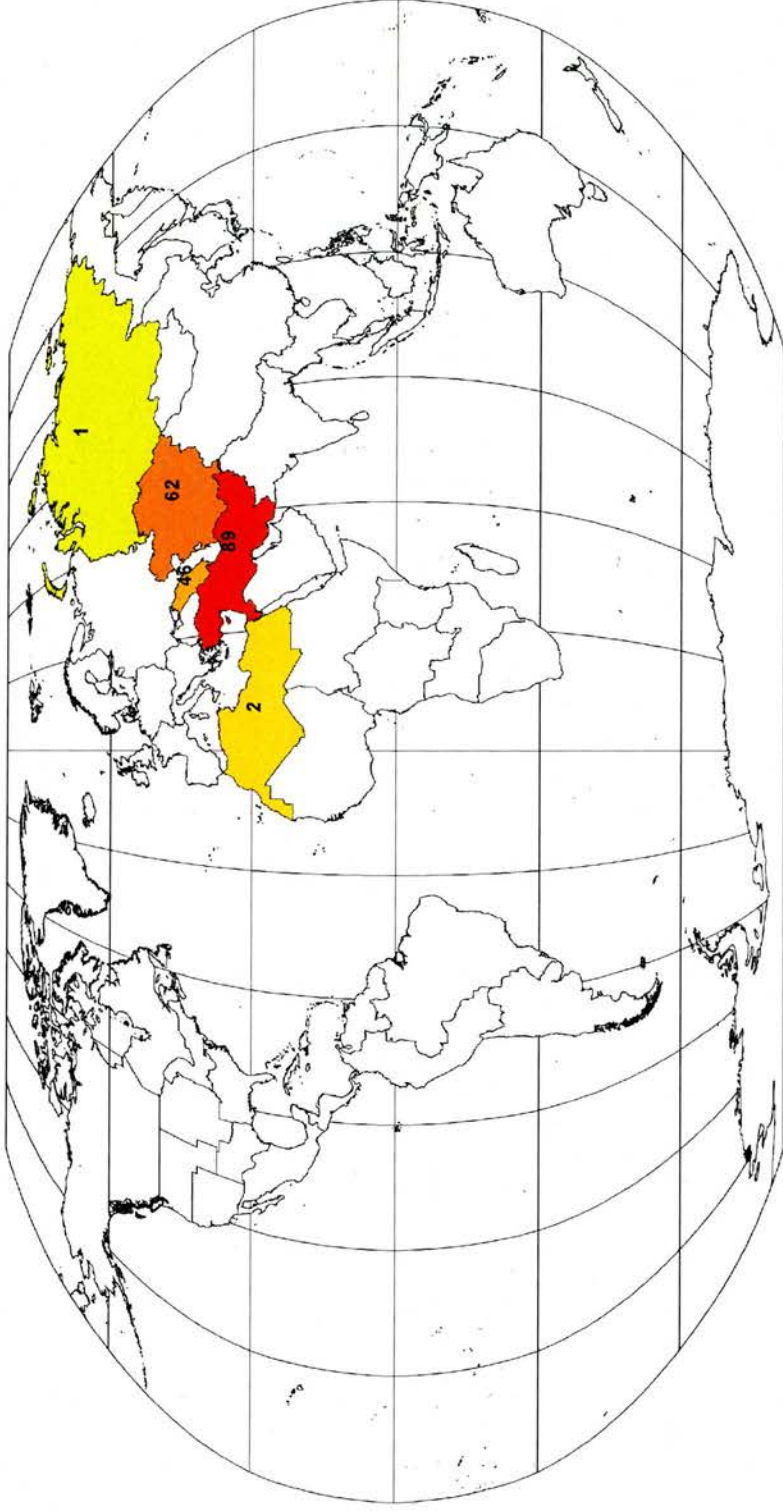


Element 52 **7 genera**
Endemic to Arabian Peninsula



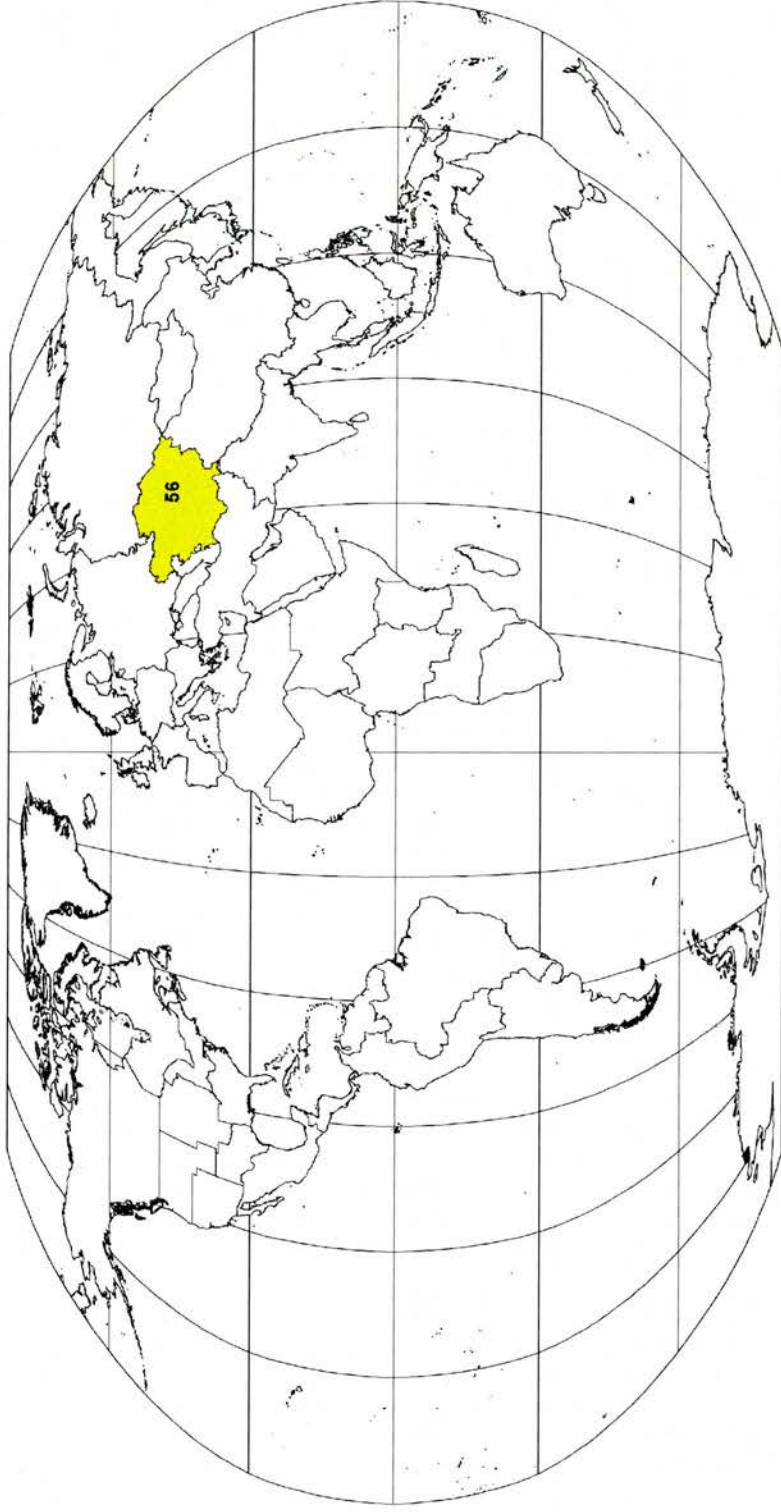
Element 53 **91 genera**

Western and Central Asia, reaching North Africa and Siberia



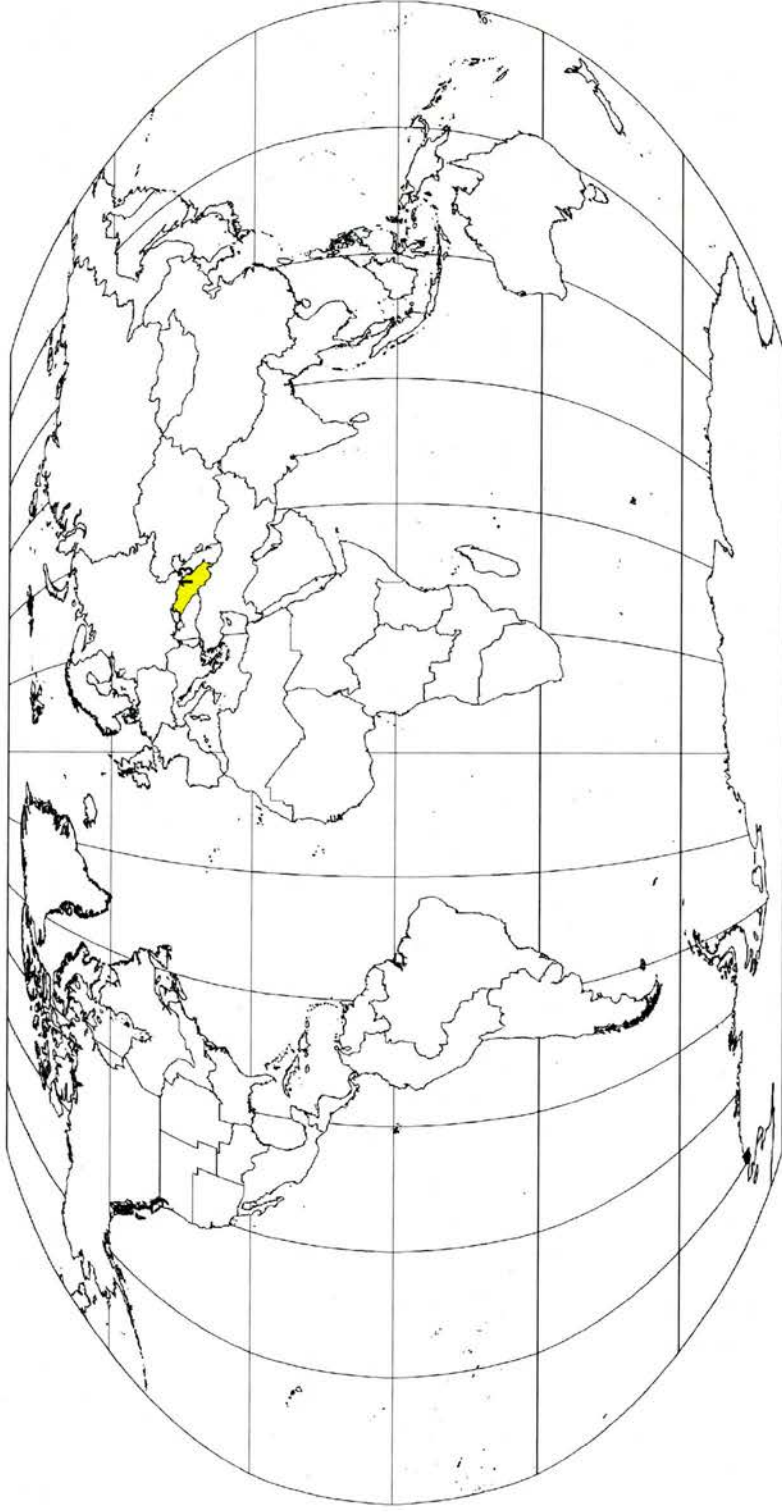
Element 54 **56 genera**

Endemic to Middle Asia



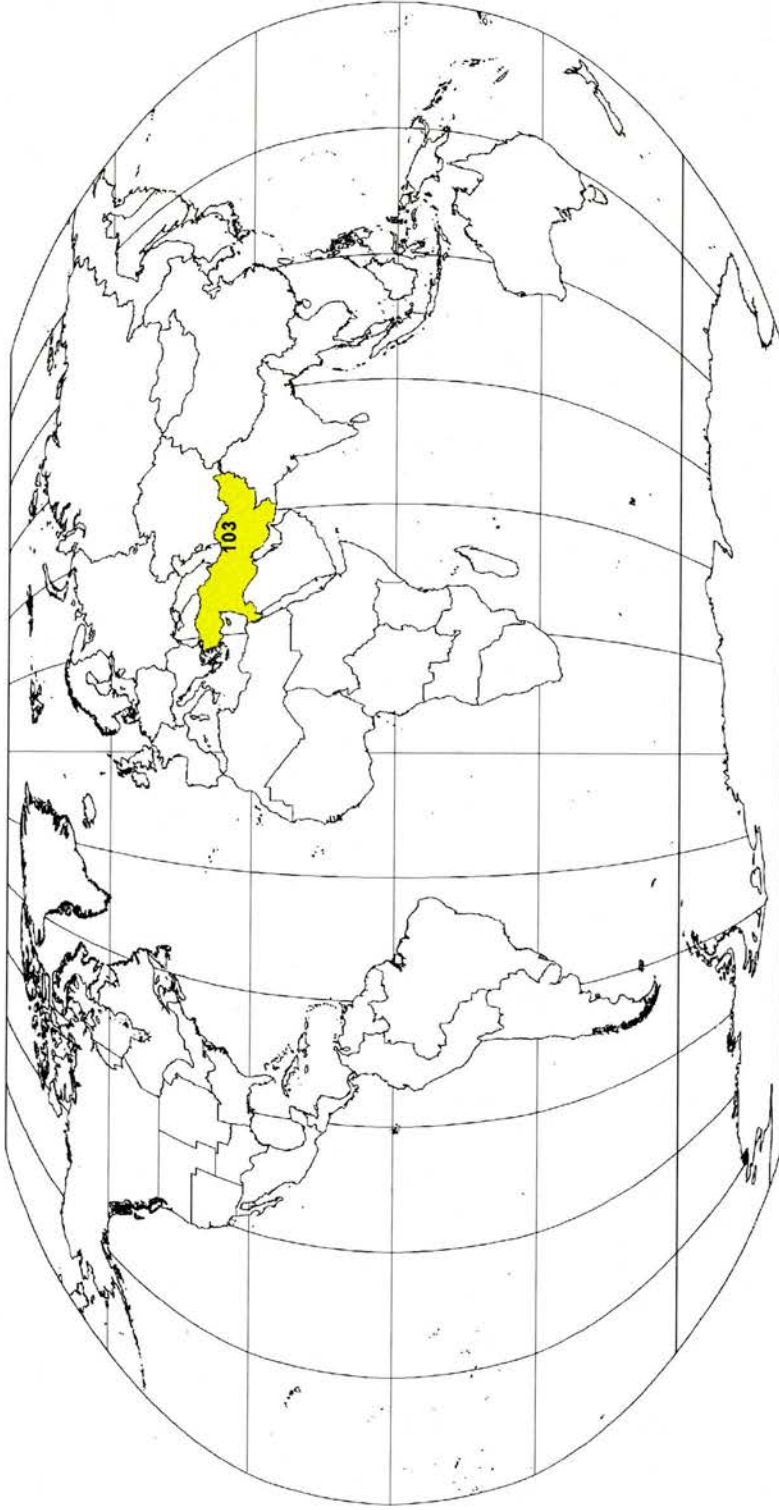
Element 55 **13 genera**

Endemic to Caucasus



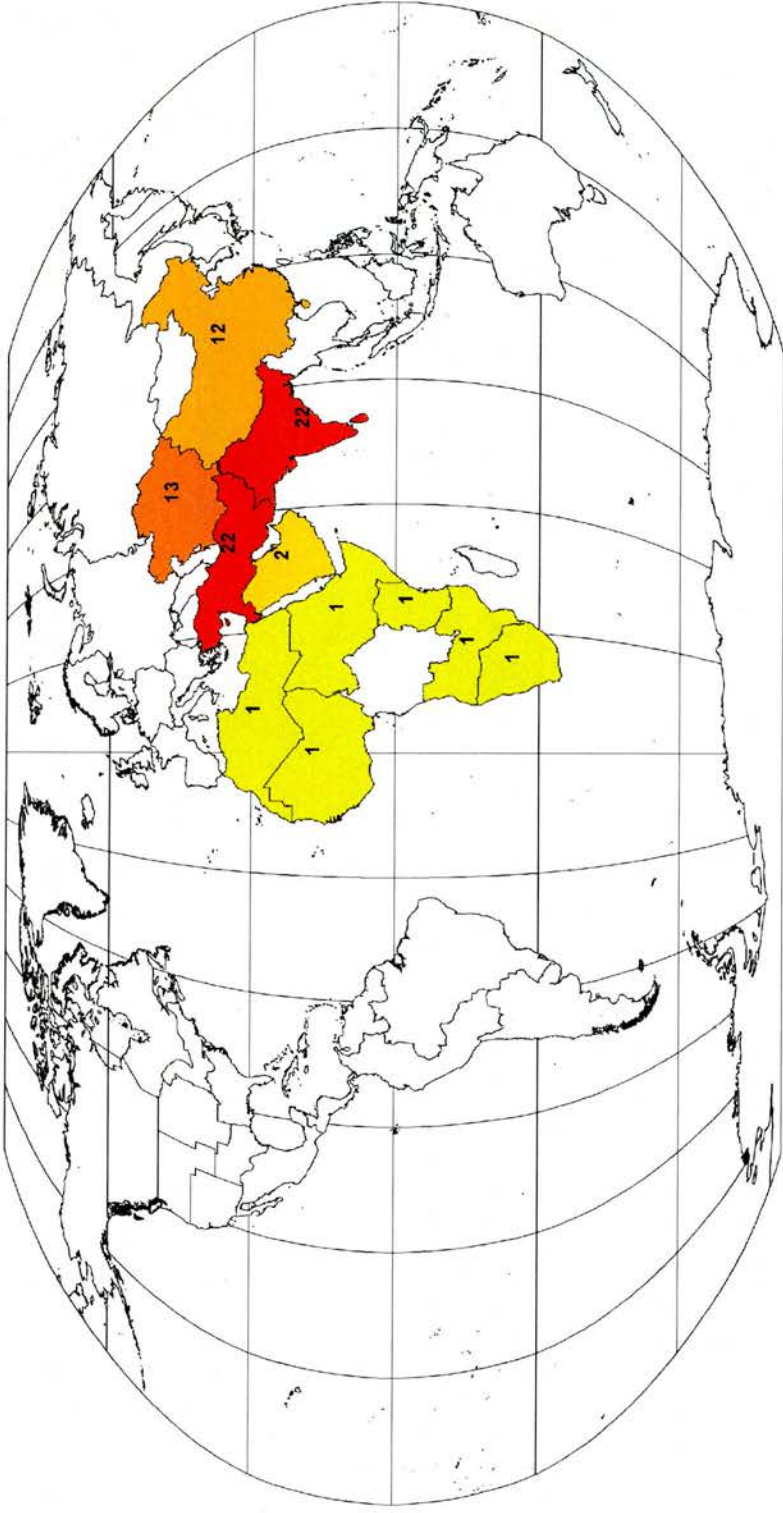
Element 56 **103 genera**

Endemic to Western Asia



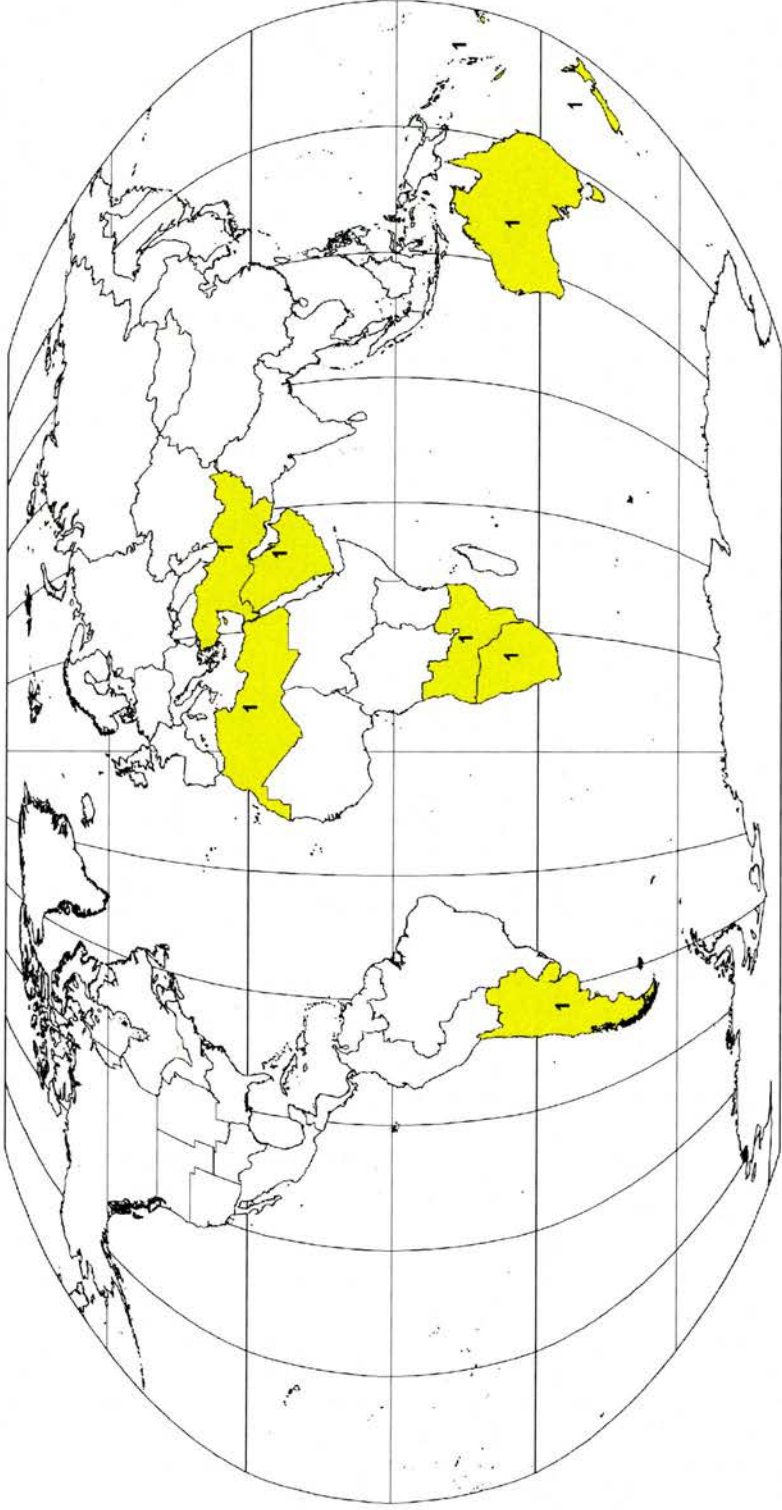
Element 57 **33 genera**

Western Asia and Indian Subcontinent to Central Asia and China, and extending into northern and tropical Africa

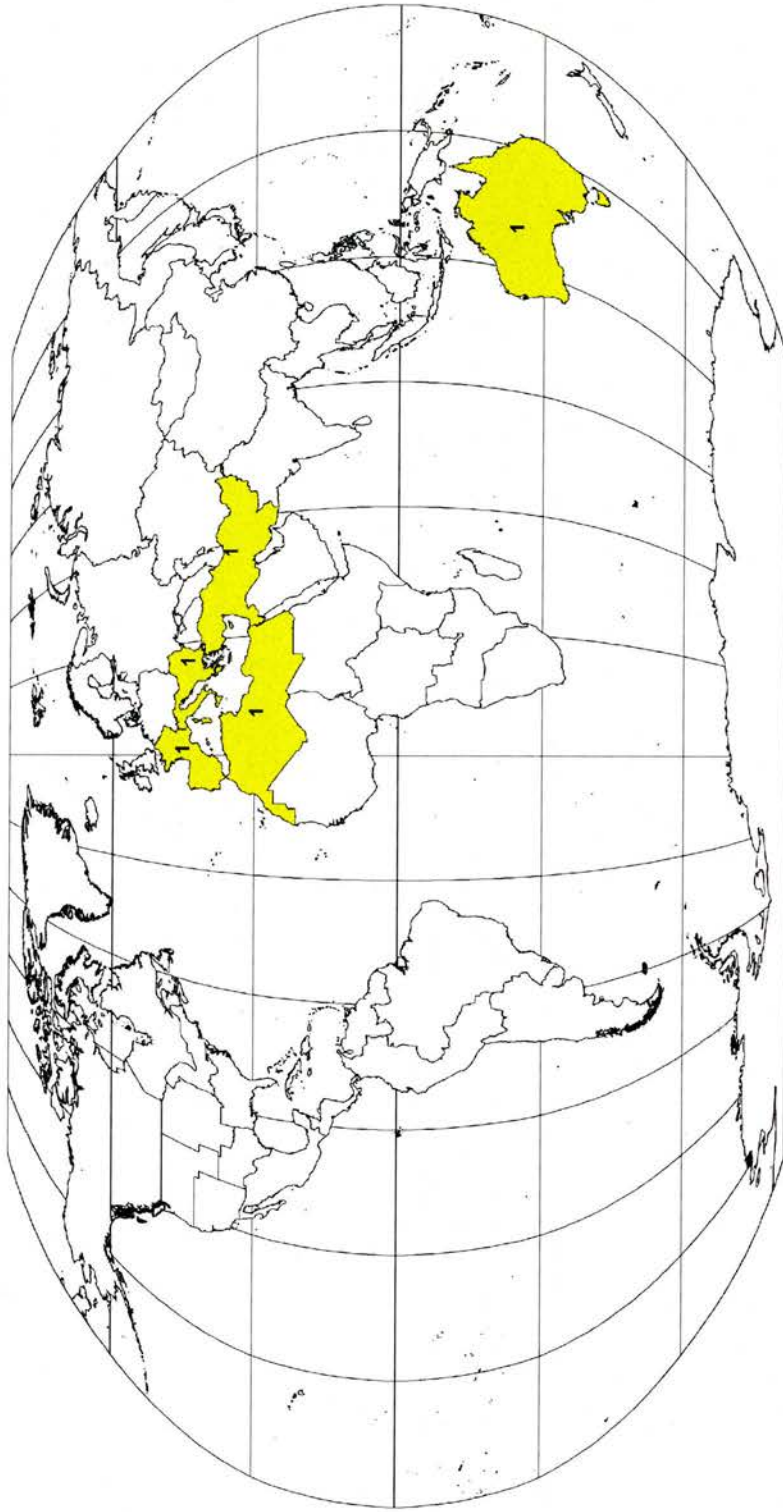


Element 58 **1 genus**

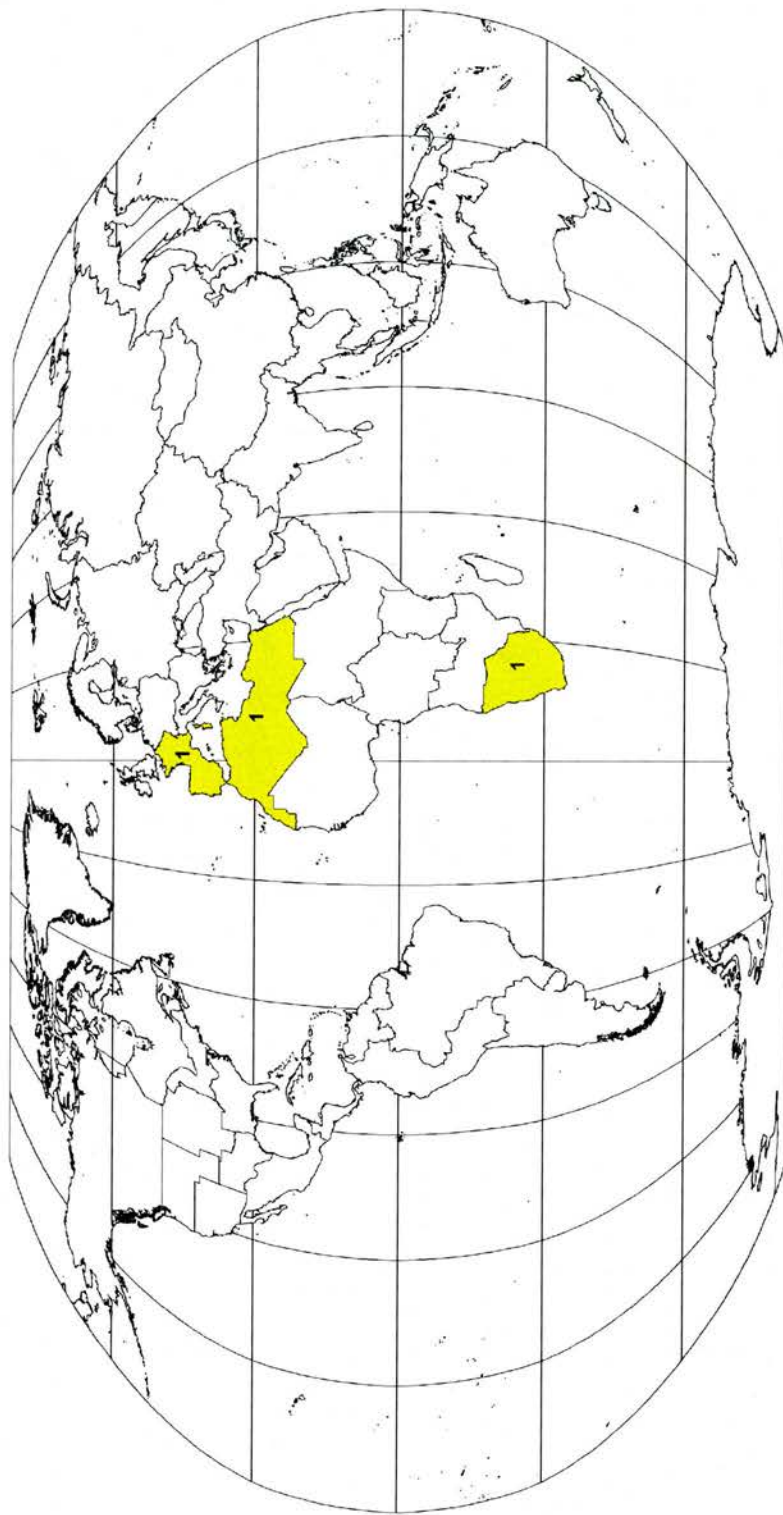
Northern, South Tropical and Southern Africa, Western Asia, Arabia; Australia, New Zealand, New Caledonia; Southern South America.



Element 59 1 genus
Mediterranean region; Australia.

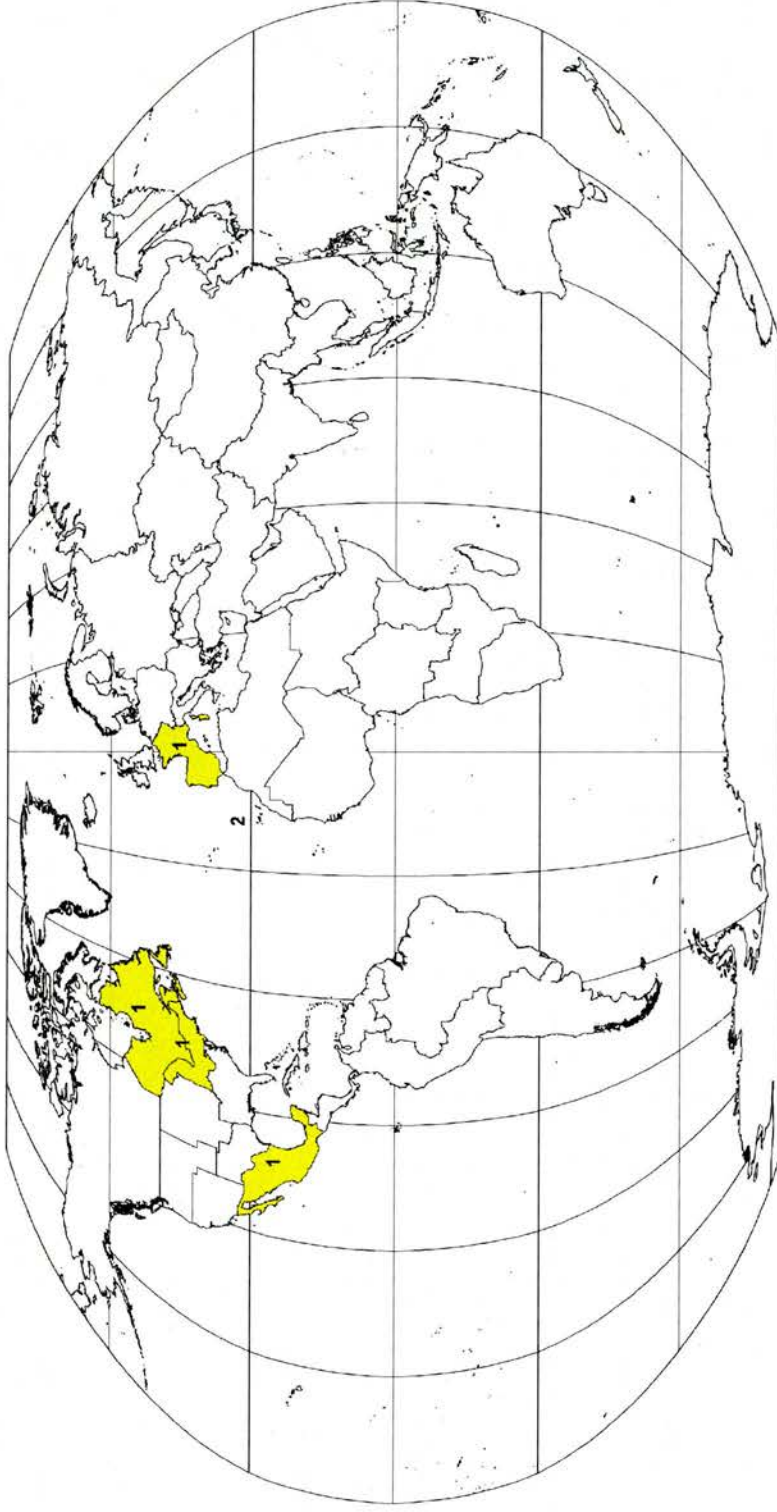


Element 60 **1 genus**
Spain, North Africa; South Africa.



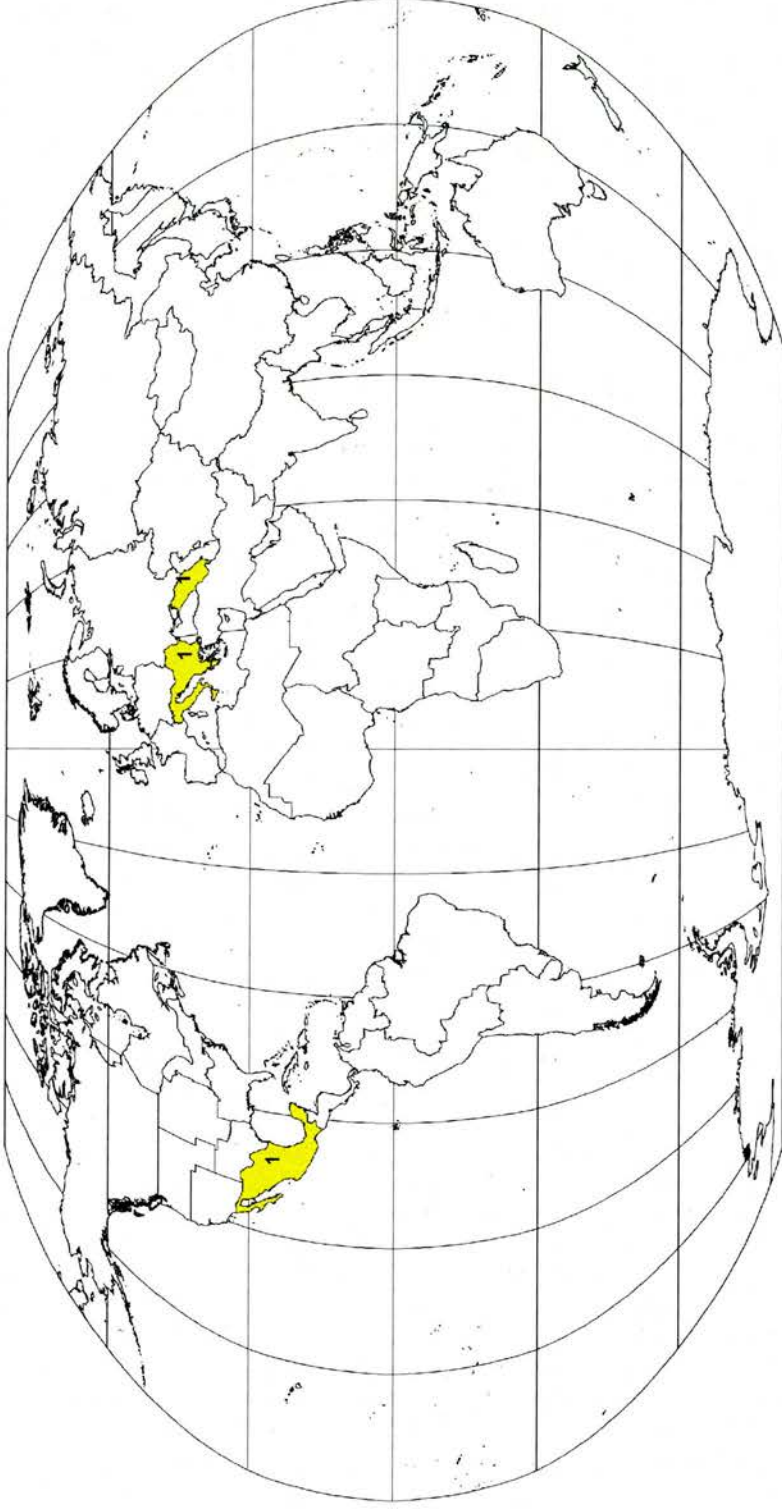
Element 61 **2 genera**

SW. Europe and Macaronesia; E. North America, Mexico



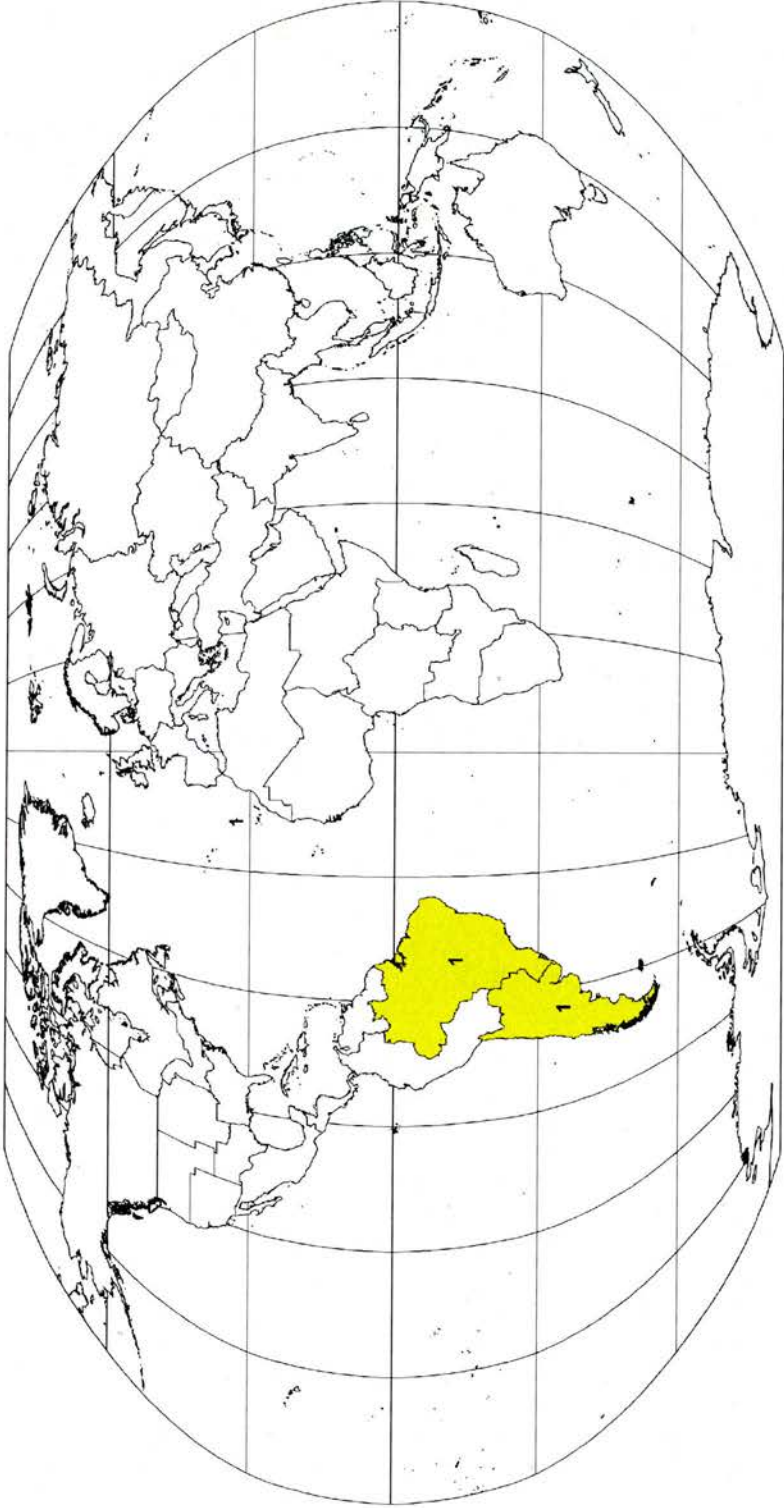
Element 62 **1 genus**

SE. Europe, Caucasus; NE. and C. Mexico.



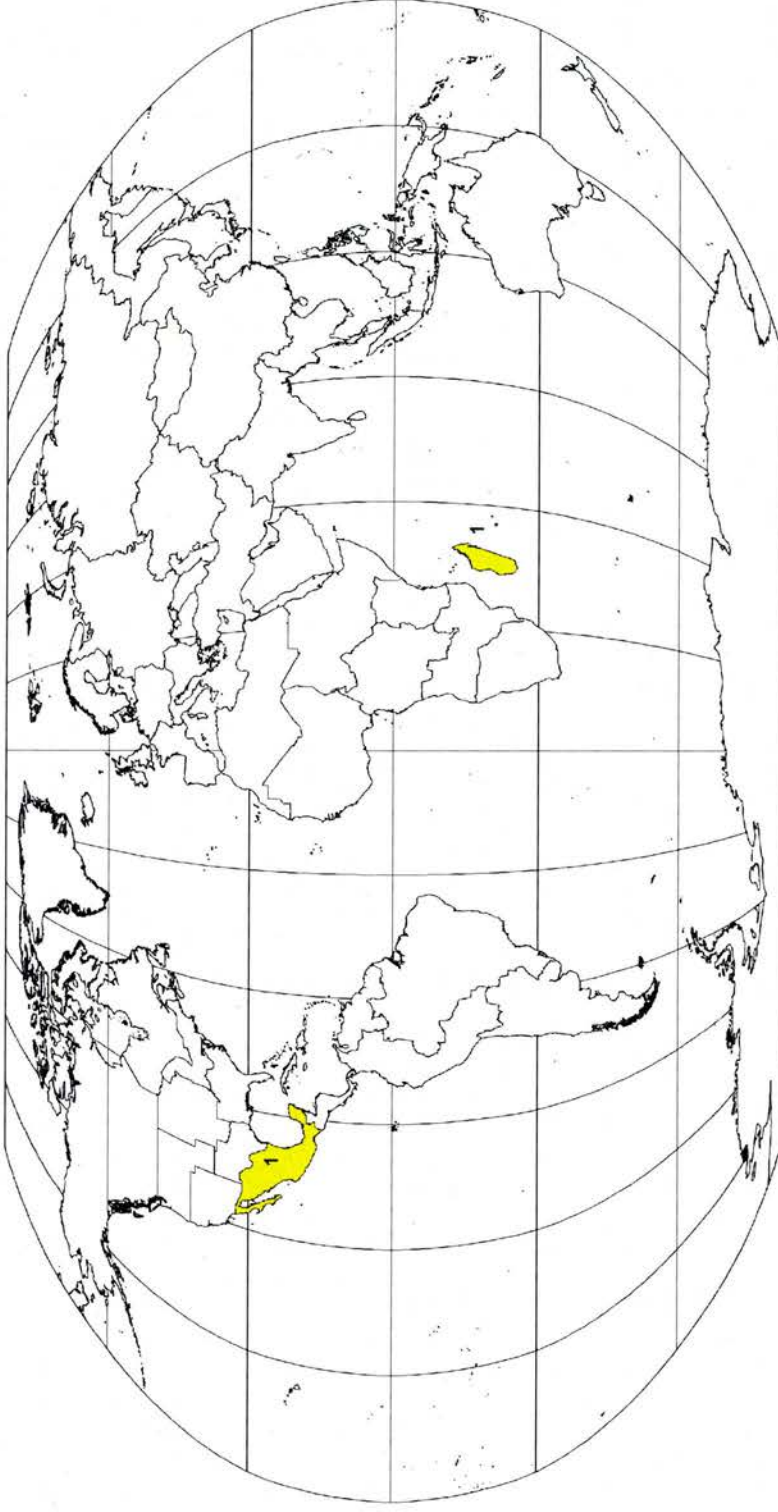
Element 63 **1 genus**

Macaronesia; S. Brazil and Southern South America



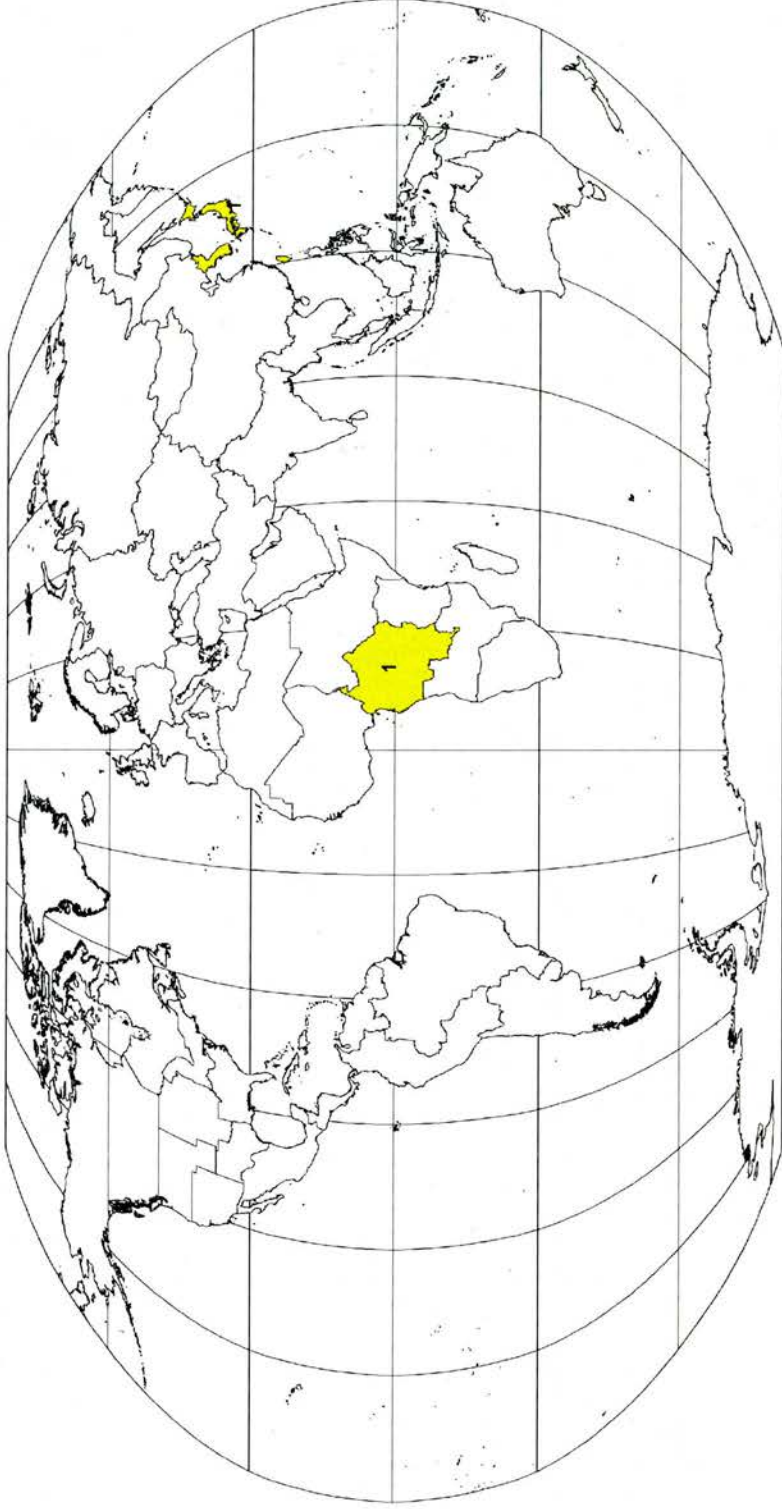
Element 64 **1 genus**

Madagascar and W. Indian Ocean islands, Mexico.

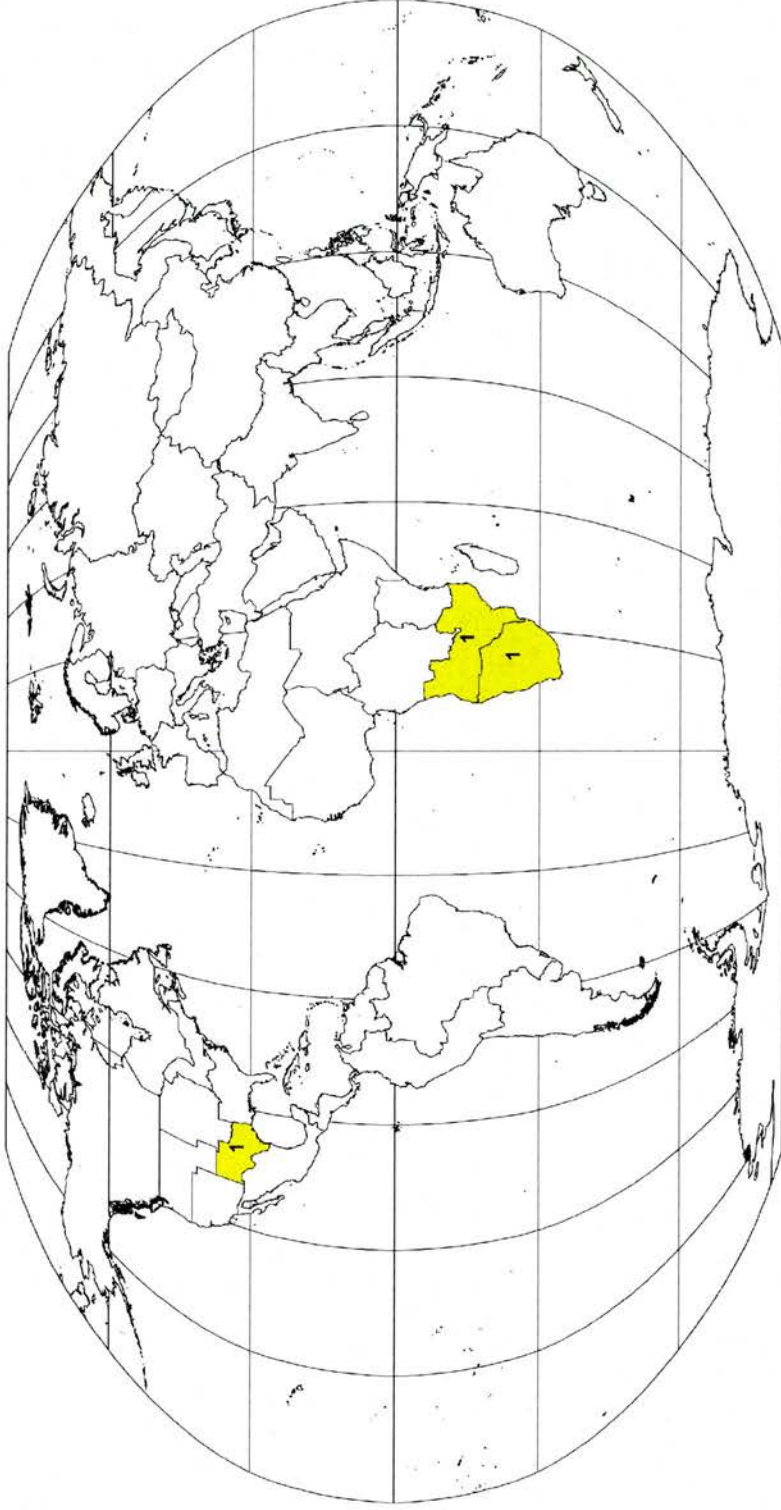


Element 65 **1 genus**

Cameroon; Japan

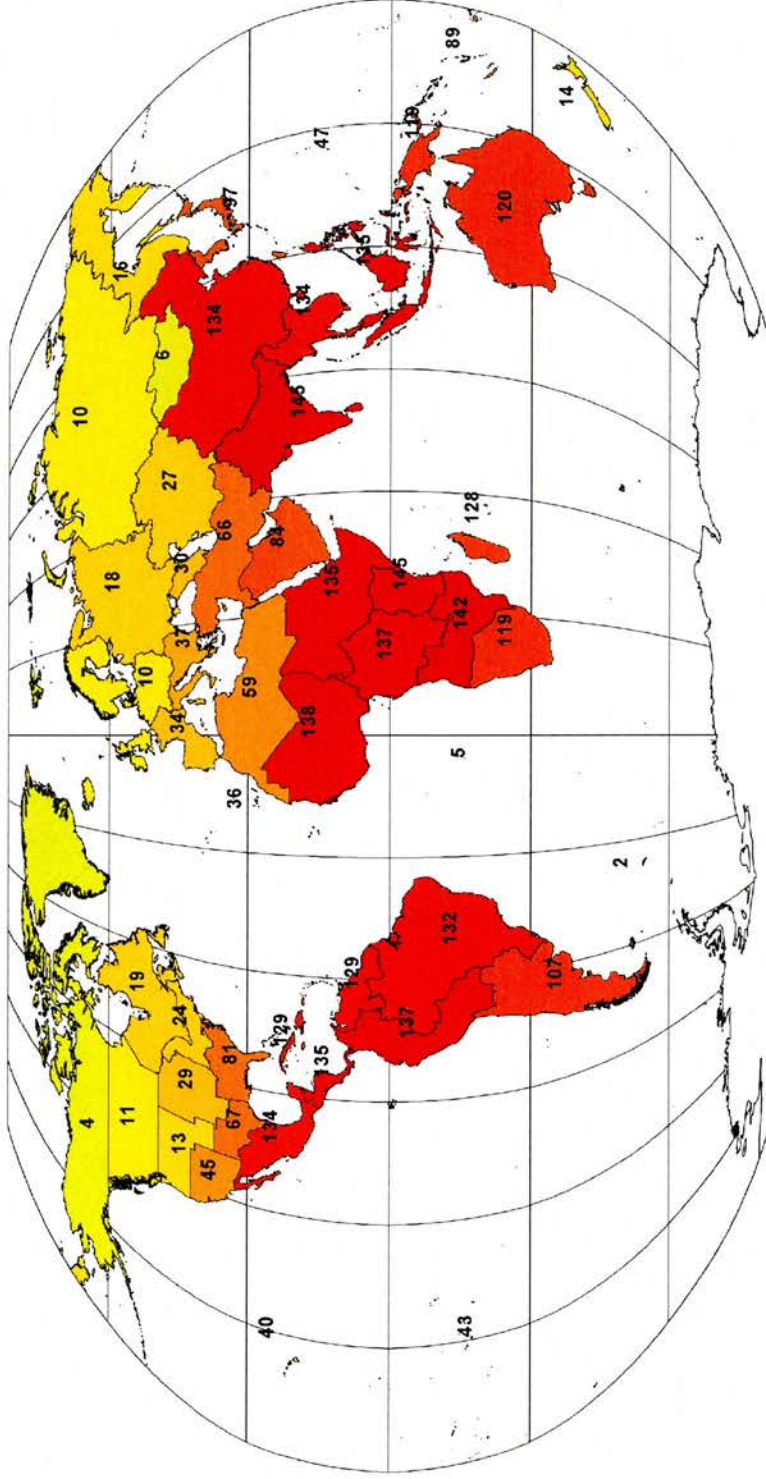


Element 66 **1 genus**
South tropical and Southern Africa; Texas



Element 67 **146 genera**

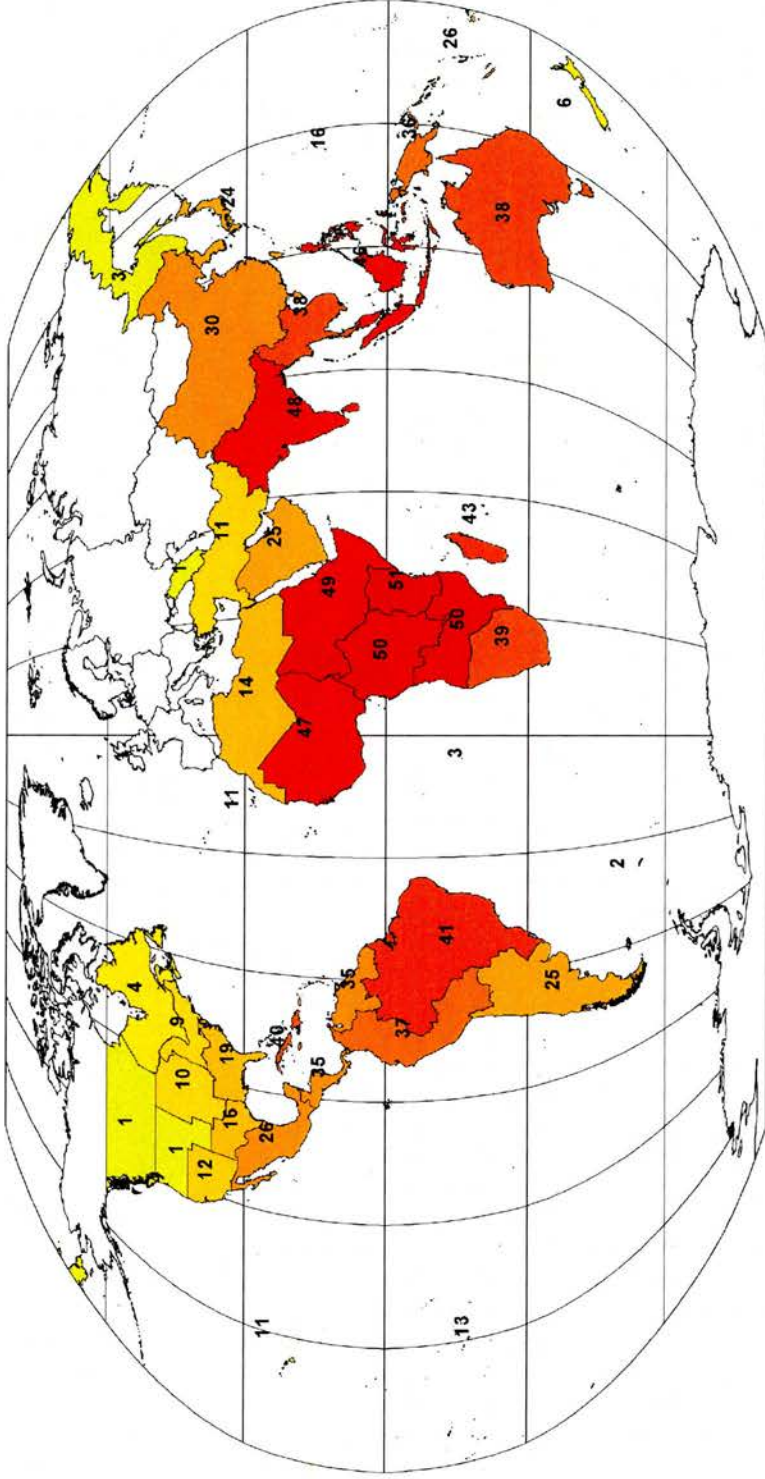
Throughout tropical and into most temperate regions



Element 68

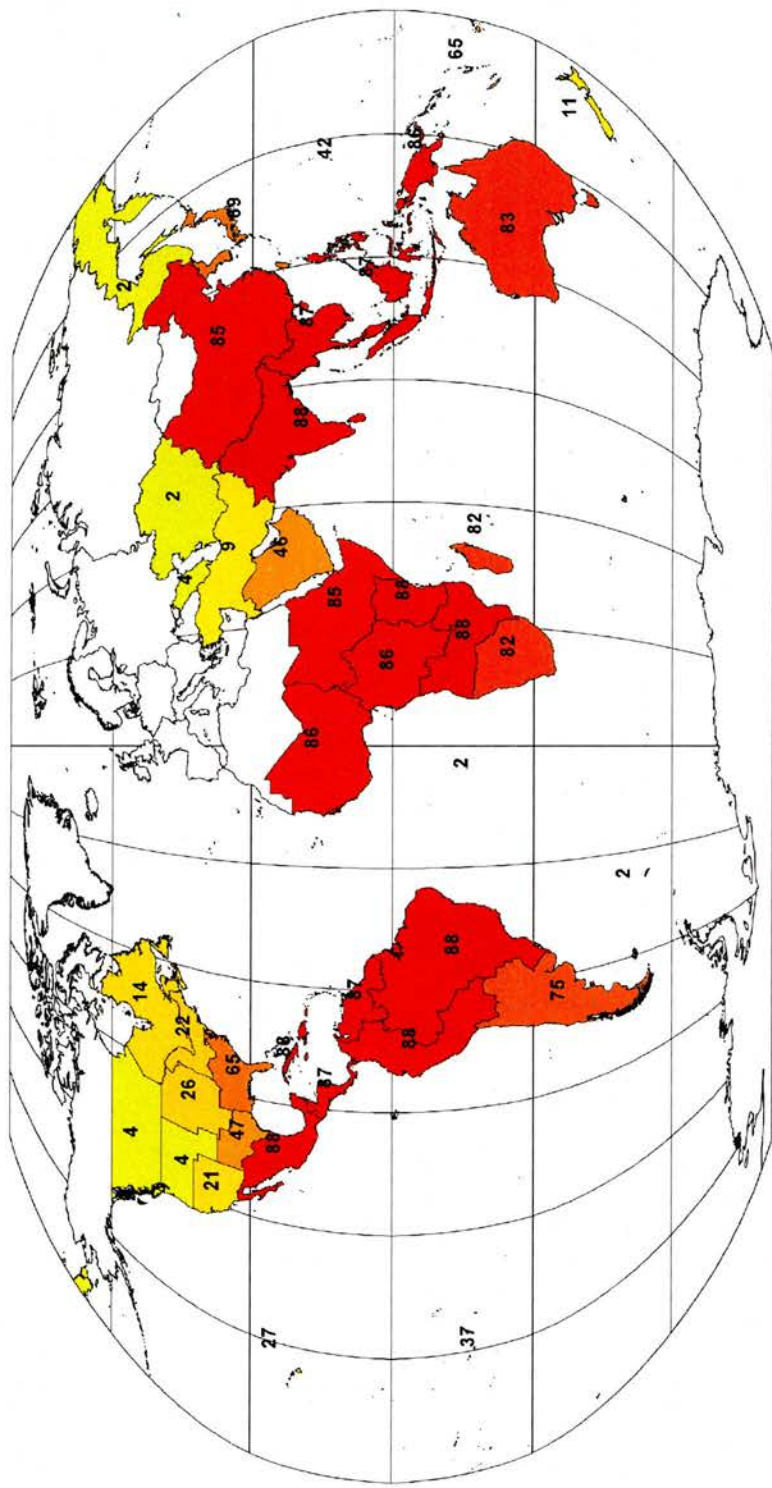
58 genera

Throughout tropical regions and reaching temperate regions



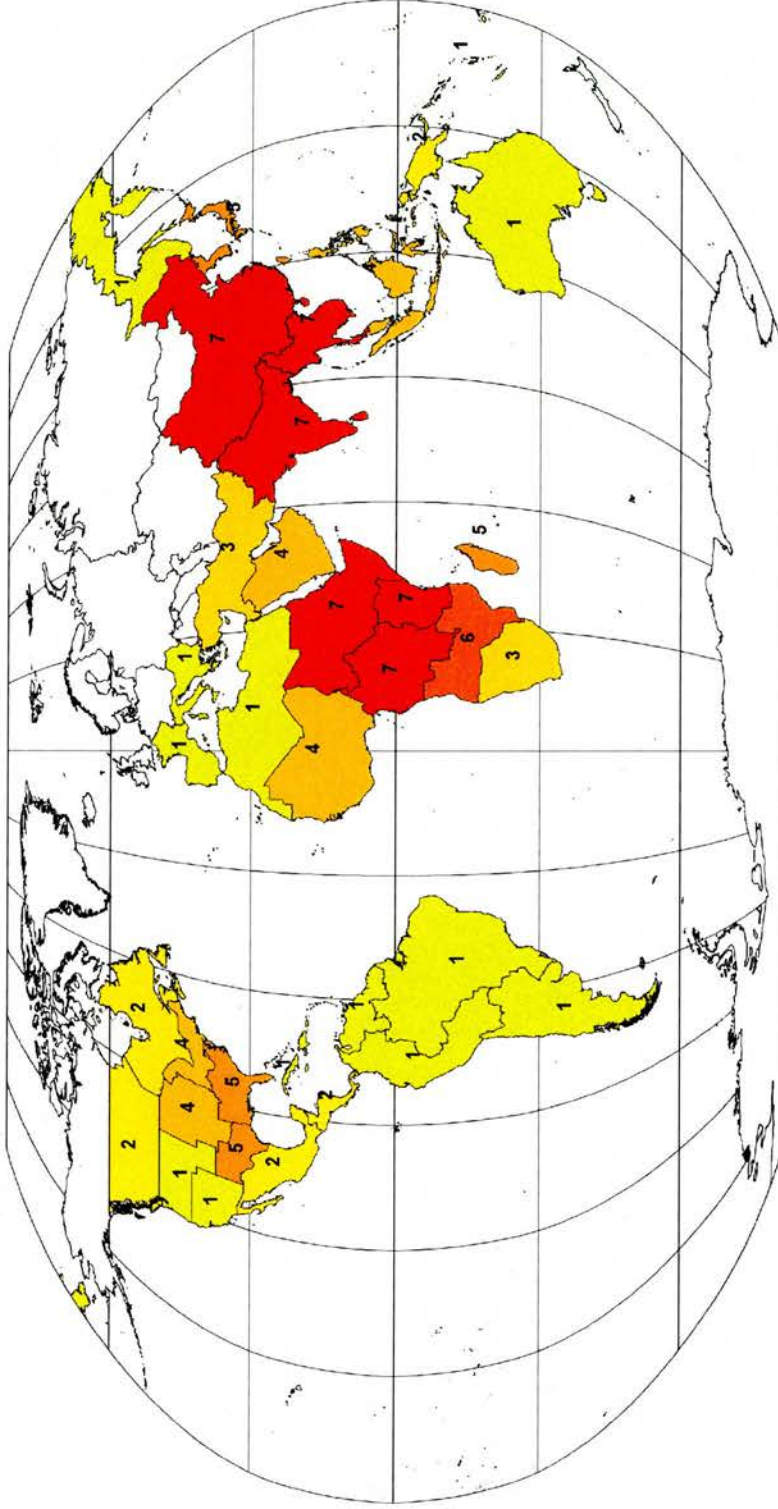
Element 69 **88 genera**

Throughout tropical regions and extending into temperate regions



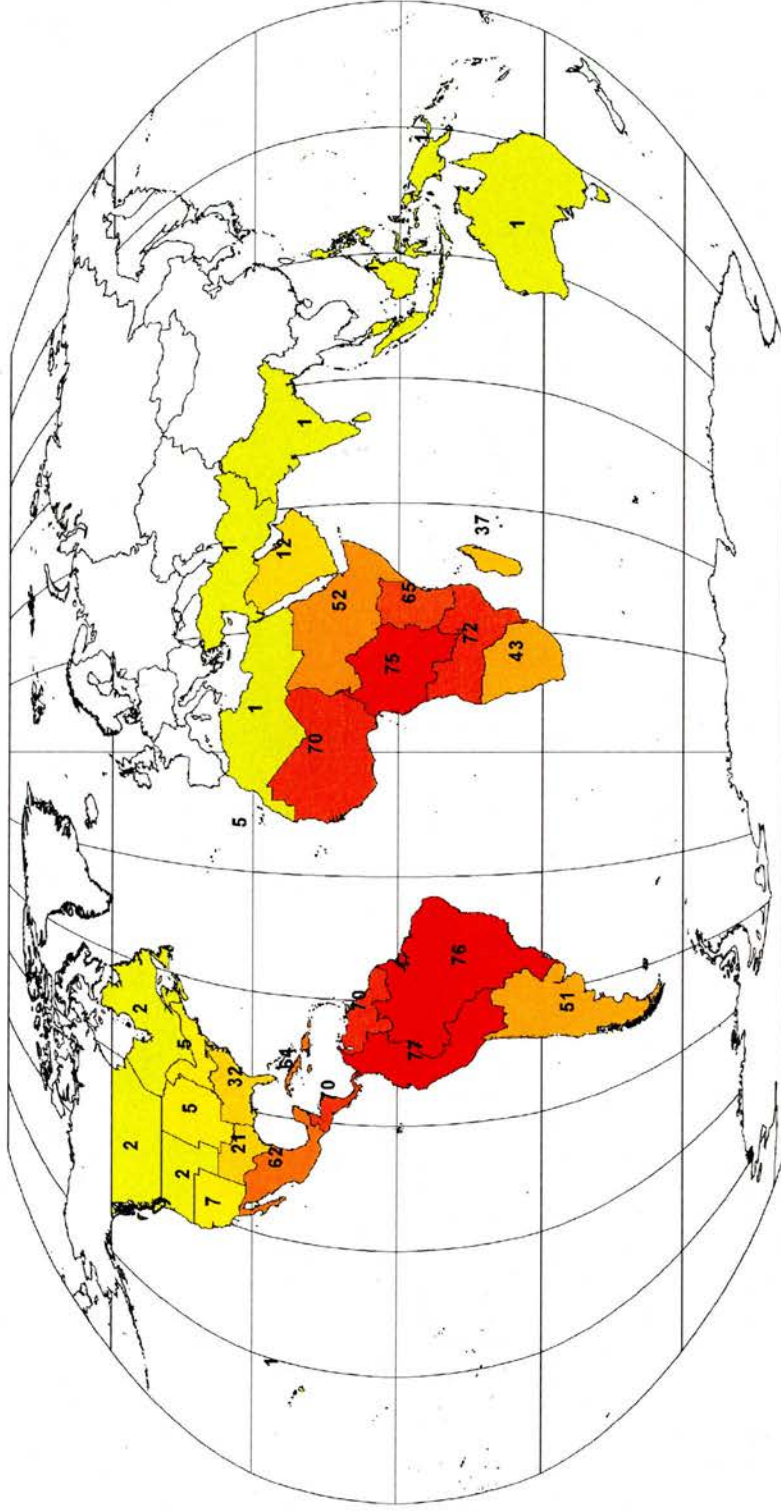
Element 70 **7 genera**

Throughout tropical regions and into north temperate regions, in America north to Canada



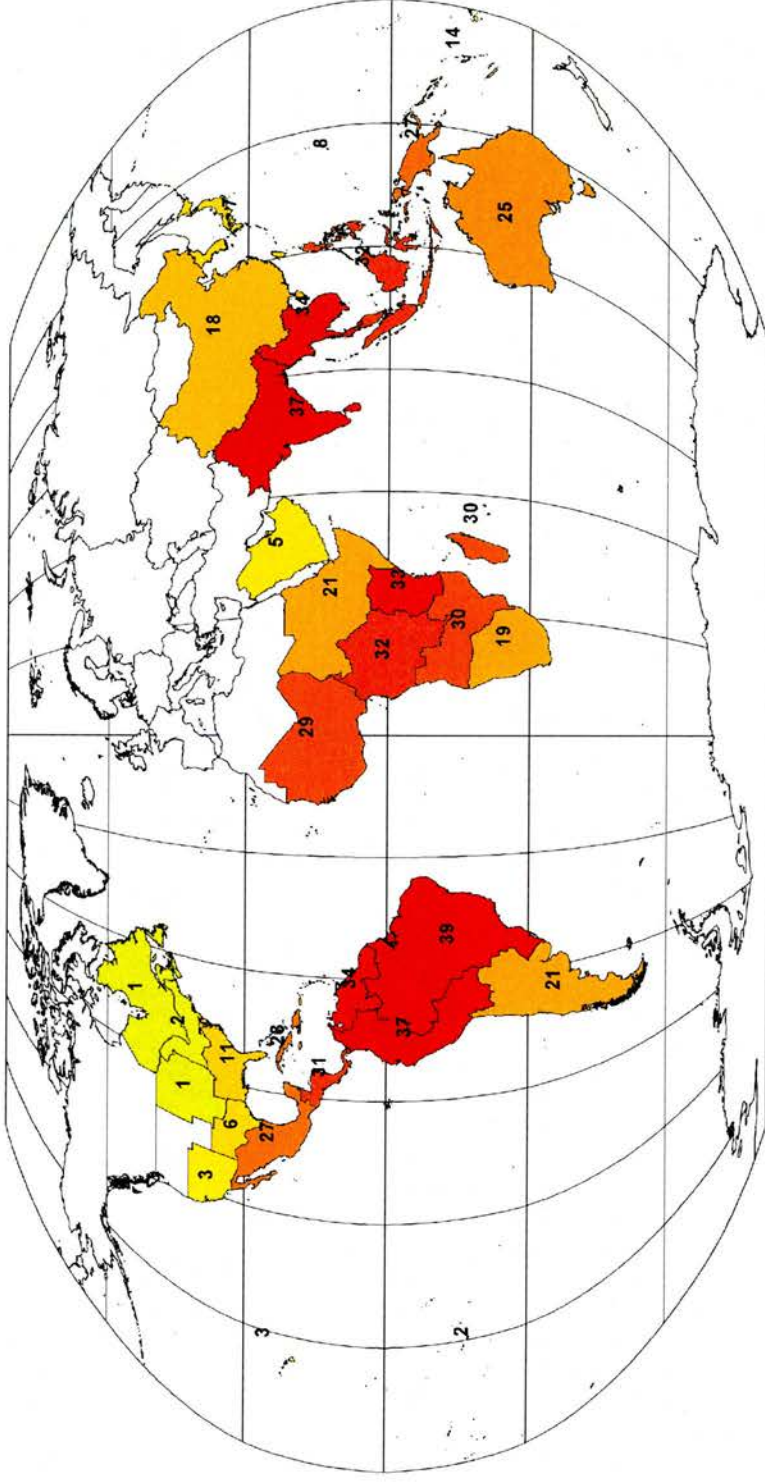
Element 71 **81 genera**

Tropical Africa and Madagascar, extending to Arabian Peninsula; tropical America north into North America



Element 72 **40 genera**

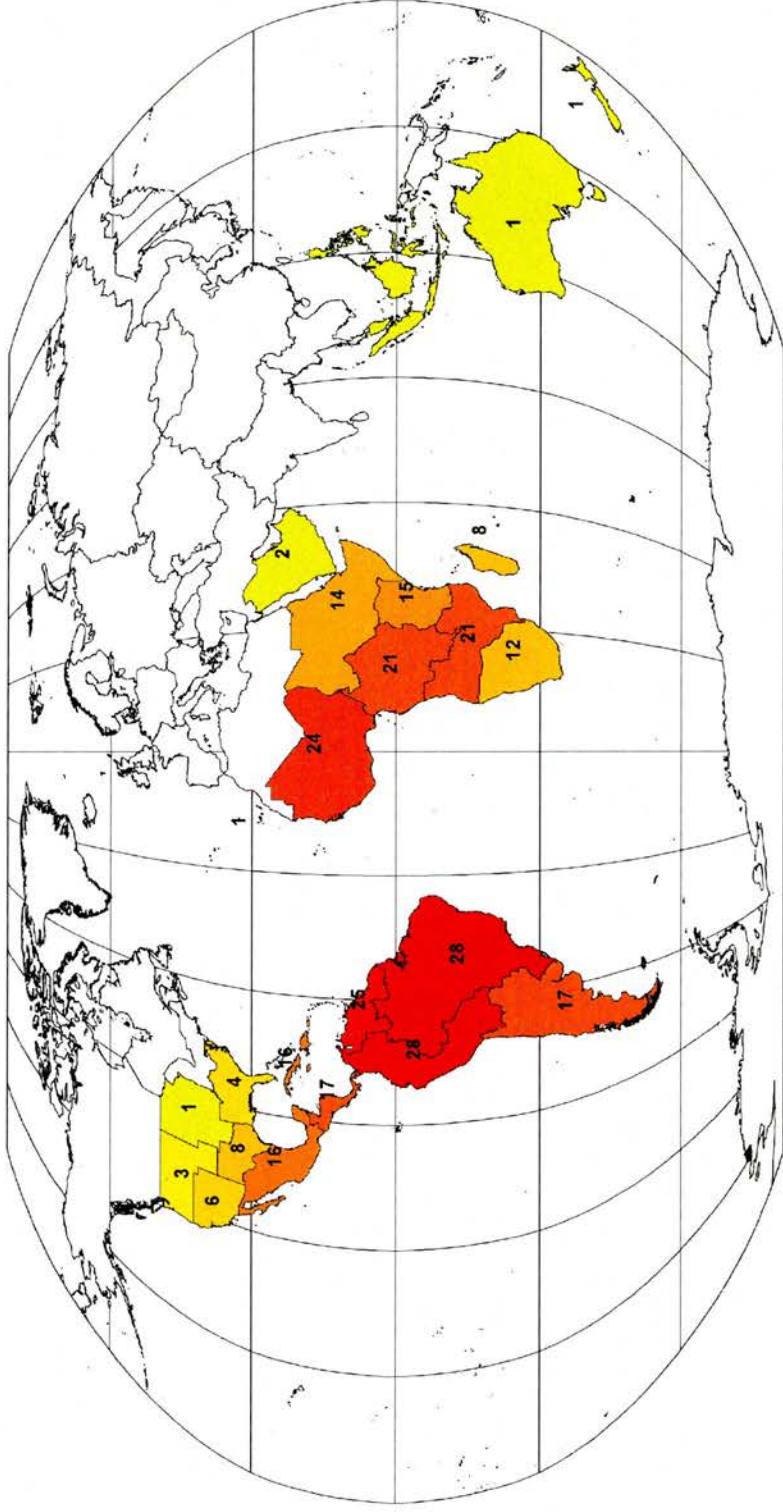
Throughout tropical regions and north into North America



Element 73

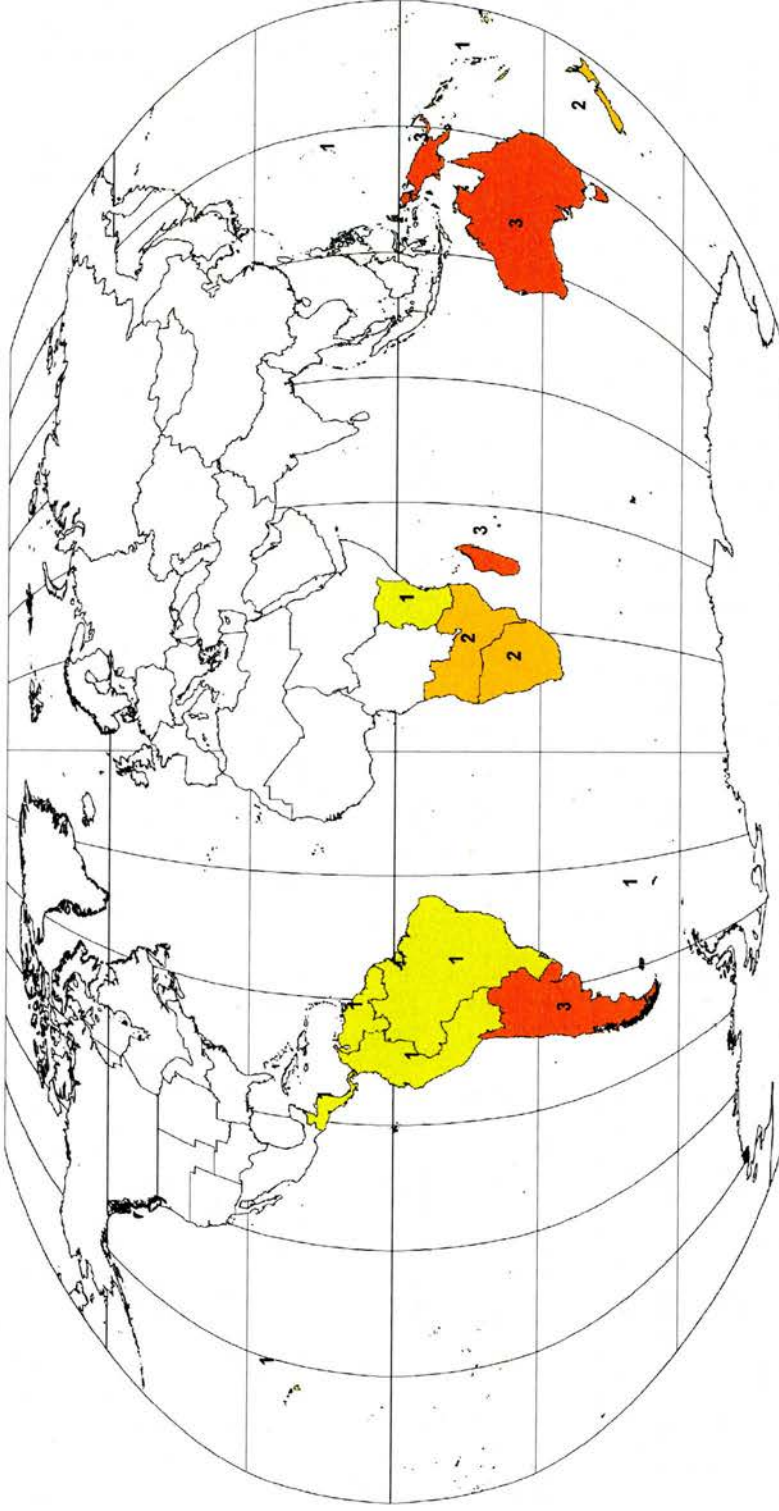
44 genera

Tropical Africa and Madagascar; tropical America north into southern and western U.S.A.



Element 74 4 genera

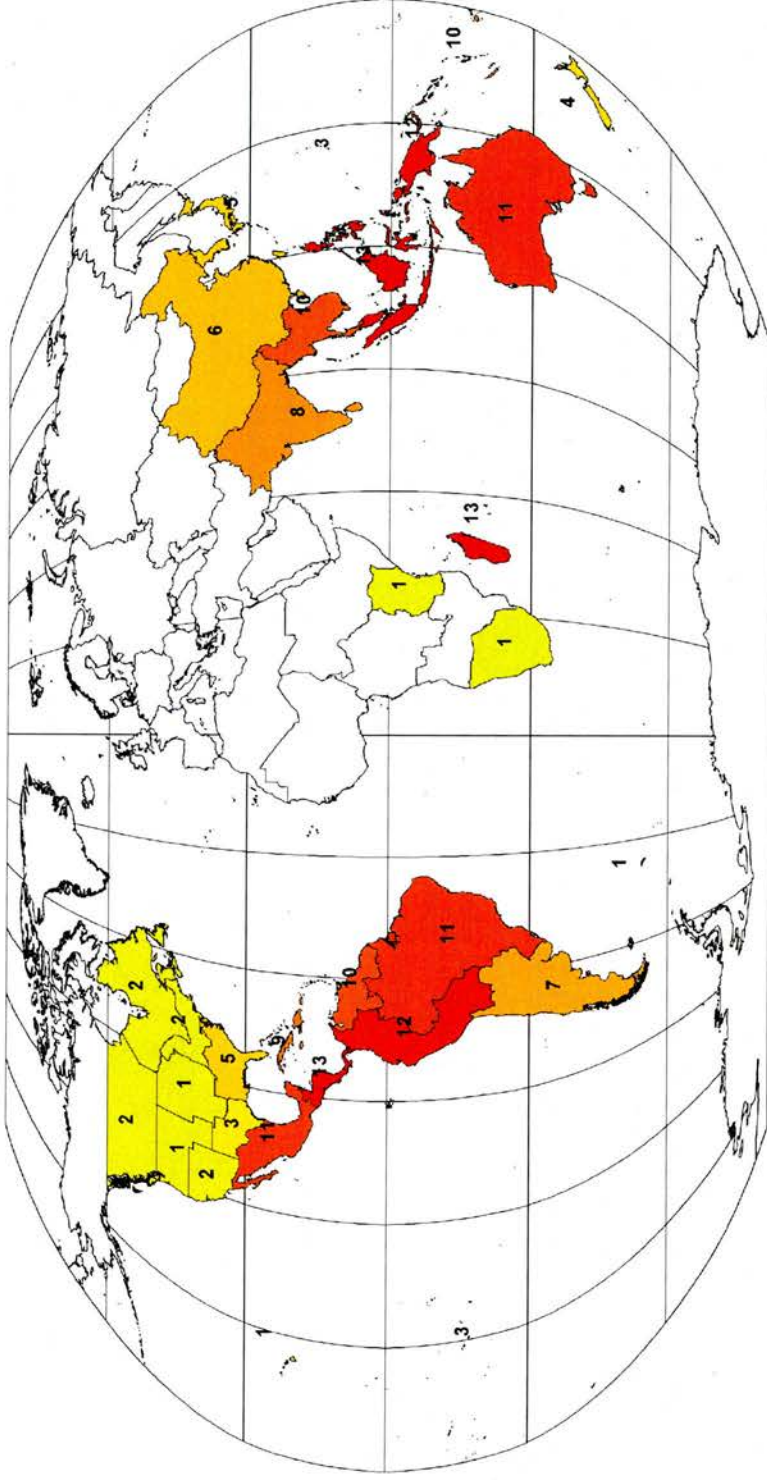
Southern Africa and Madagascar; Papuasia, Australasia and the Pacific; Central America and tropical South America



Element 75

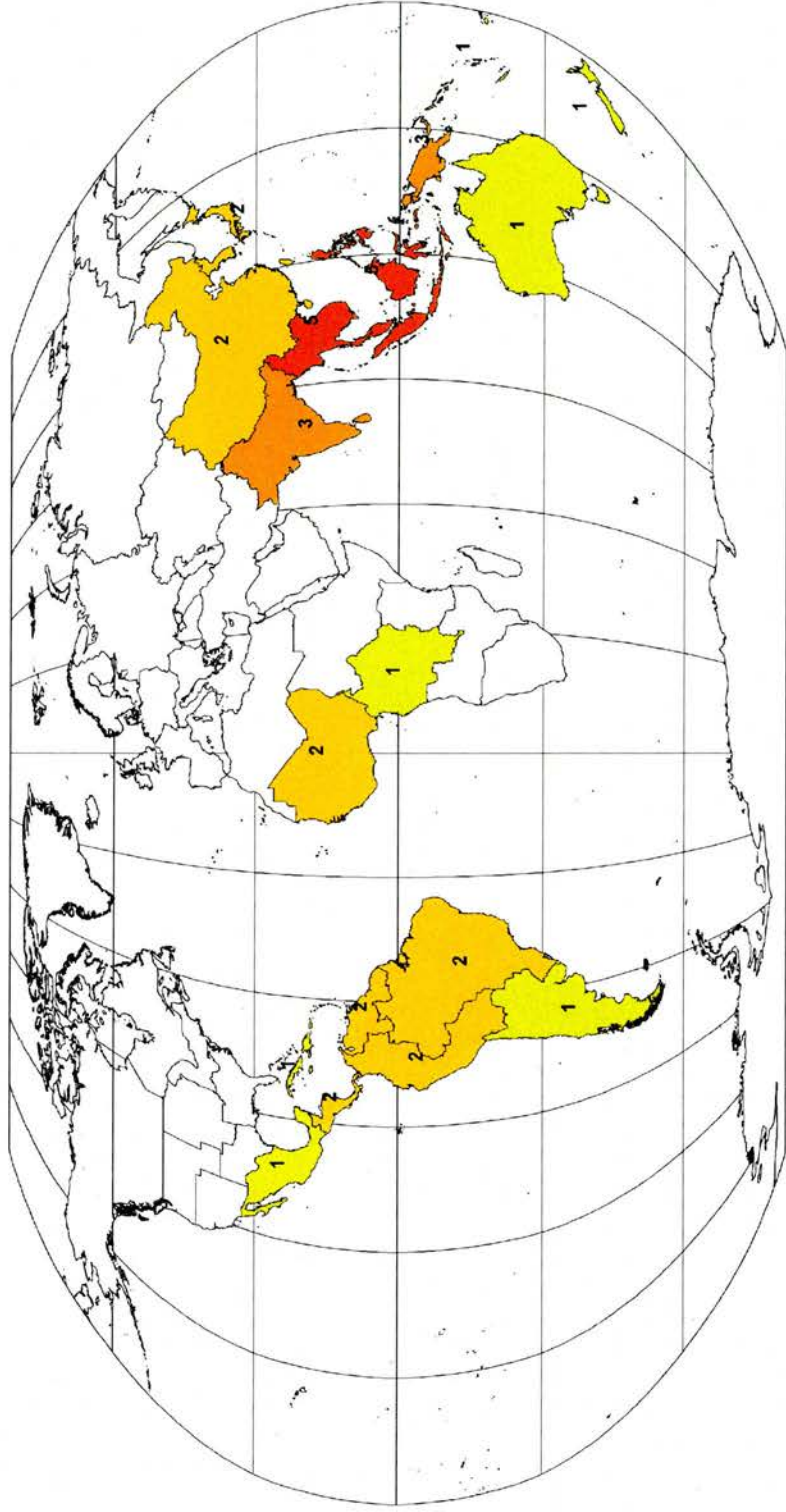
14 genera

Madagascar; China and Eastern Asia through tropical Asia to Australasia and the Pacific; tropical America north to Canada and south to Southern South America



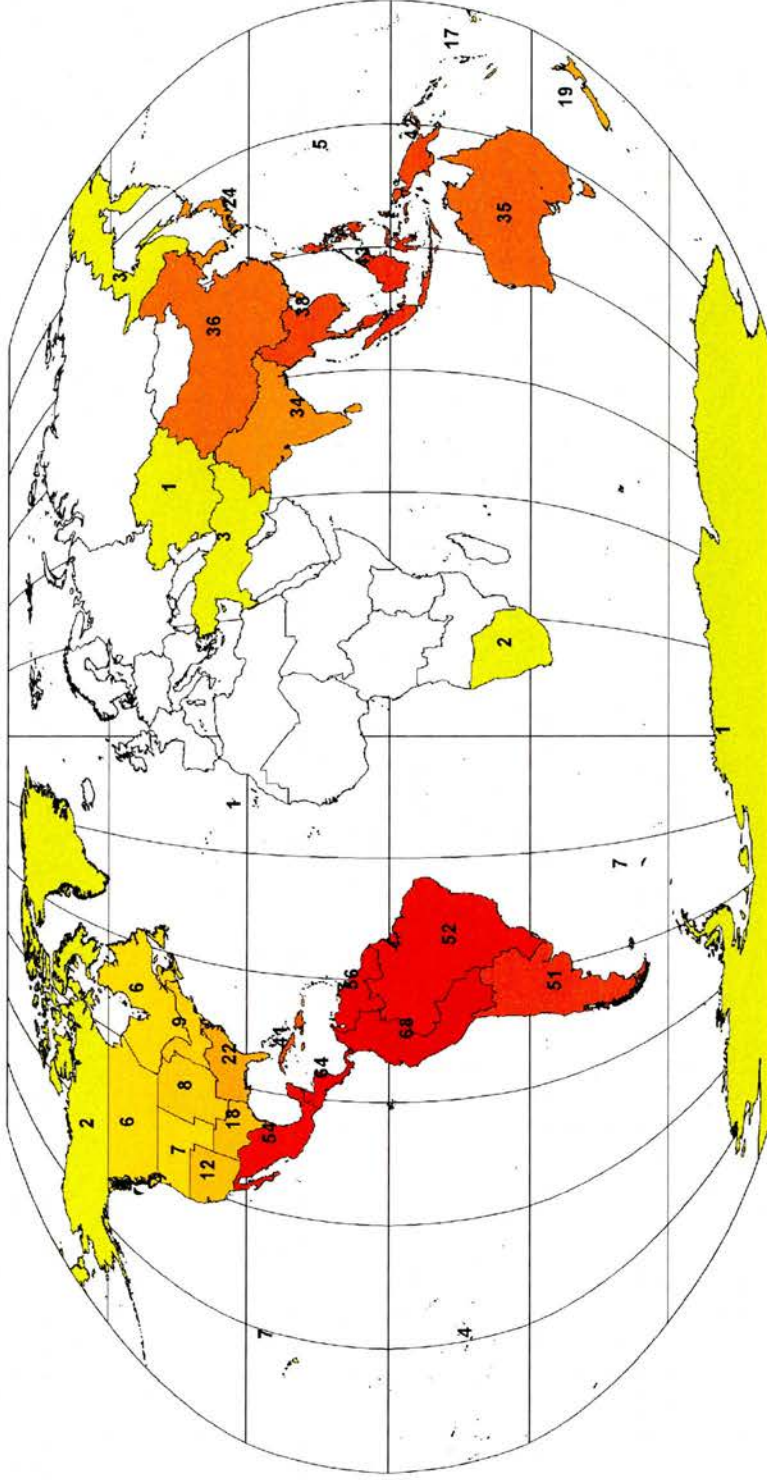
Element 76 **6 genera**

West and Central Africa; S. China and Eastern Asia through to Australasia and SW. Pacific; Mexico south to Southern South America



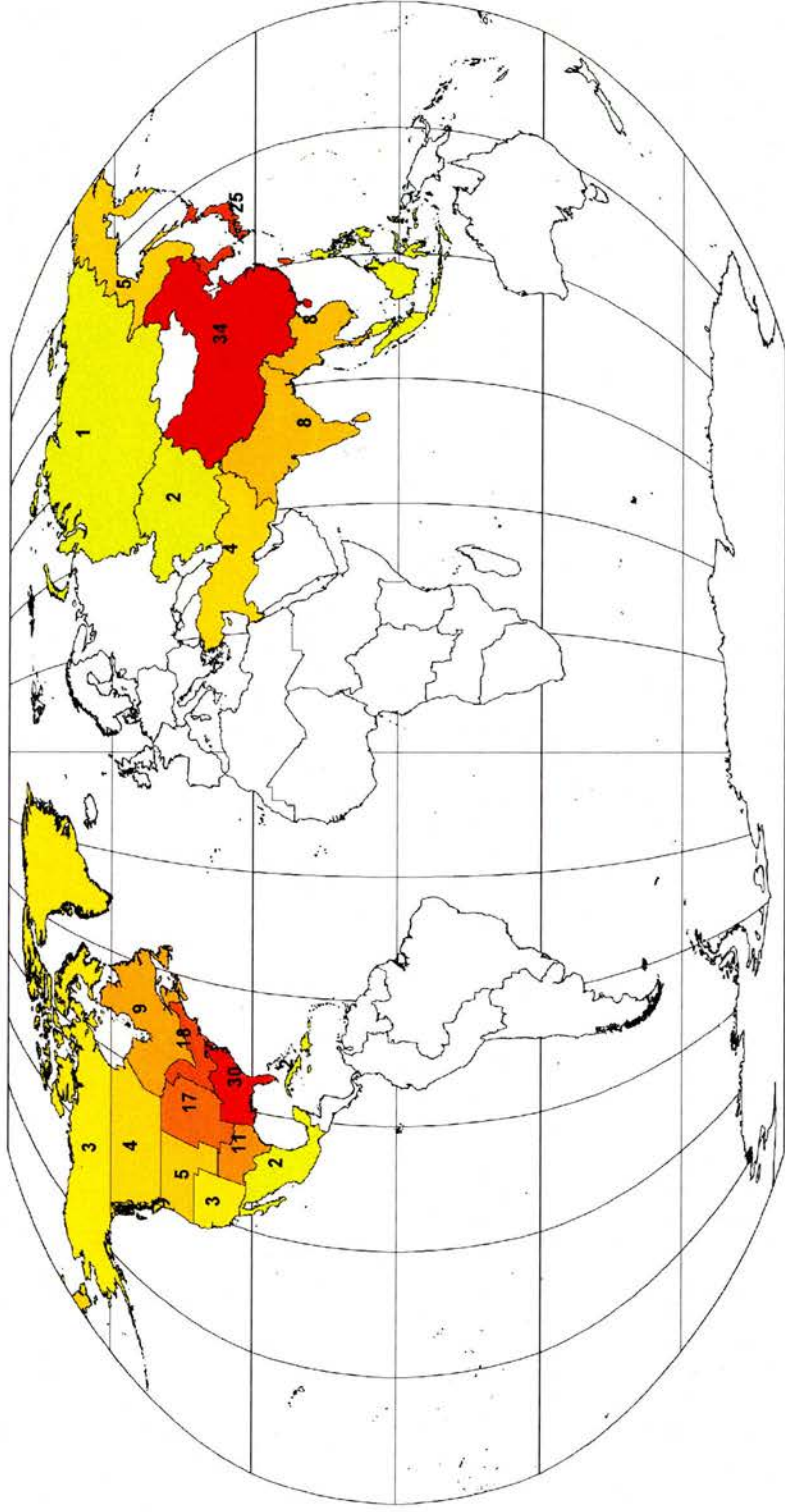
Element 77 **74 genera**

Tropical Asia to Russian Far East and through tropical Asia to Australasia and the Pacific; tropical America north to Subarctic America and south to Southern South America and Subantarctic Islands



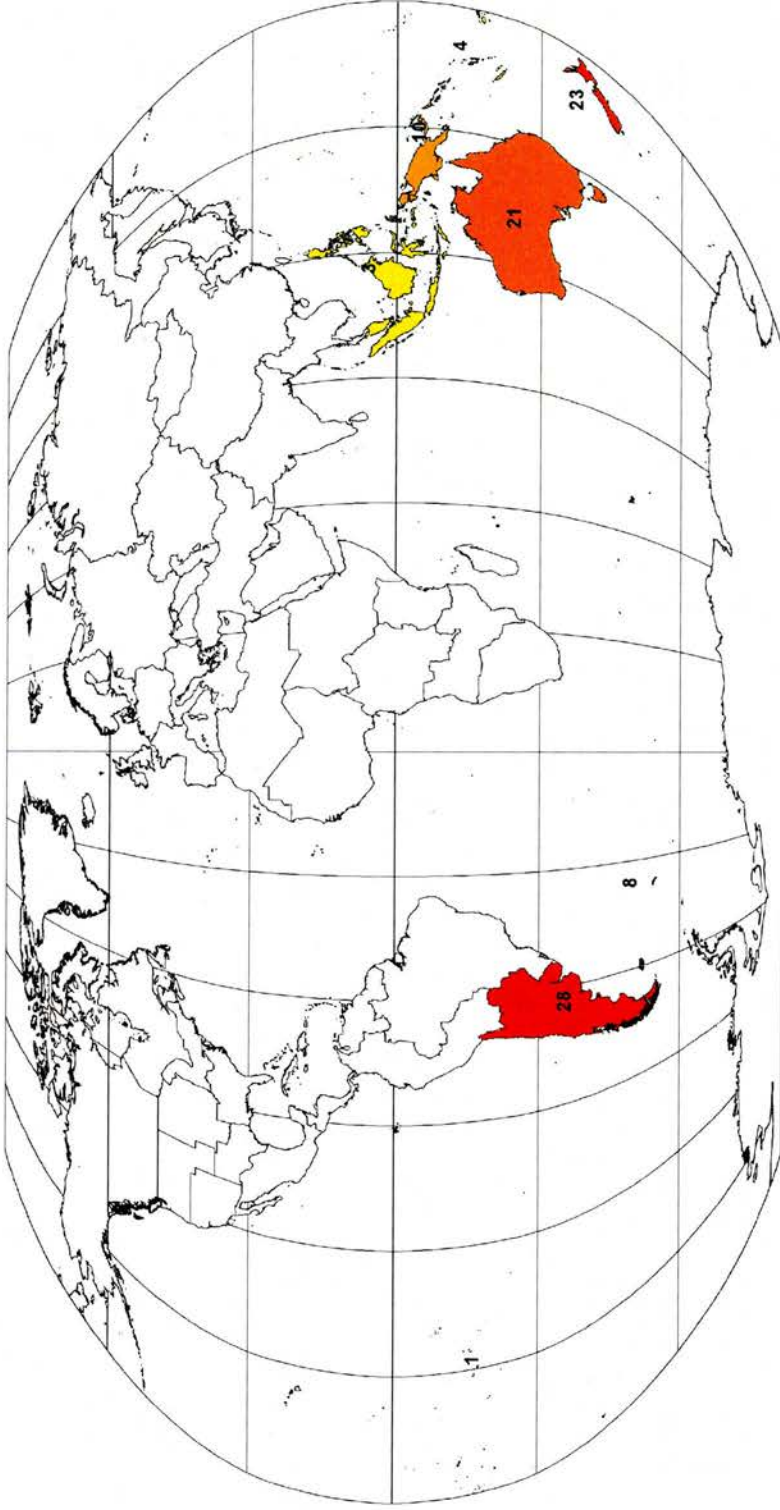
Element 79 **37 genera**

China and Eastern Asia to Siberia and Malasia; SE. U.S.A. to Subarctic America and Mexico and Caribbean

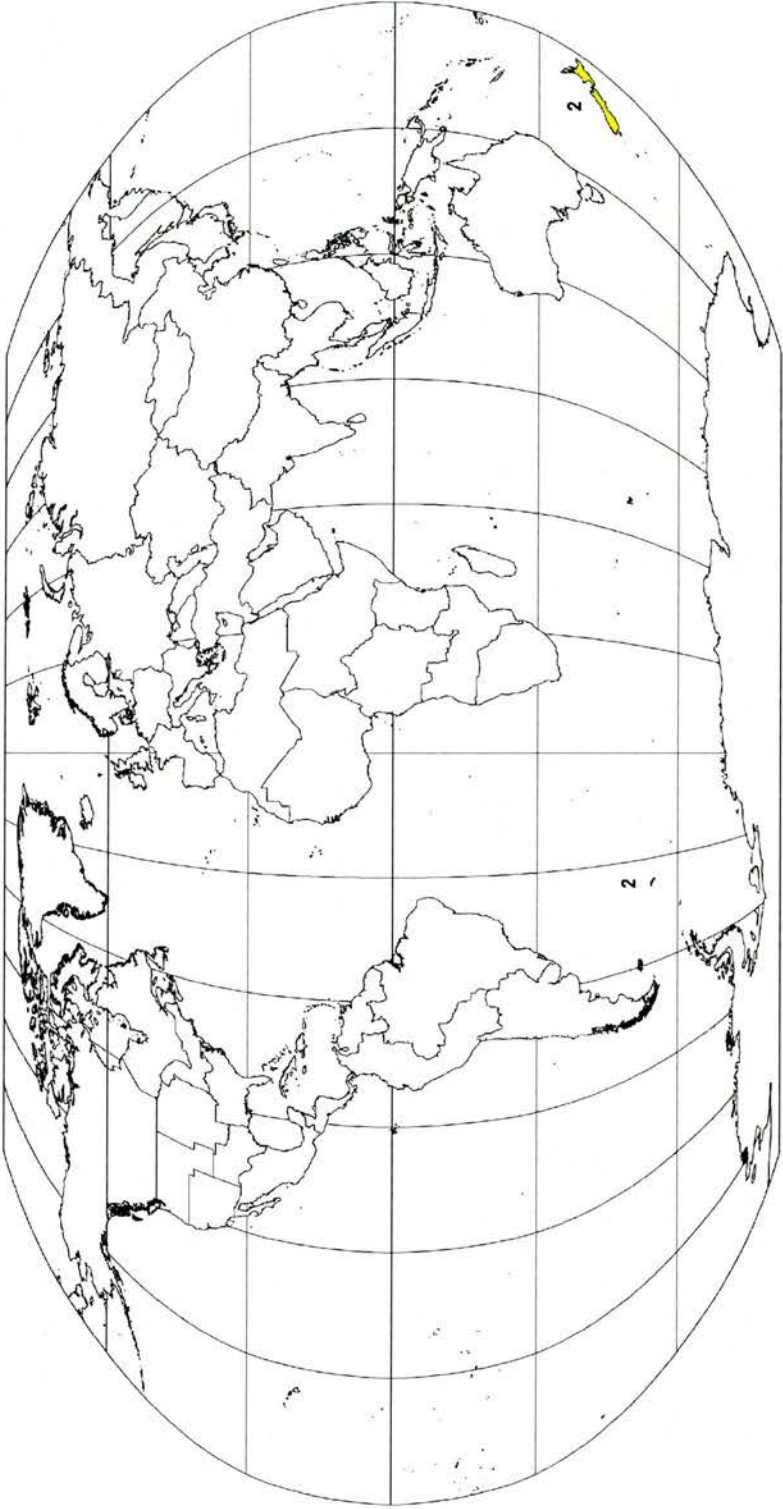


Element 80 **28 genera**

Australasia, extending to Malaysia and the southern Pacific; Southern South America and the Subantarctic Islands

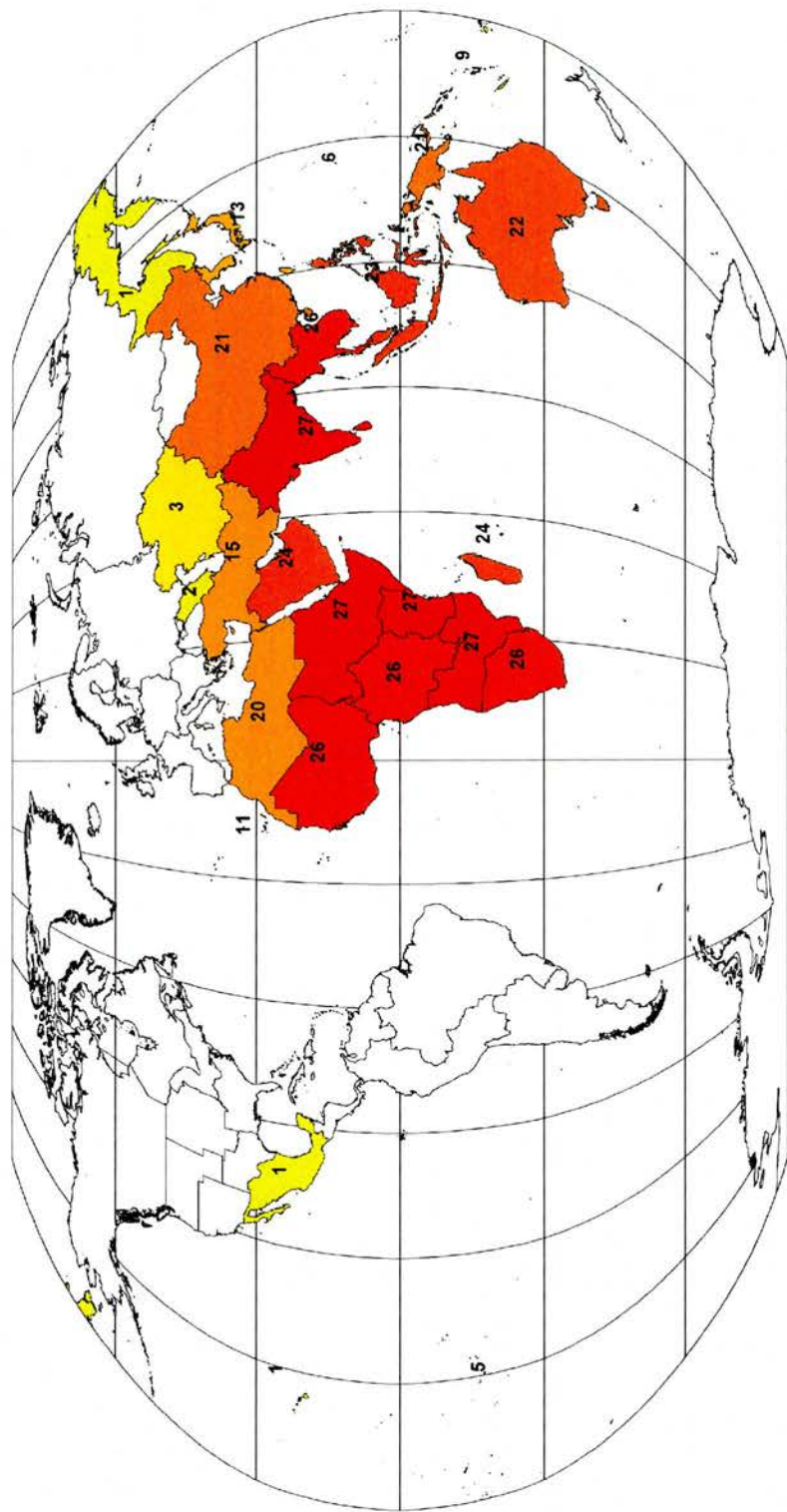


Element 81 **2 genera**
New Zealand; Subantarctic Islands



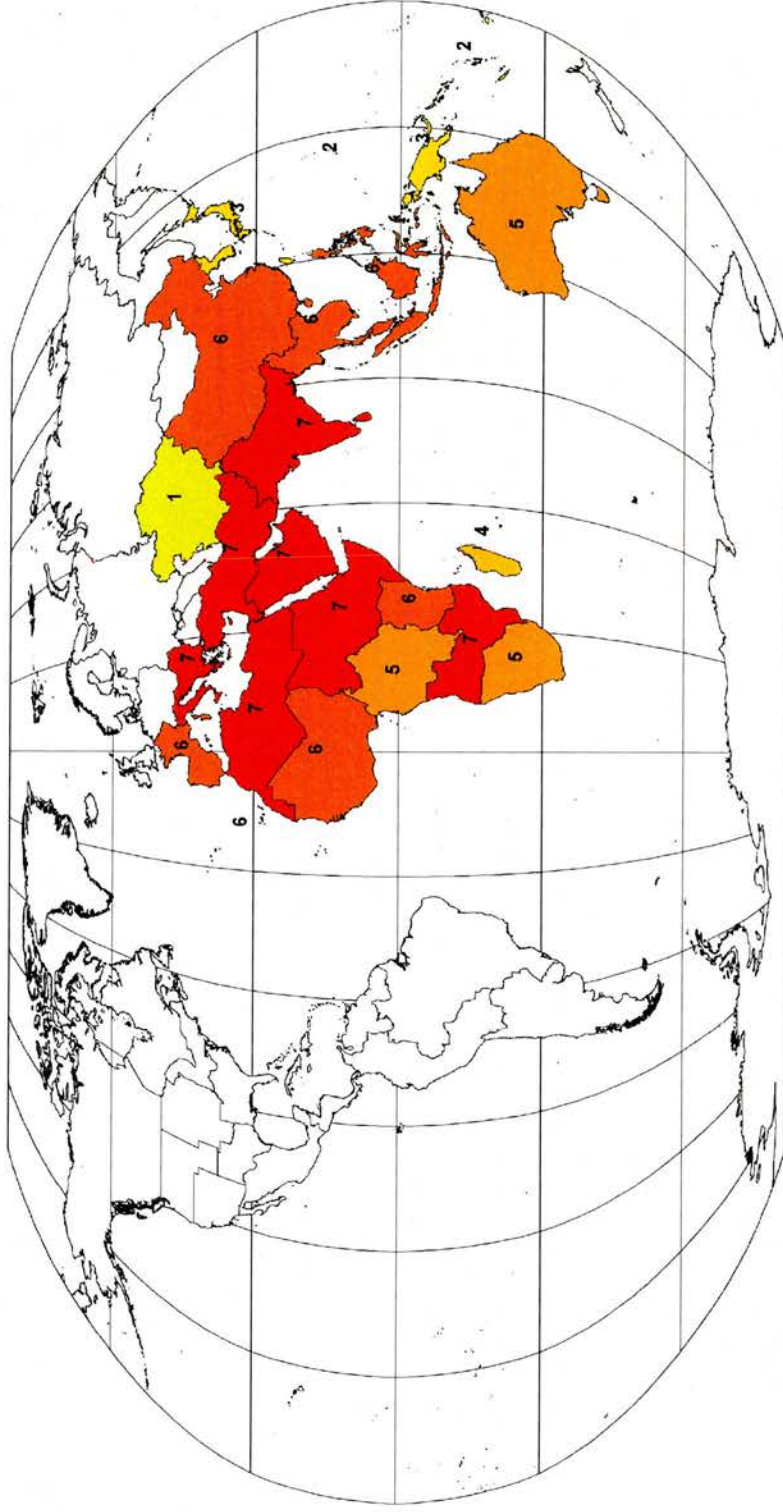
Element 82 **27 genera**

Throughout Palaearctic regions and into temperate Asia, with 1 outlier in Mexico



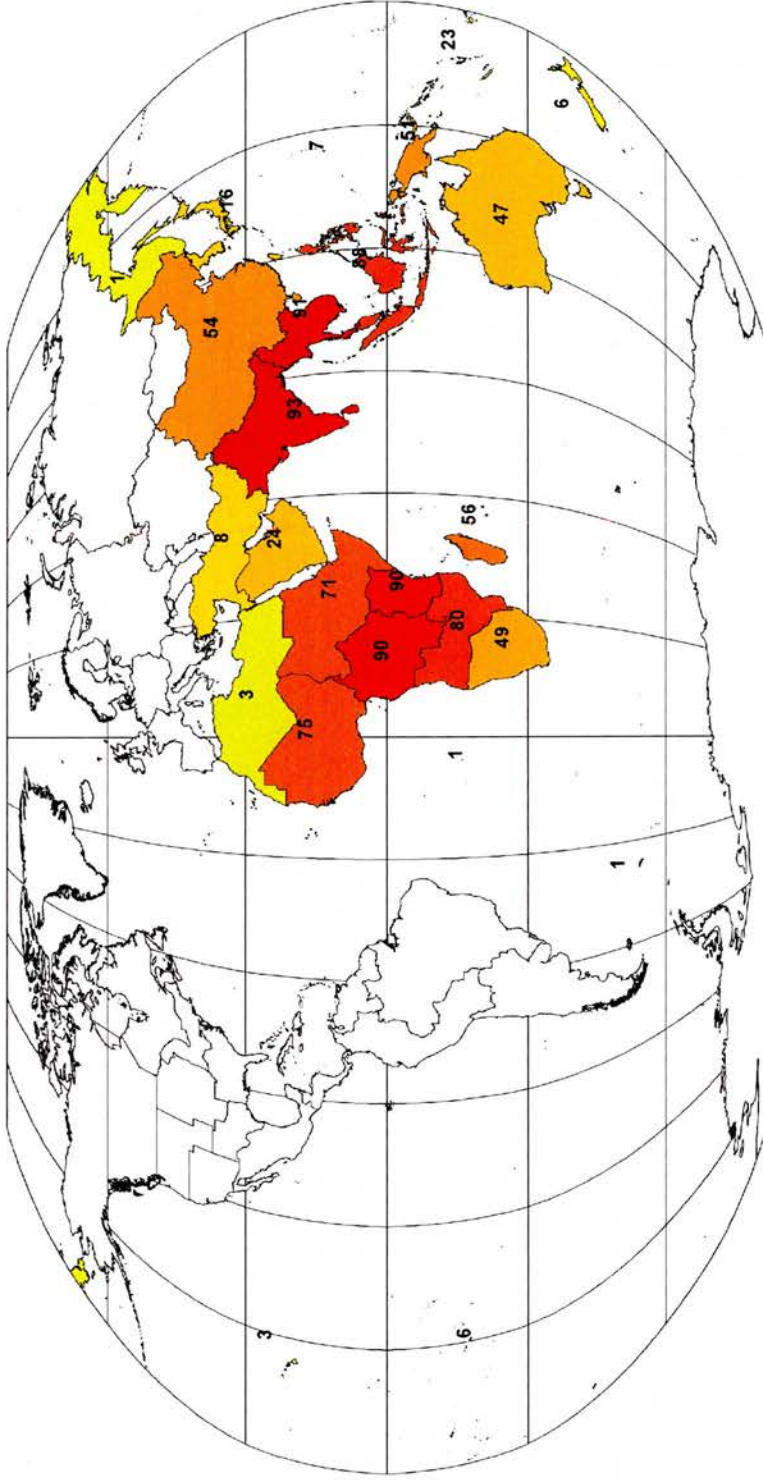
Element 83 7 genera

Throughout Palaeotropical regions and north into the Mediterranean region and temperate Asia



Element 84 **112 genera**

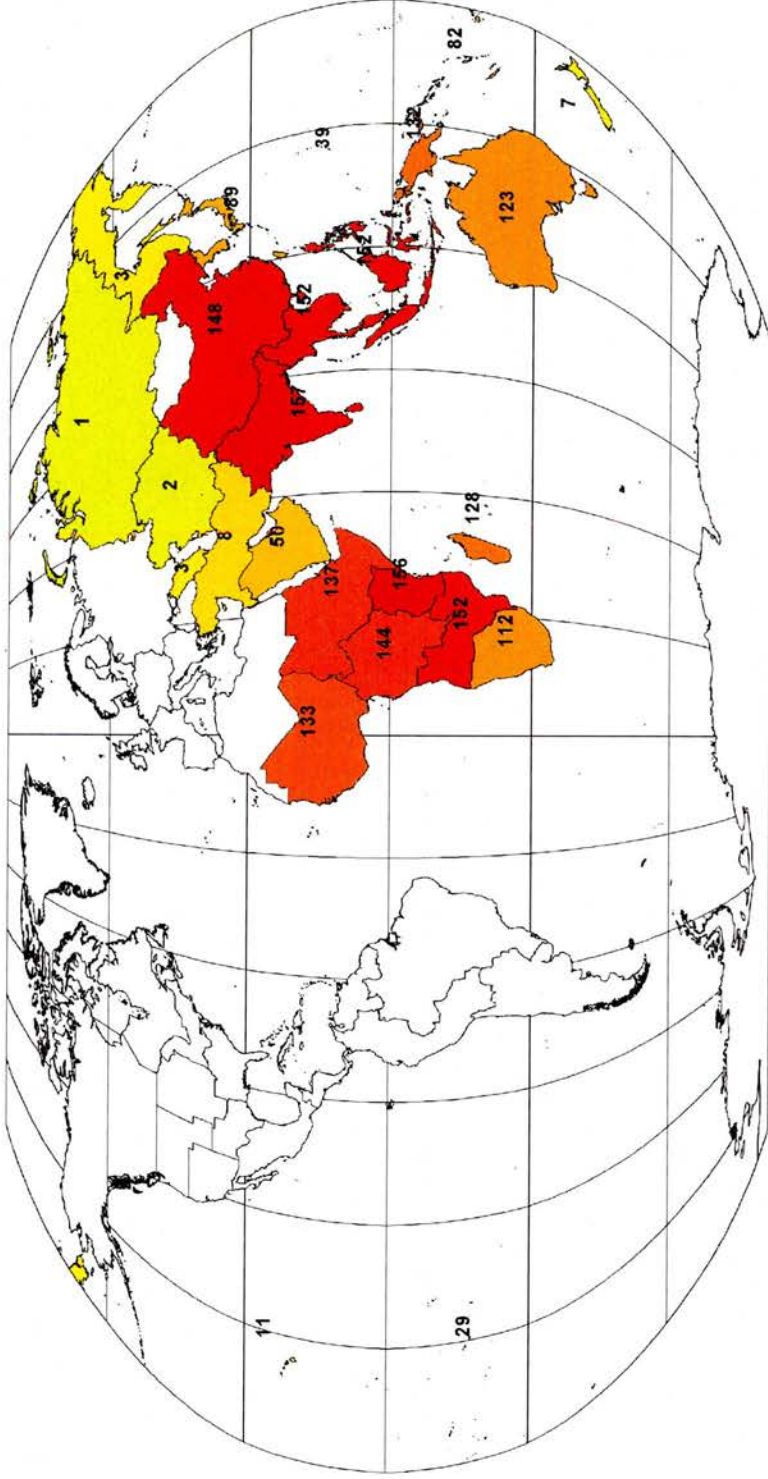
Throughout Palaeotropical regions and into temperate Asia, also reaching Subantarctic Islands



Element 85

157 genera

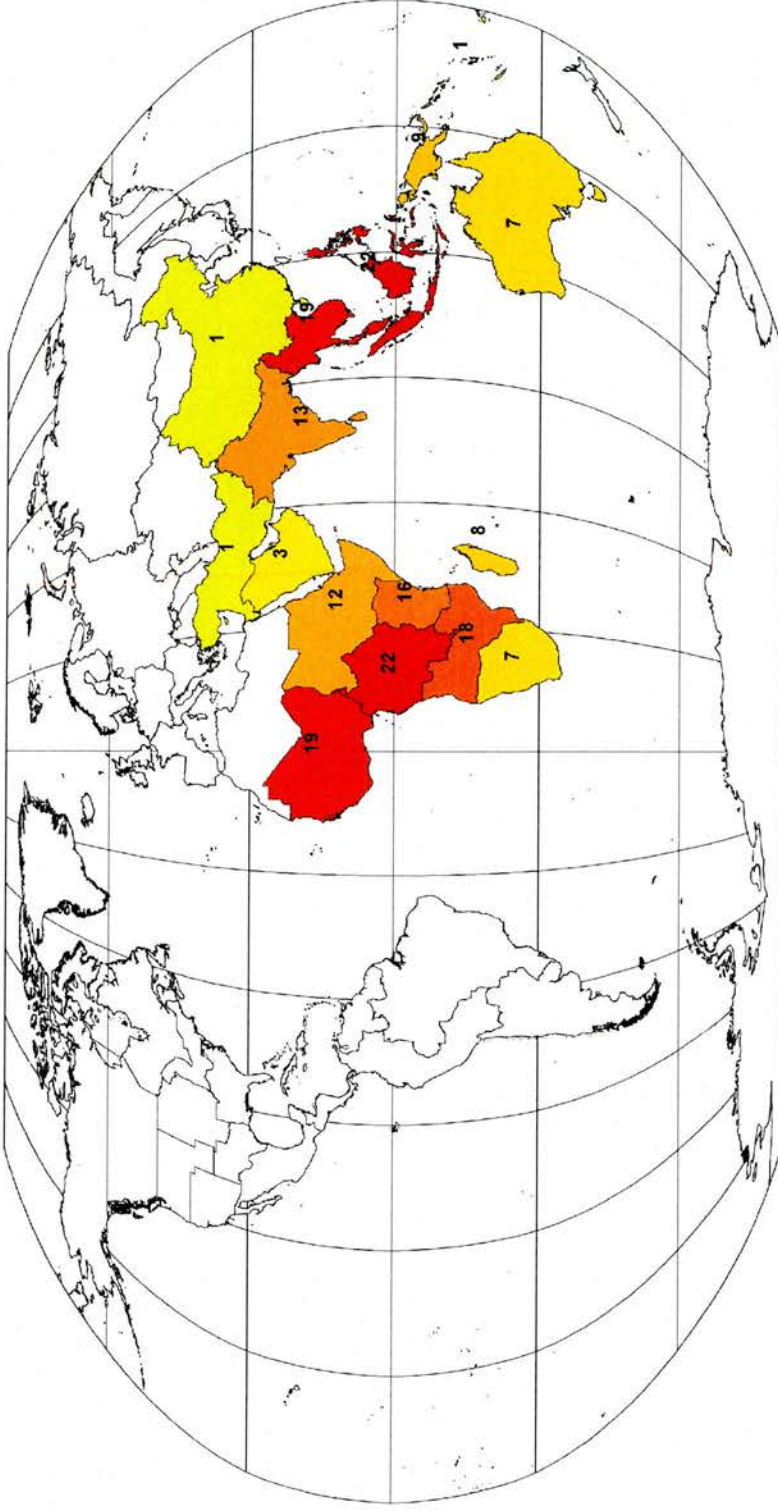
Tropical Africa and Madagascar, tropical Asia through to Australasia and the Pacific and north into temperate Asia



Element 87

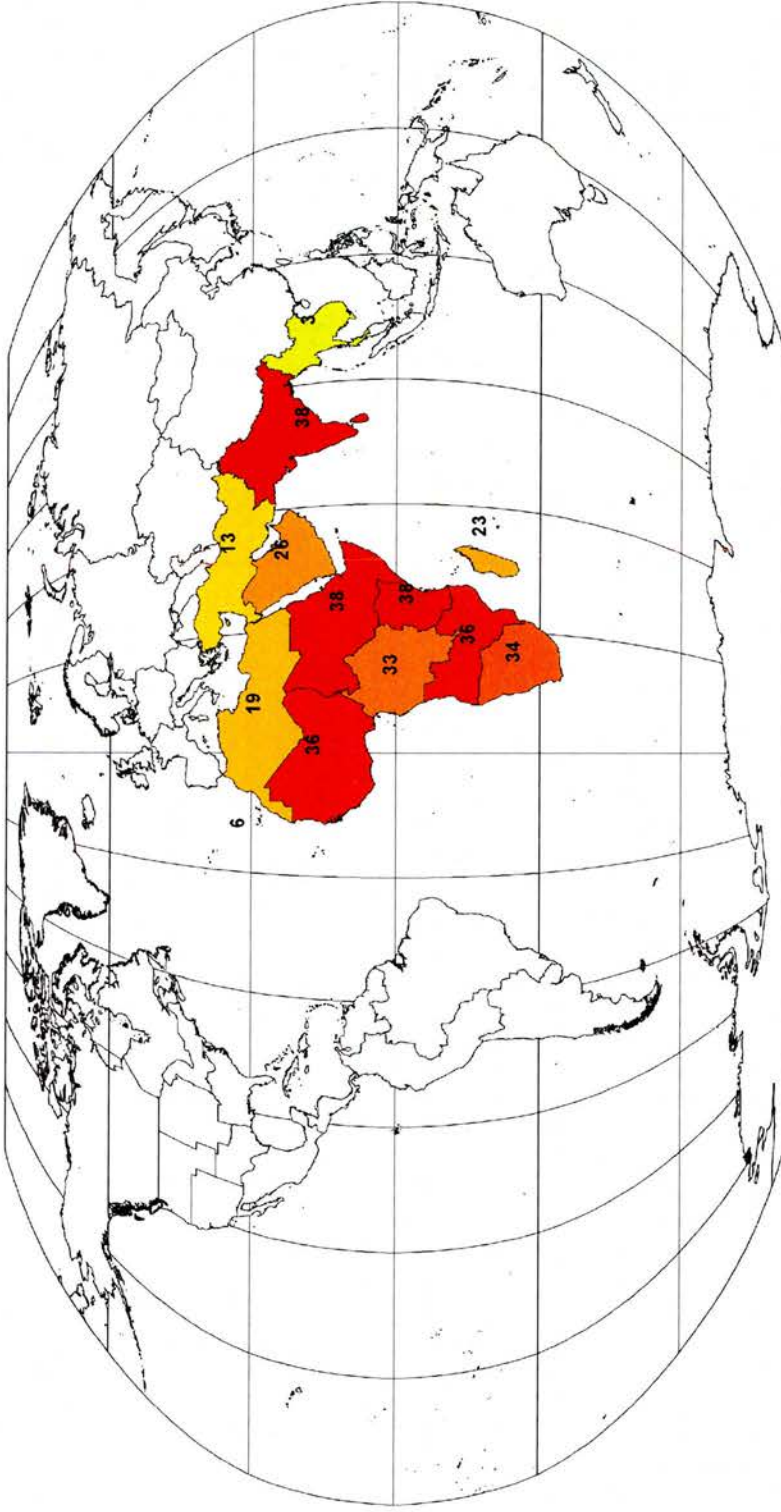
35 genera

Tropical Africa and Madagascar, Arabian Peninsula and through tropical Asia



Element 88 **38 genera**

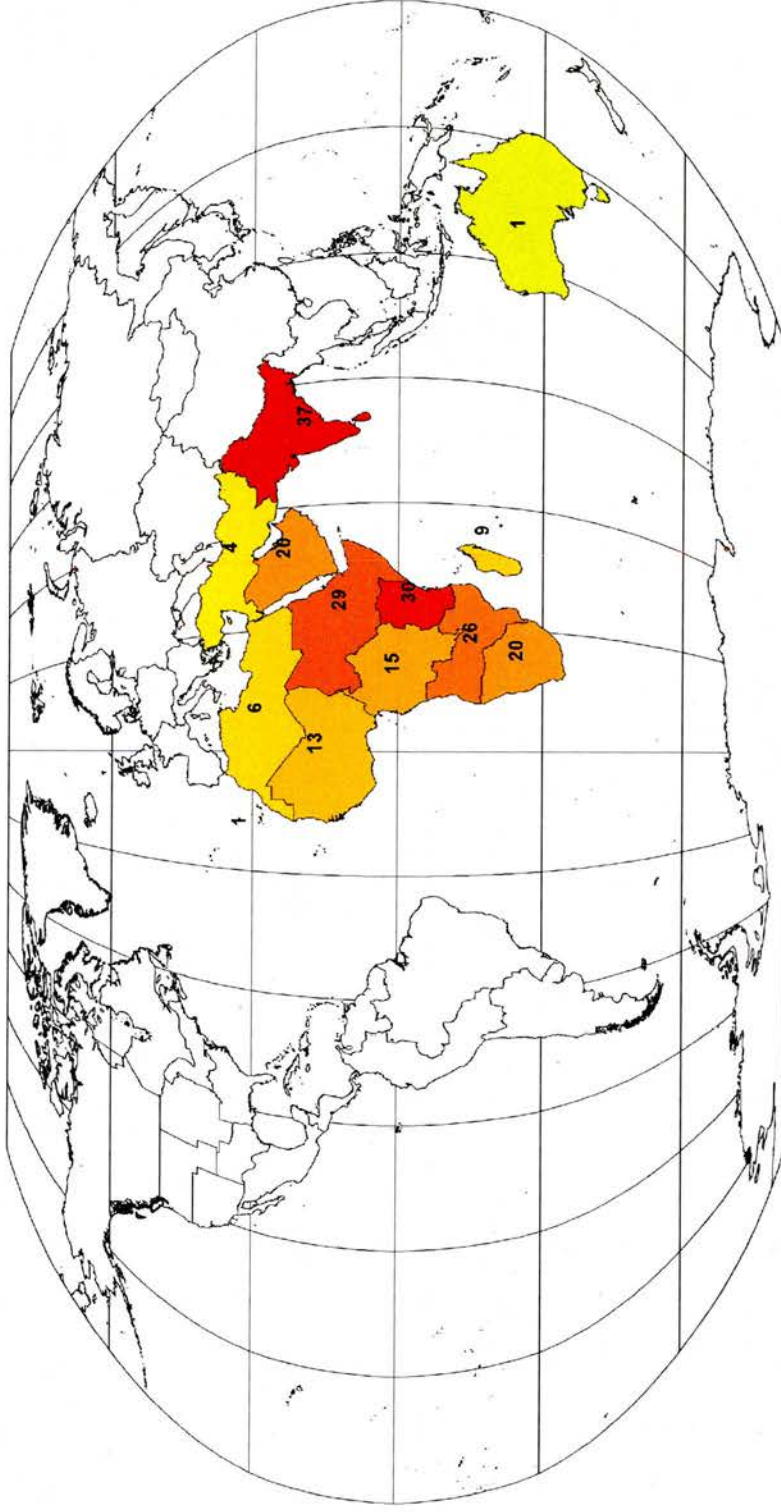
Africa and Madagascar eastward to Indian Subcontinent and into Indo-China



Element 89

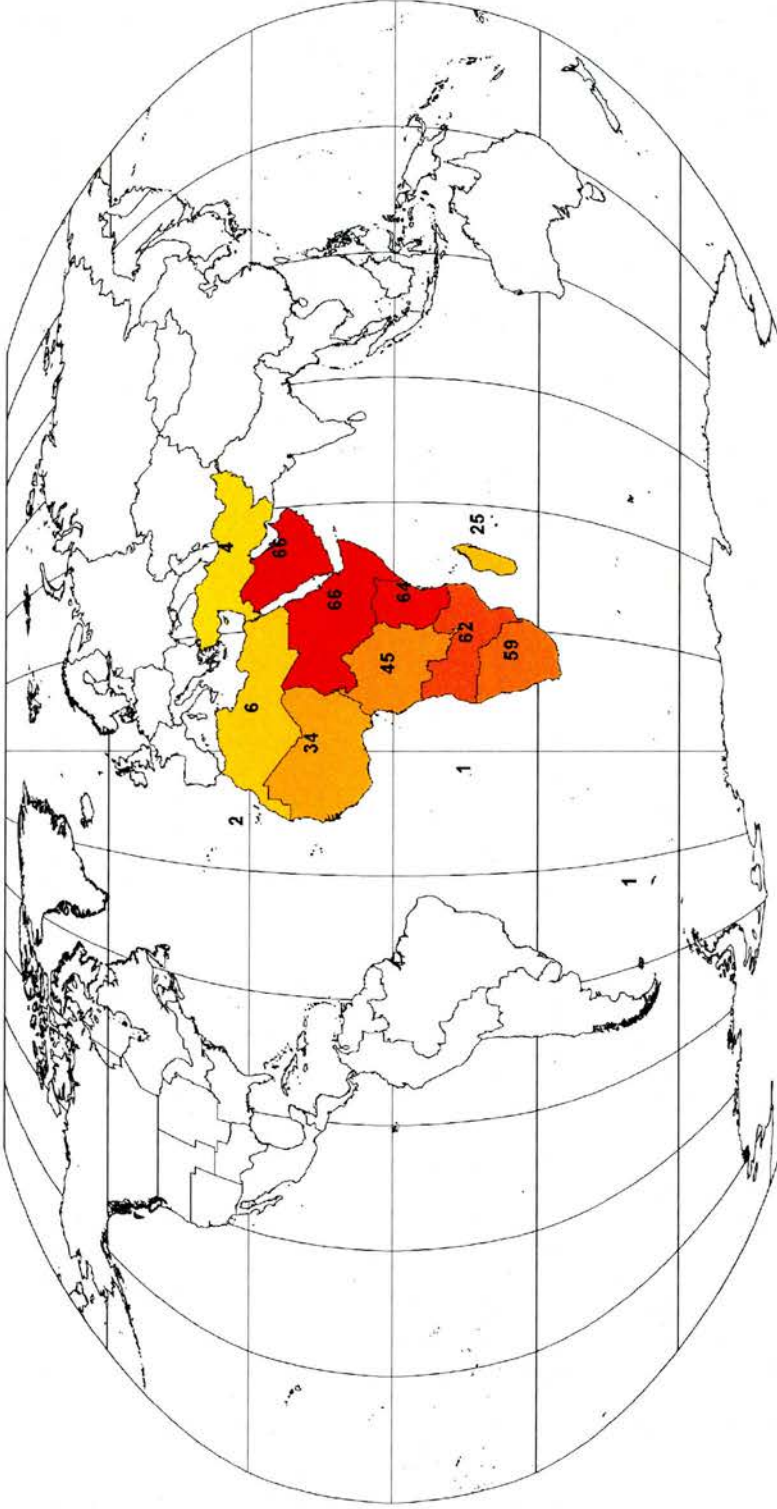
38 genera

Africa and Madagascar, Arabian Peninsula and eastward to Indian Subcontinent; 1 outlier in Australia



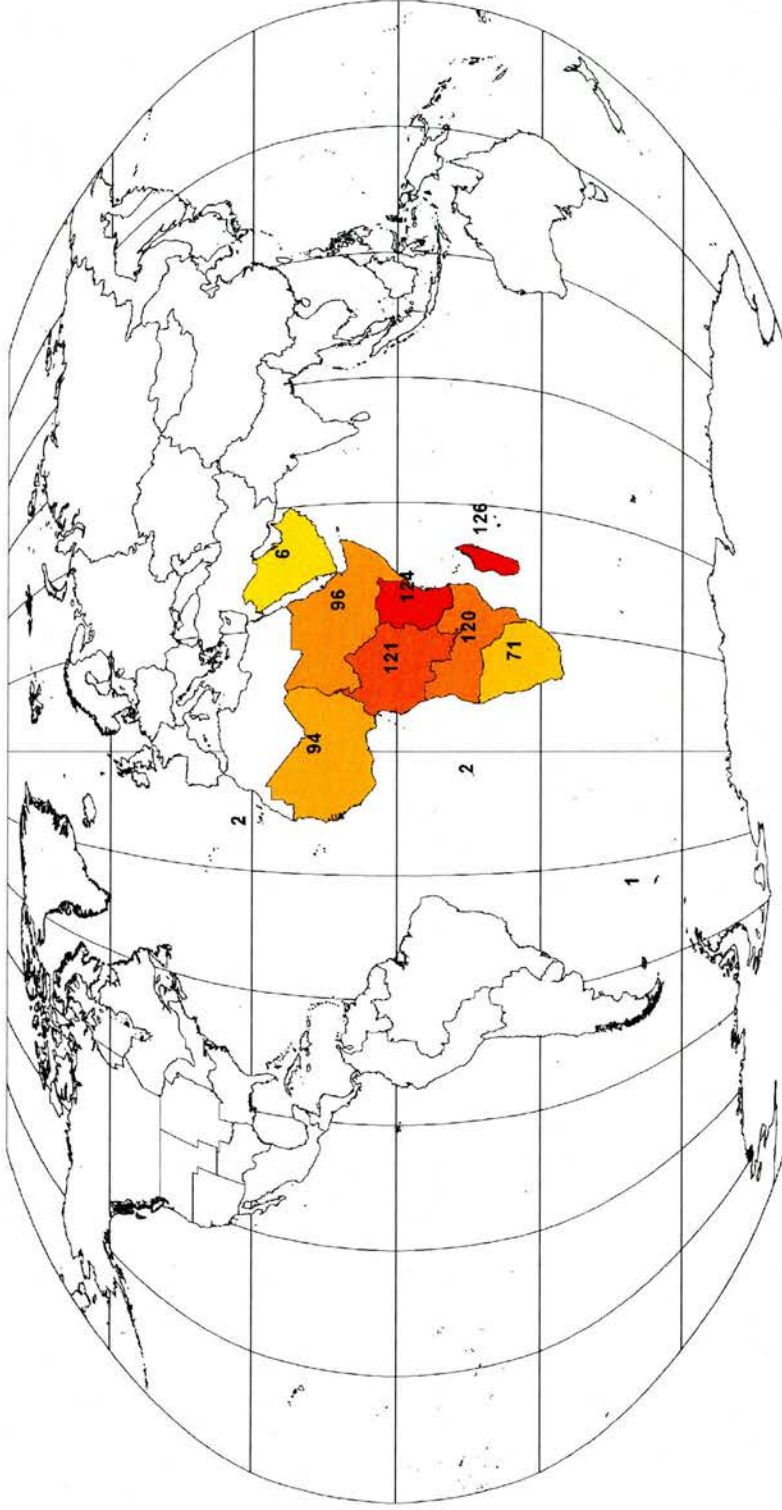
Element 90 **66 genera**

Africa and Madagascar, extending to Arabian Peninsula and Western Asia and also to Subantarctic Islands

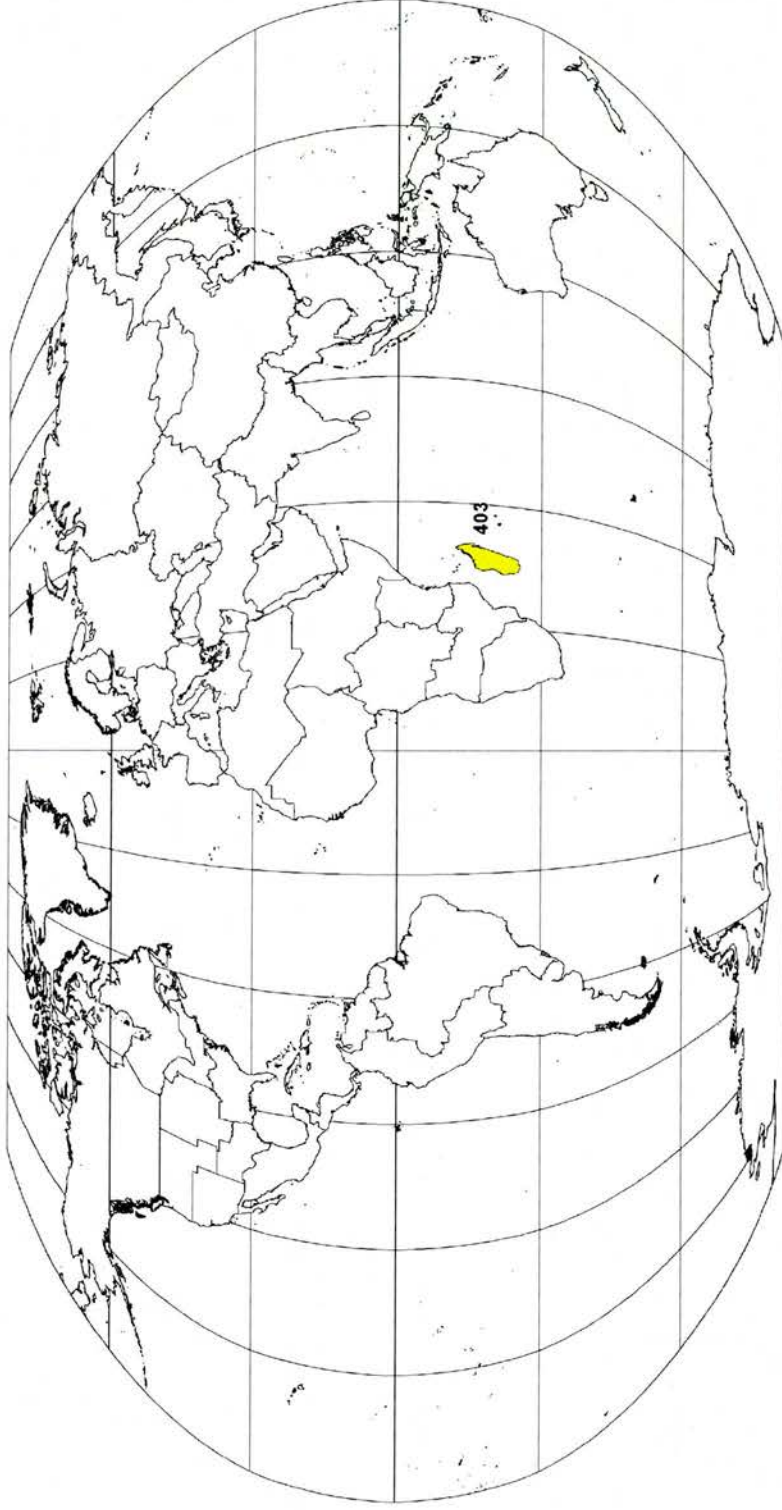


Element 91 **126 genera**

Tropical Africa and Madagascar, also reaching Macaronesia, Arabian Peninsula, St. Helena and Subantarctic Islands



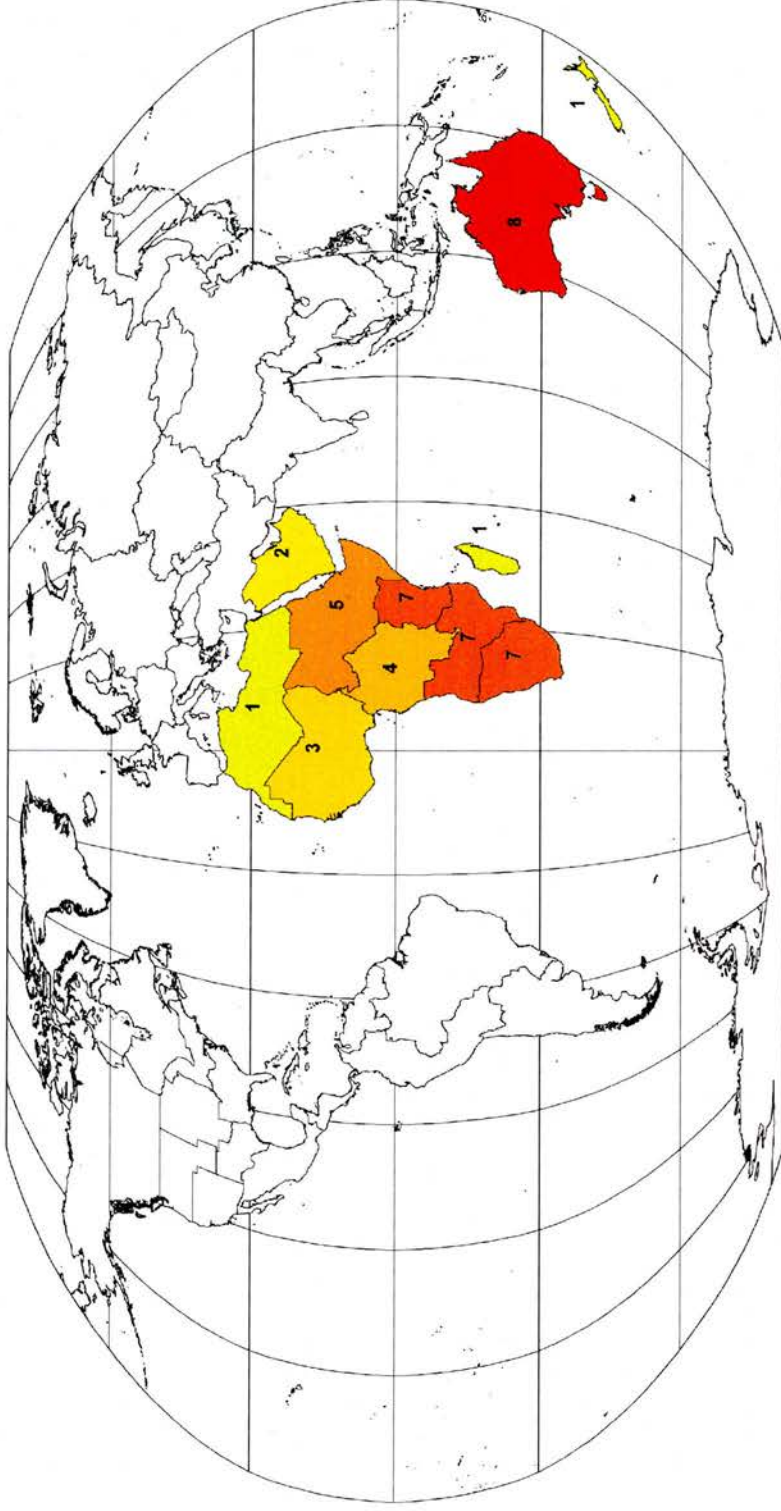
Element 92 **403 genera**
Endemic to Western Indian Ocean



Element 93

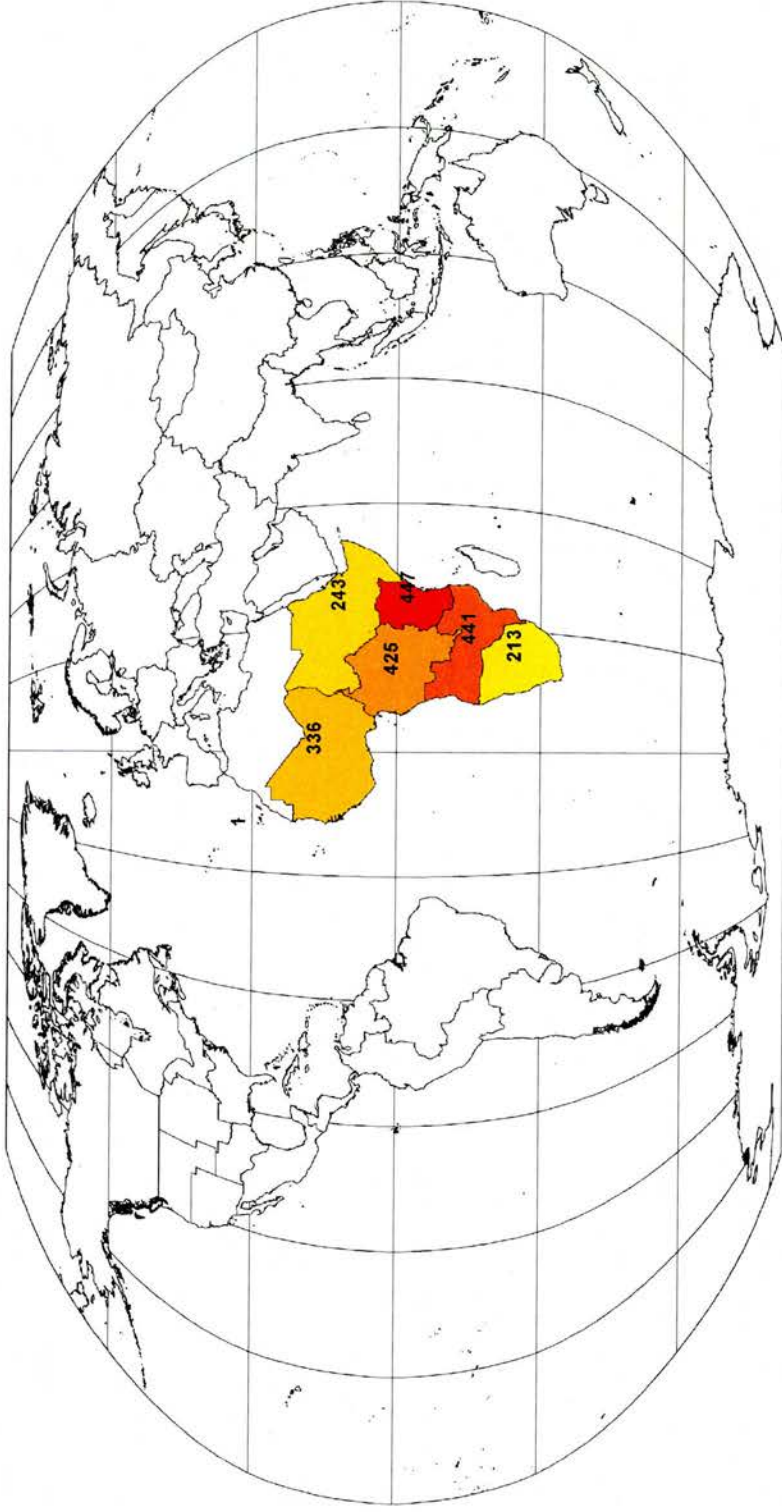
8 genera

Tropical Africa; Australasia, 2 also reaching Arabian Peninsula

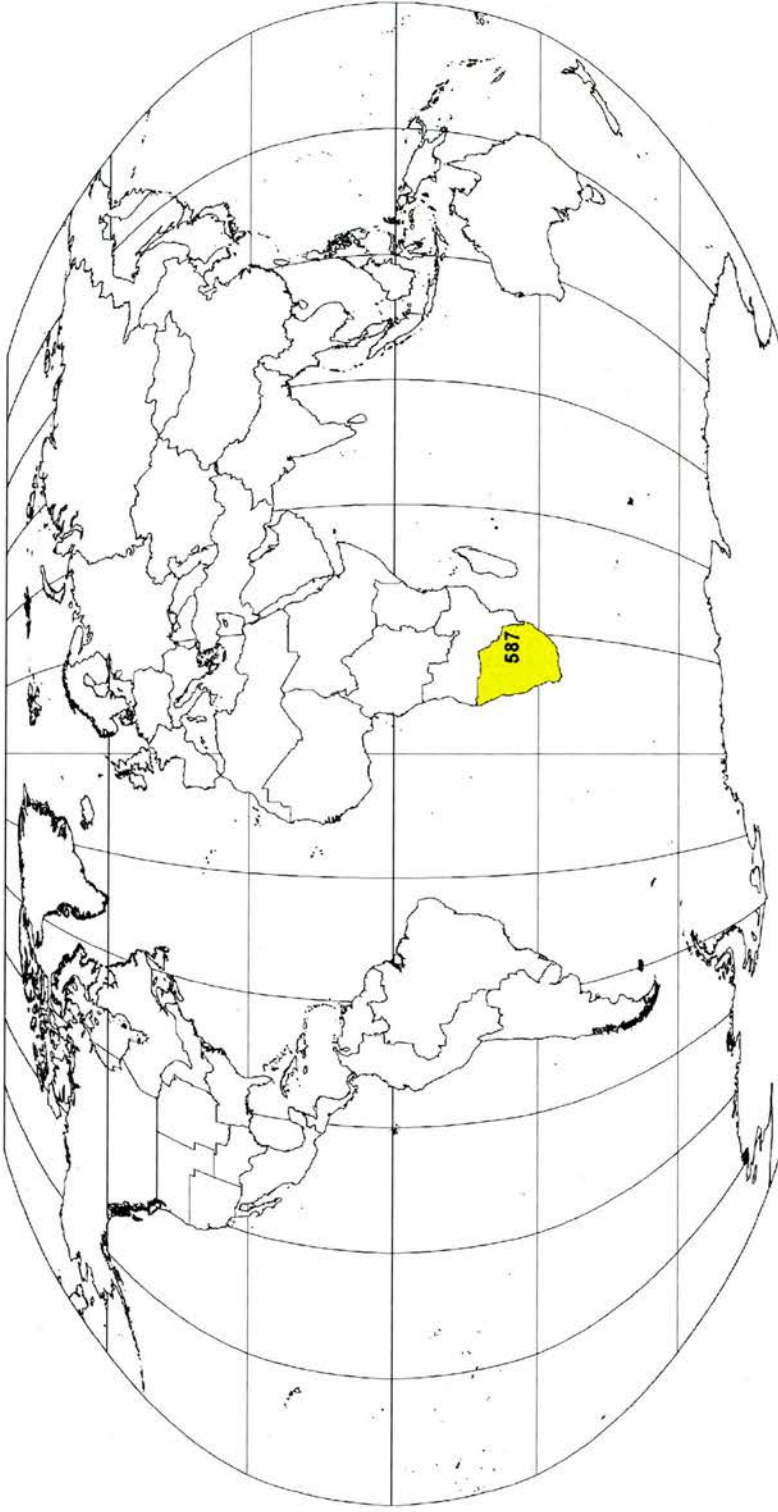


Element 94 **500 genera**

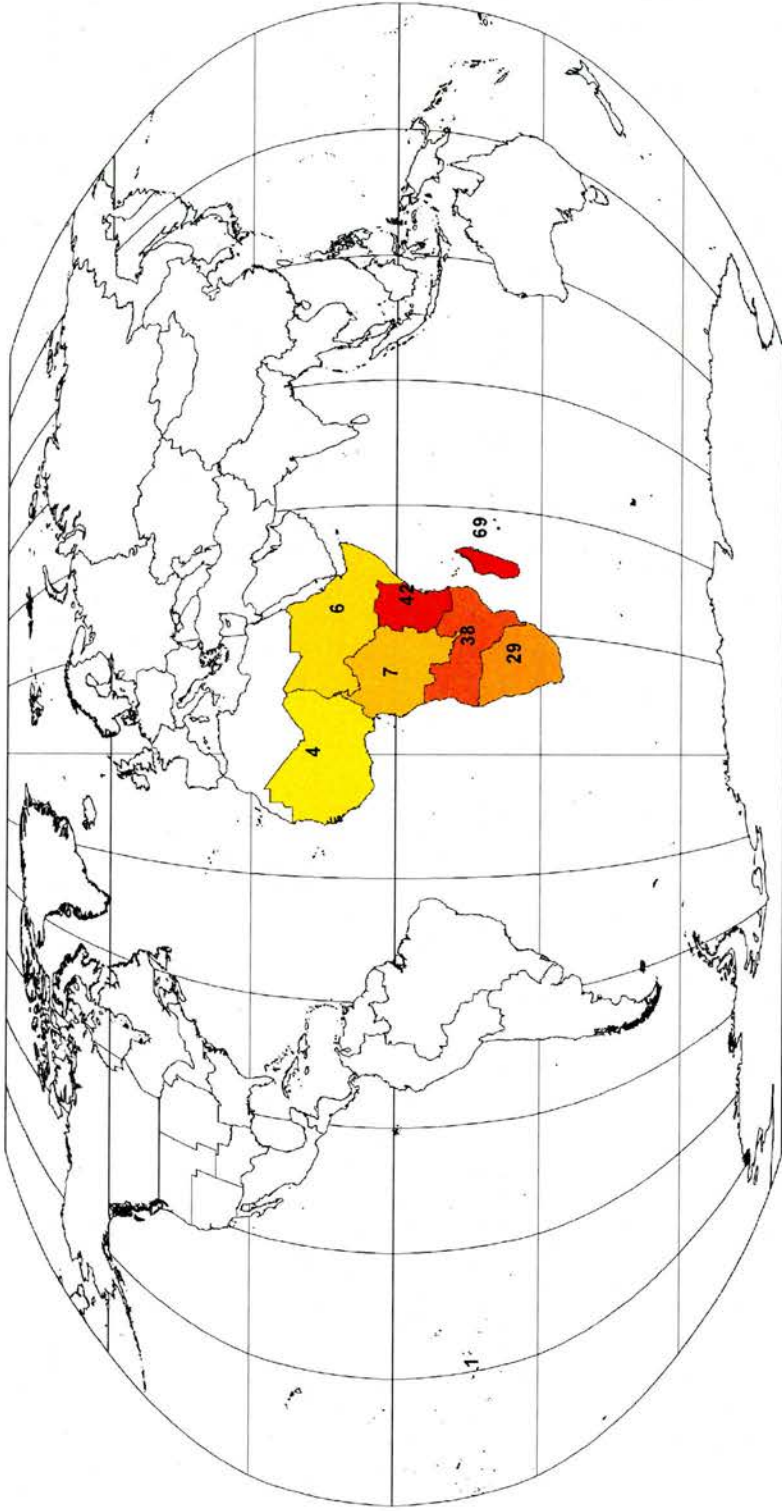
Throughout tropical Africa, 1 also in Macaronesia



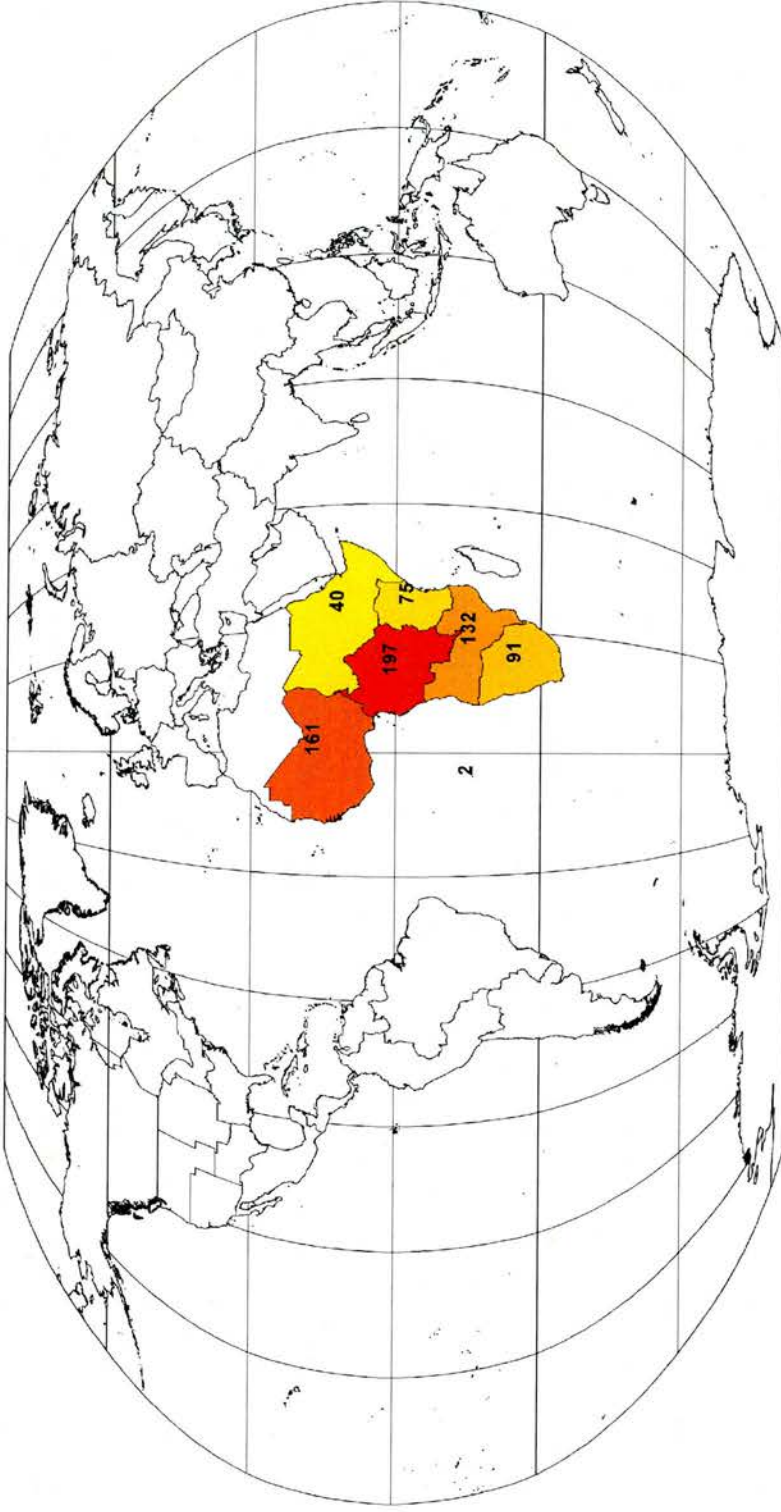
Element 95 **587 genera**
Endemic to Southern Africa



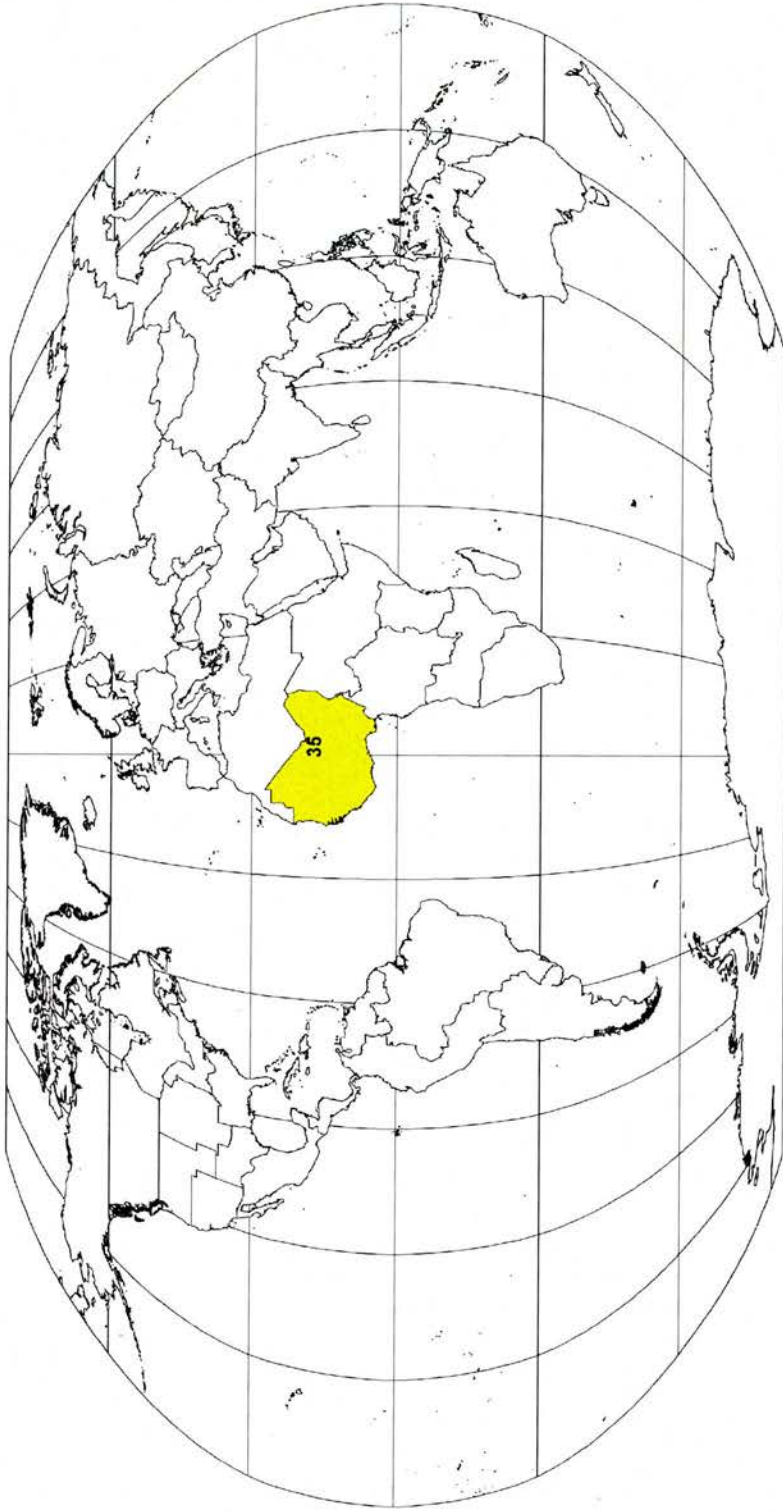
Element 96 **69 genera**
Tropical Africa and Madagascar



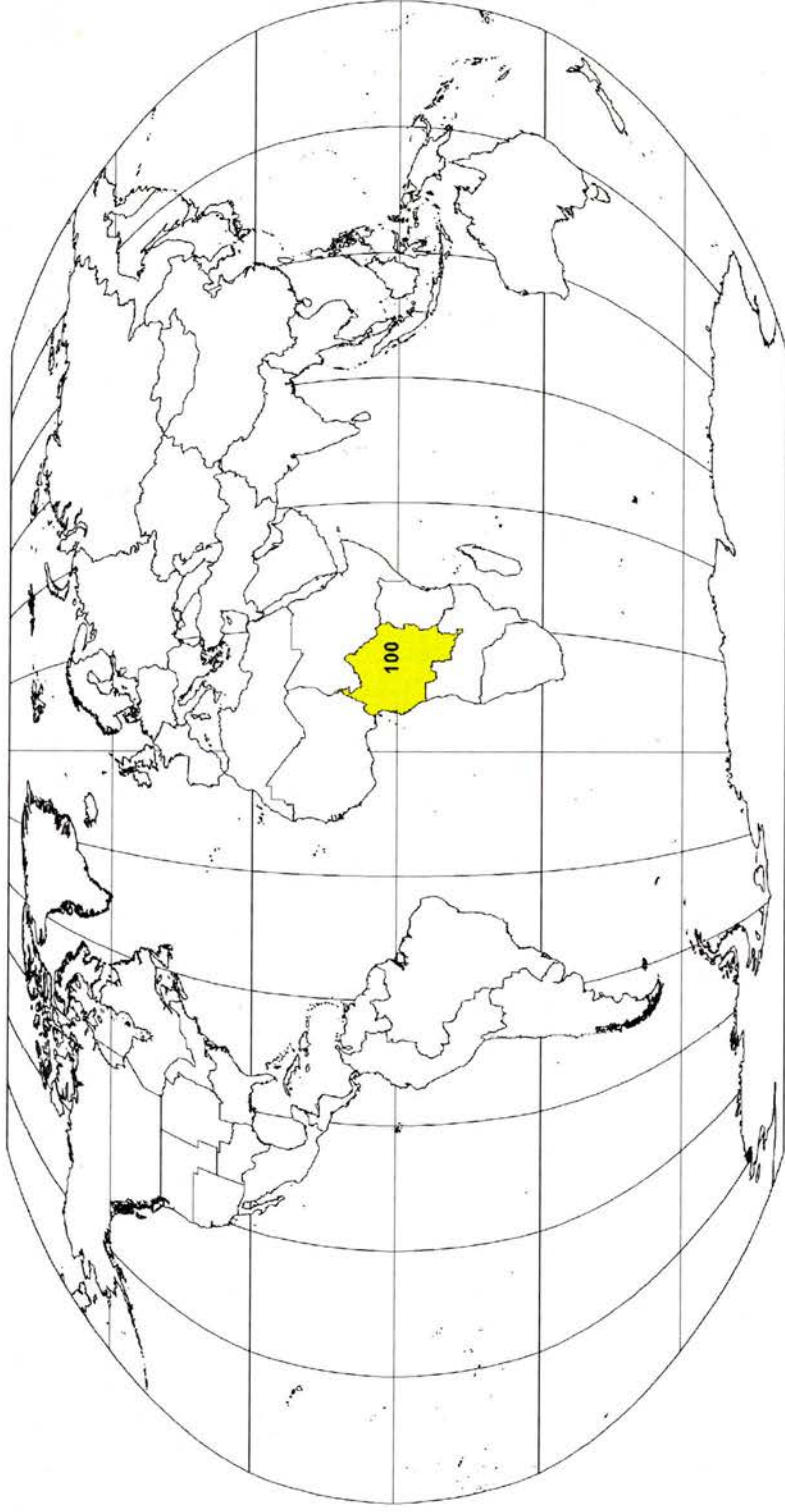
Element 97 **343 genera**
Tropical Africa, reaching St. Helena



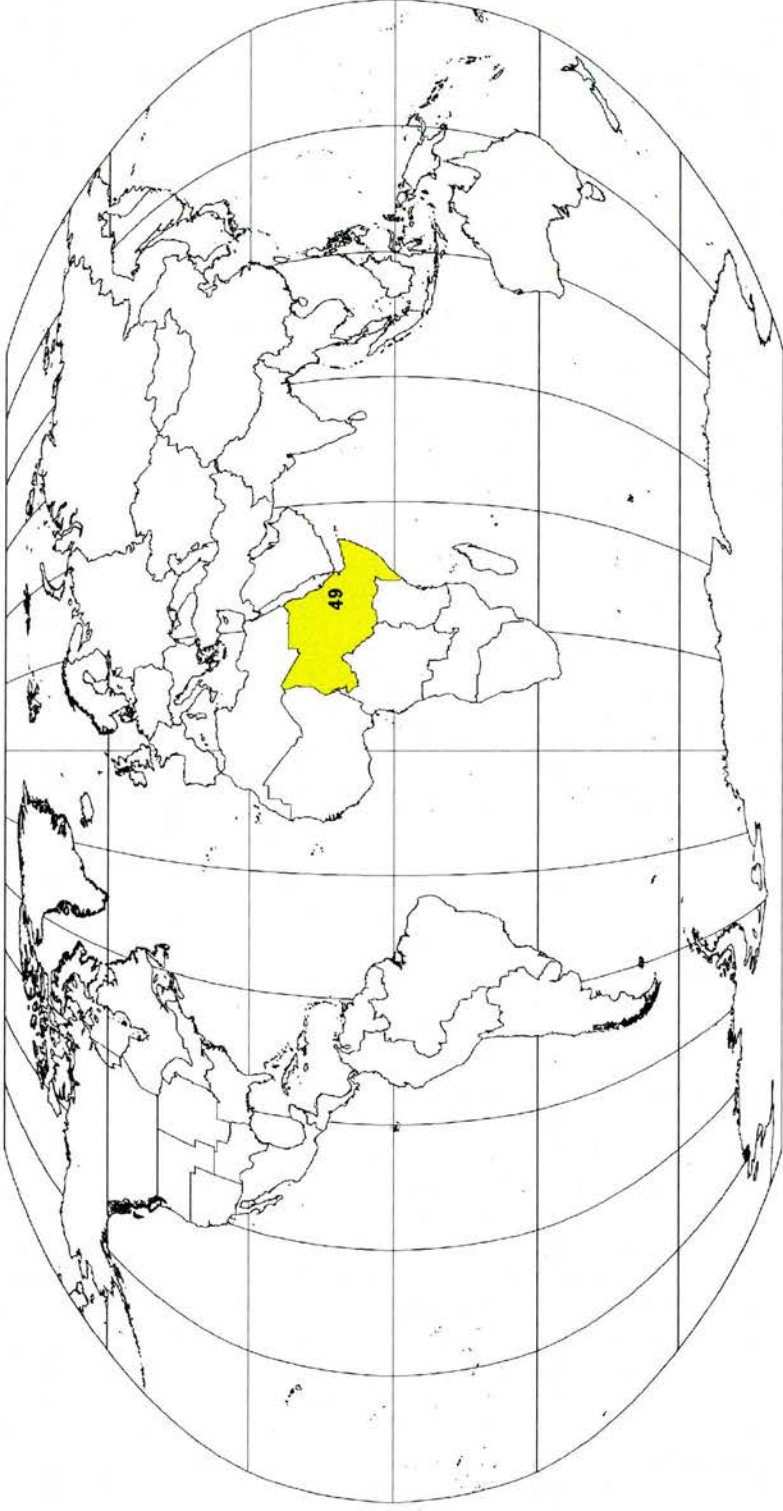
Element 98 **35 genera**
Endemic to West Tropical Africa



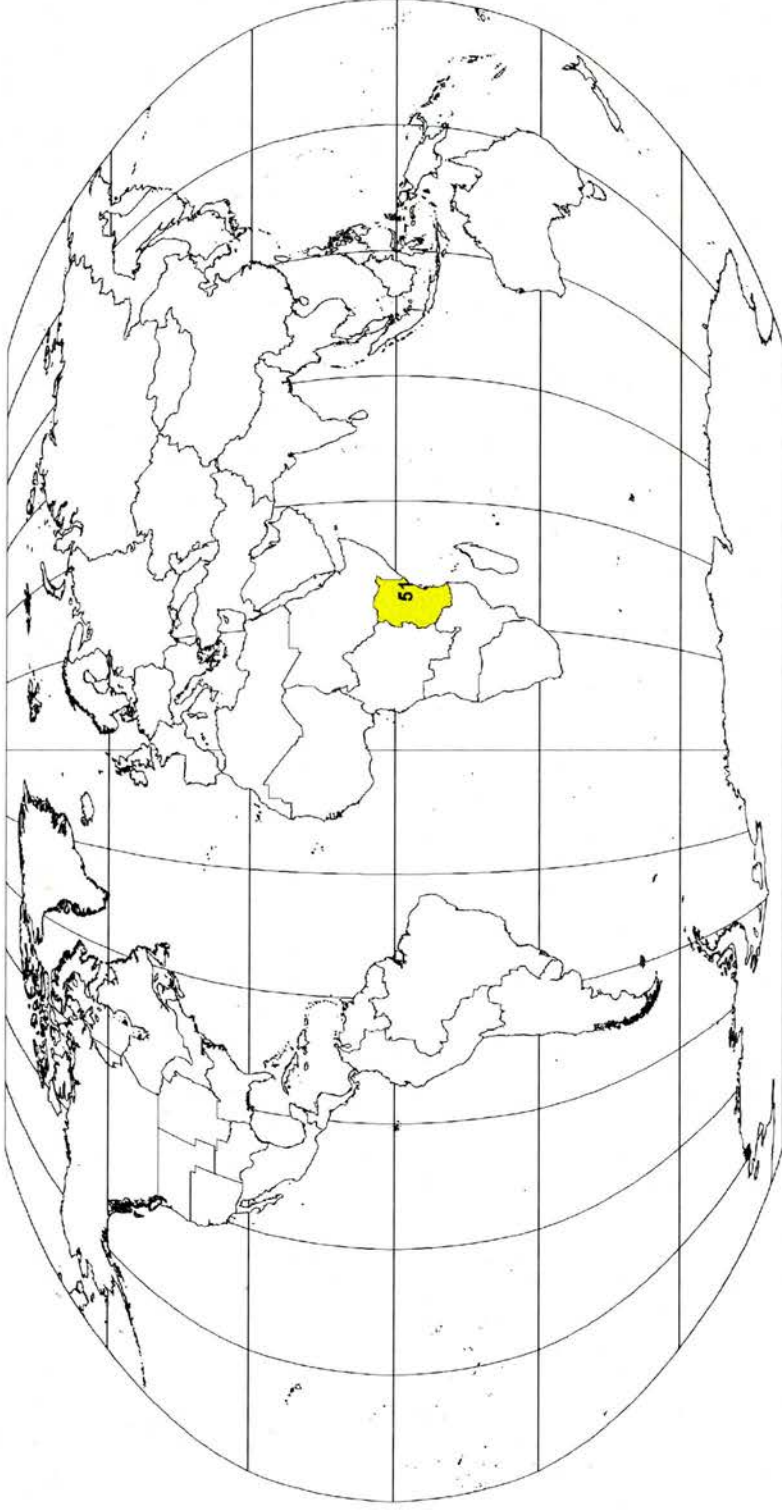
Element 99 **100 genera**
Endemic to West-Central Tropical Africa



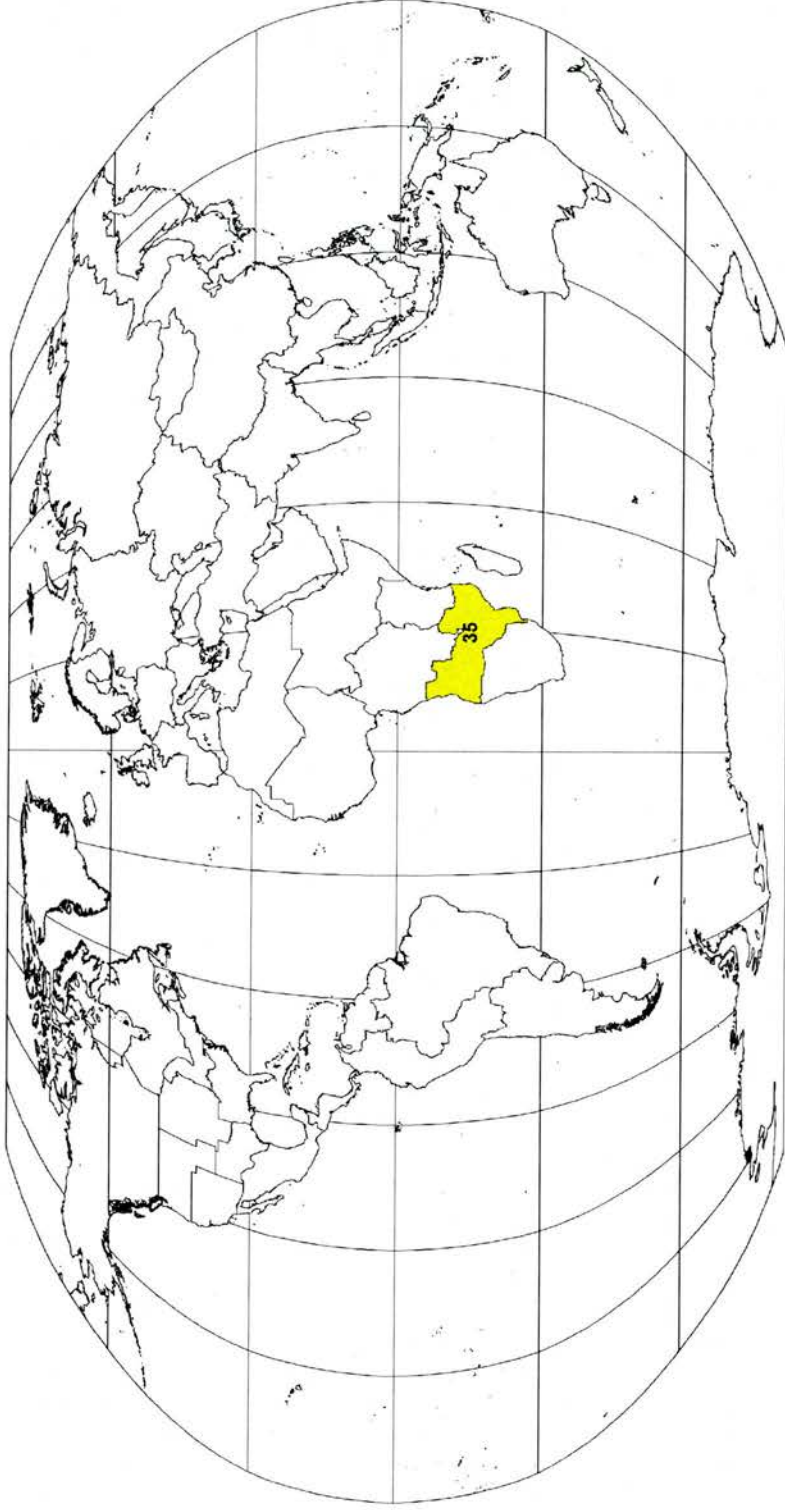
Element 100 **49 genera**
Endemic to Northeast Tropical Africa



Element 101 **51 genera**
Endemic to East Tropical Africa

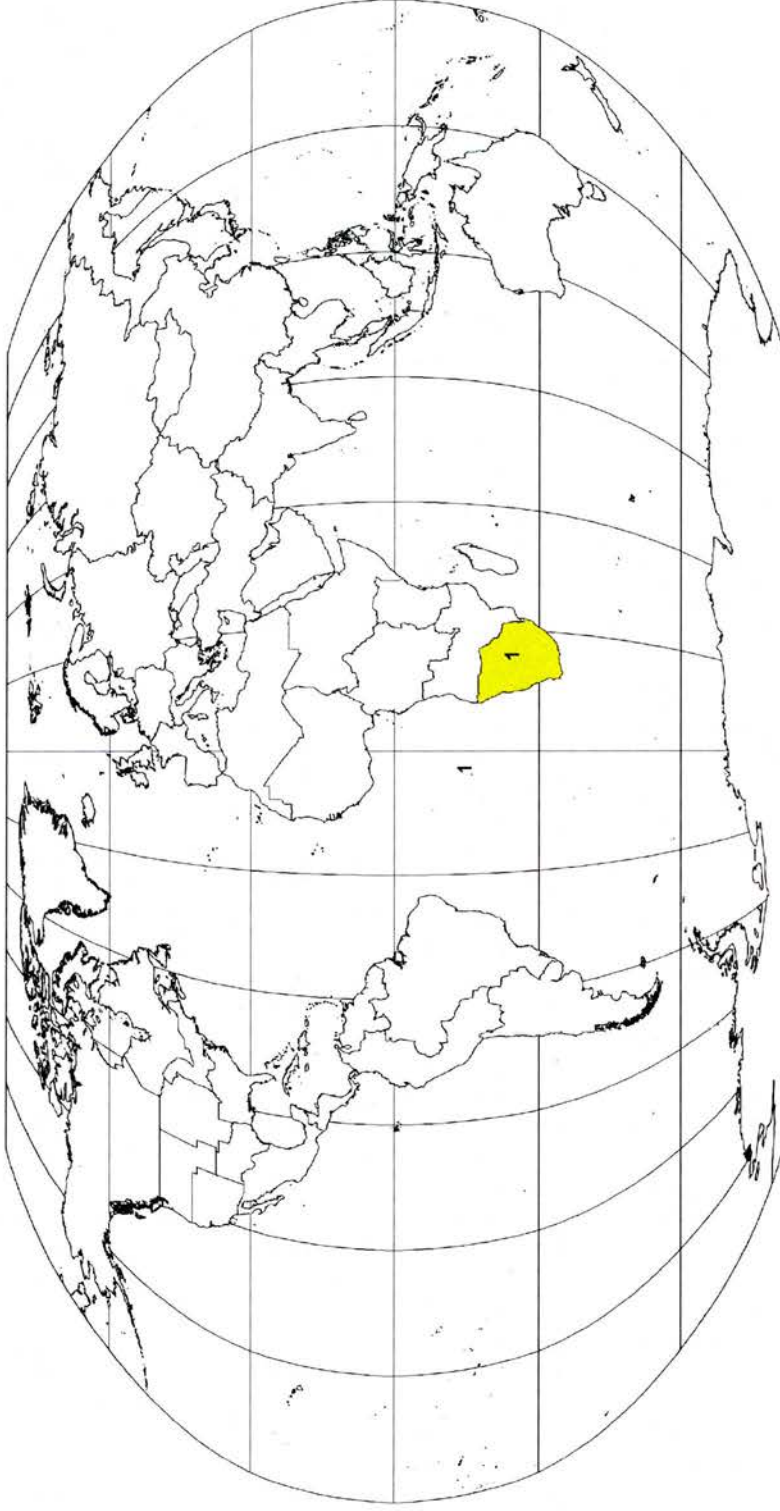


Element 102 **35 genera**
Endemic to South Tropical Africa

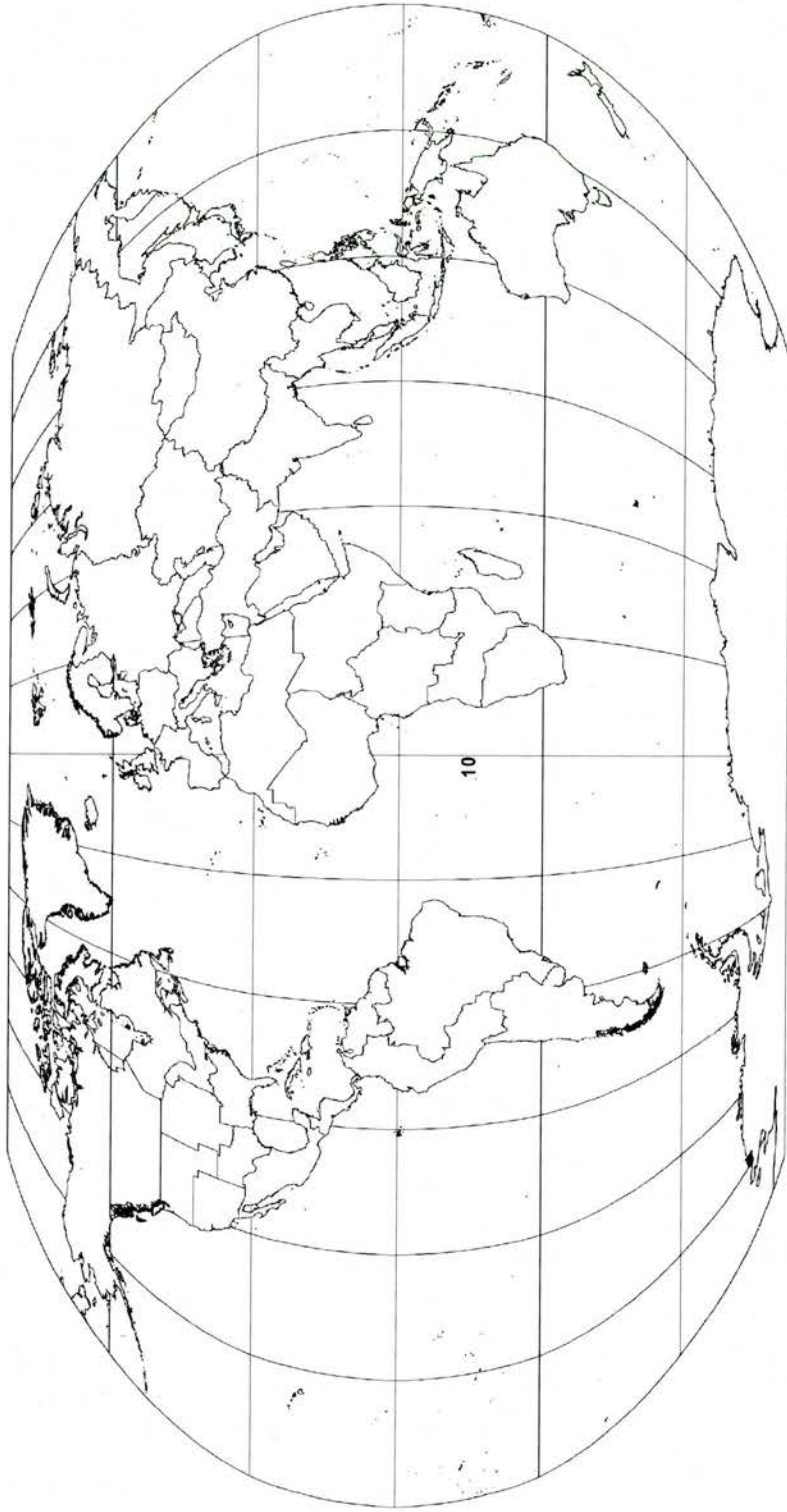


Element 103 **1 genus**

South Africa; St. Helena

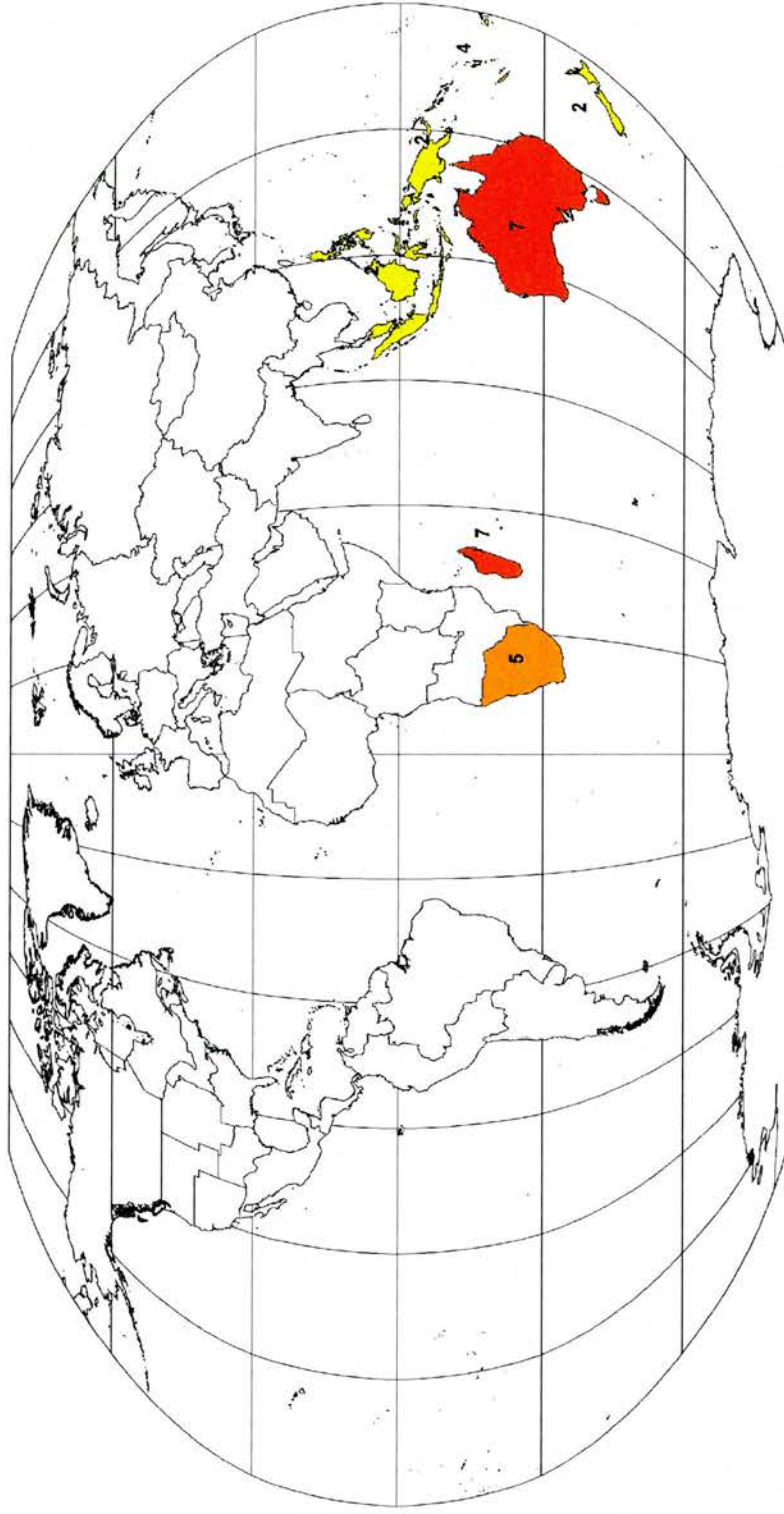


Element 104 **10 genera**
Endemic to Middle Atlantic Ocean



Element 105 **12 genera**

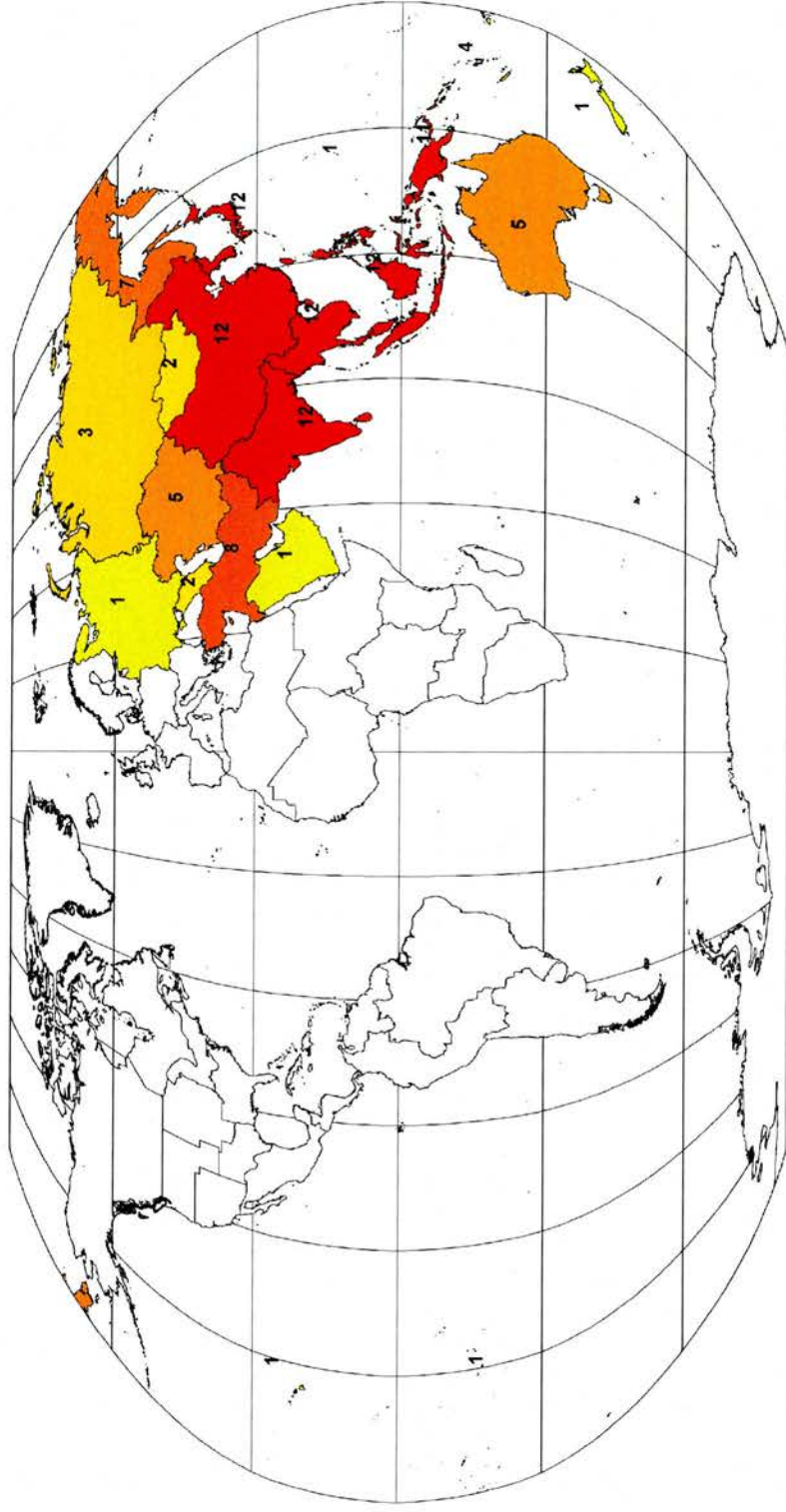
South Africa, Madagascar; SE. Asia, Australasia and SW. Pacific



Element 106

12 genera

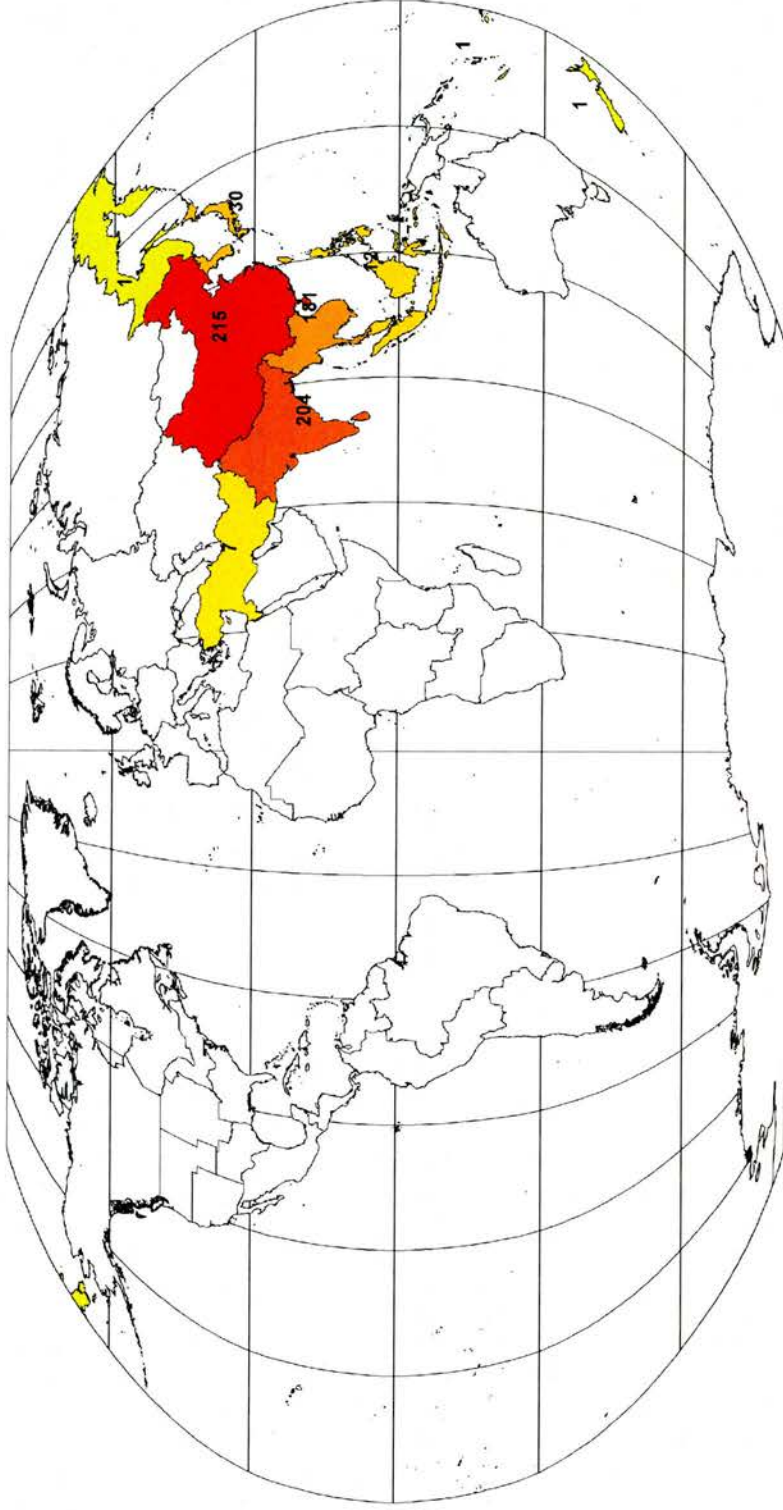
Widespread in temperate and tropical Asia, reaching to Eastern Europe and through the Pacific



Element 107

264 genera

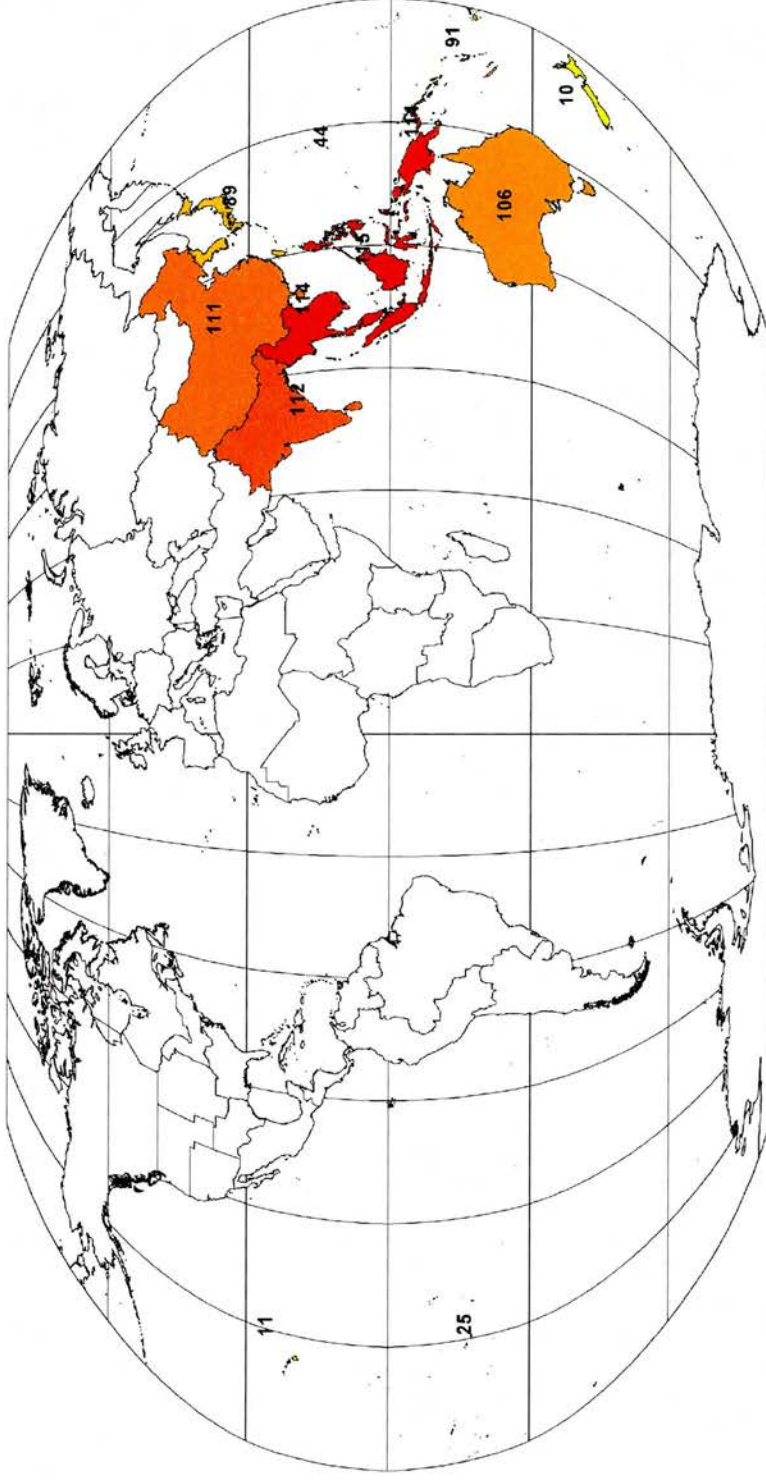
S. China, Indian Subcontinent and Indo-China and into Eastern Asia and Malasia



Element 108

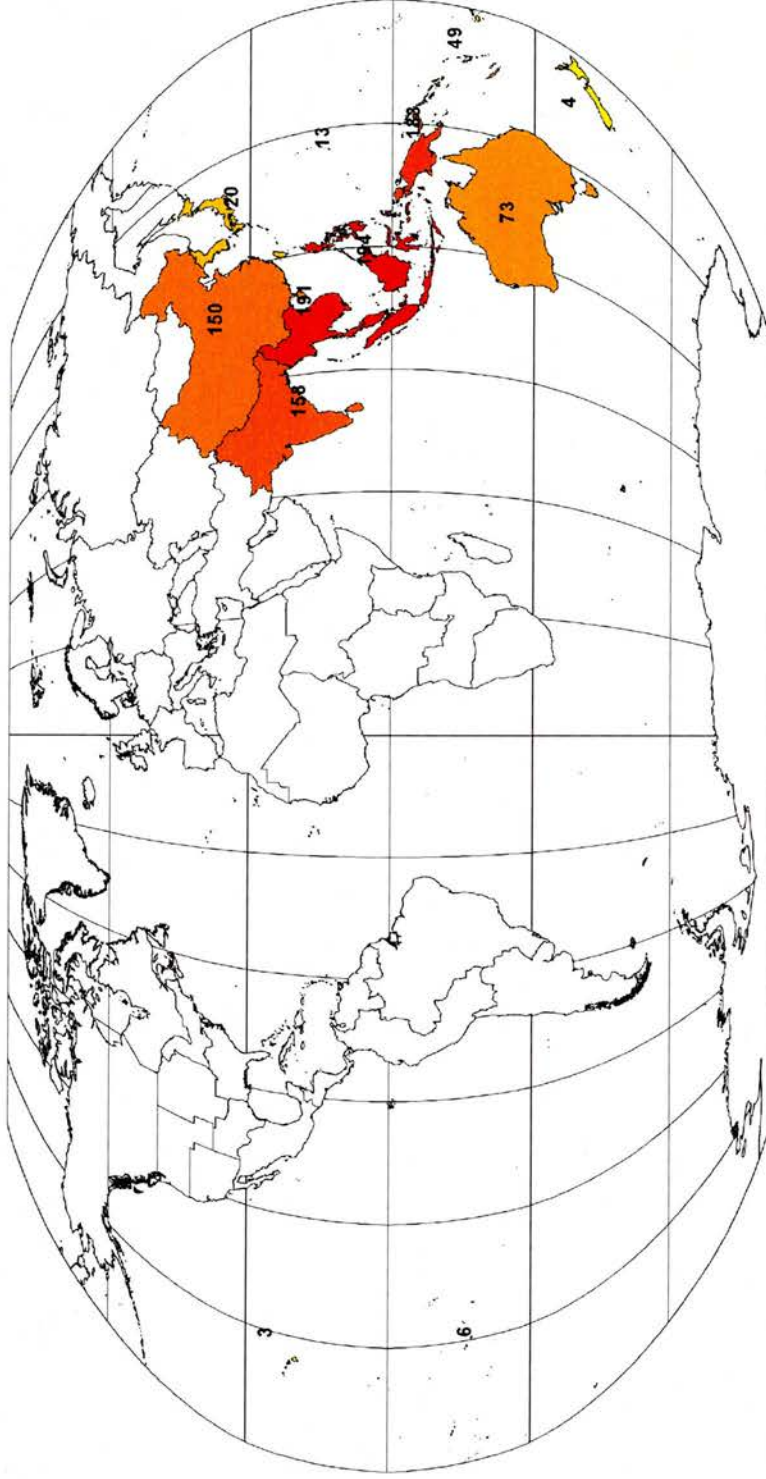
115 genera

S. China and Eastern Asia and through tropical Asia to Australasia and the Pacific



Element 109 **197 genera**

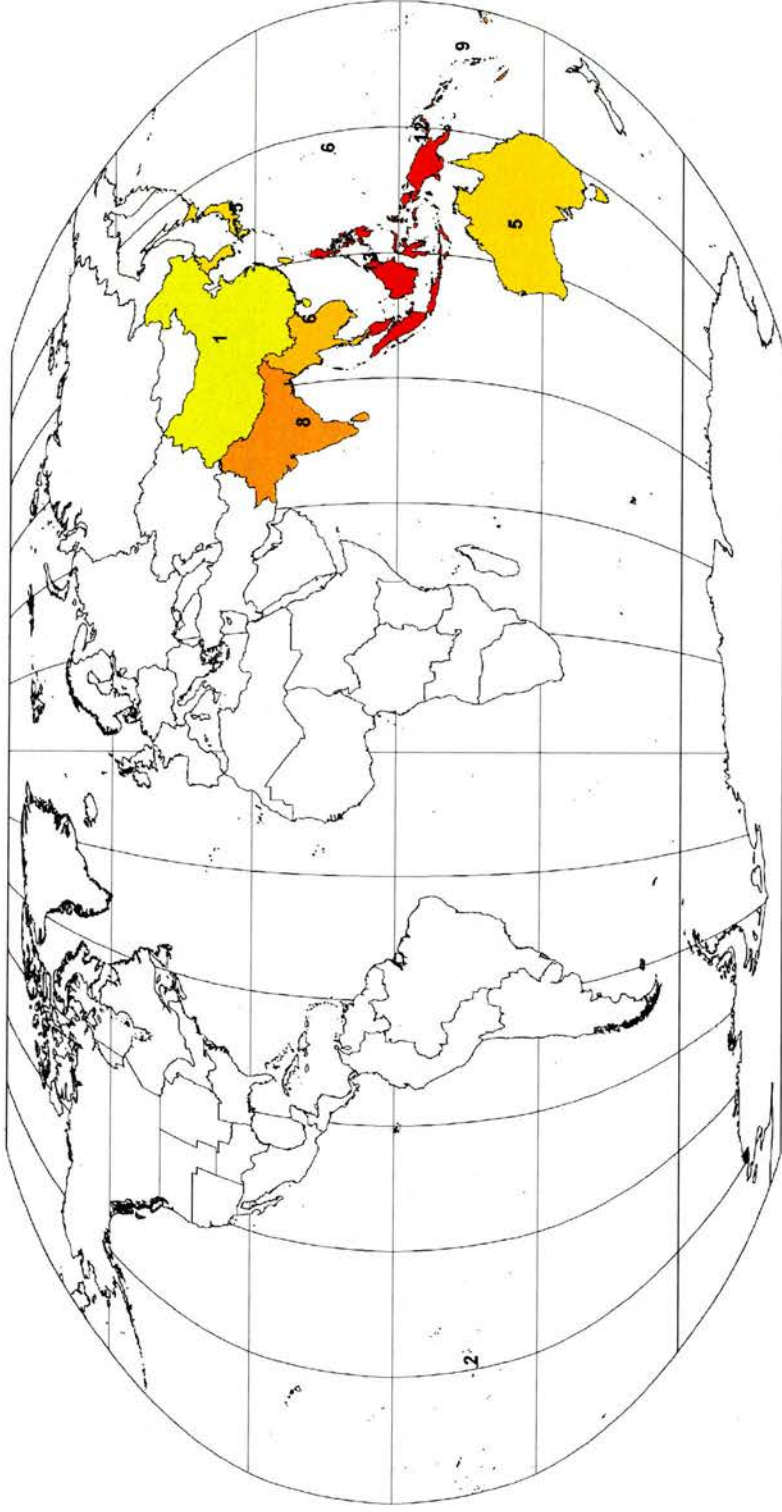
S. China and Eastern Asia to Papuasia, and extending to Australasia and the Pacific



Element 110

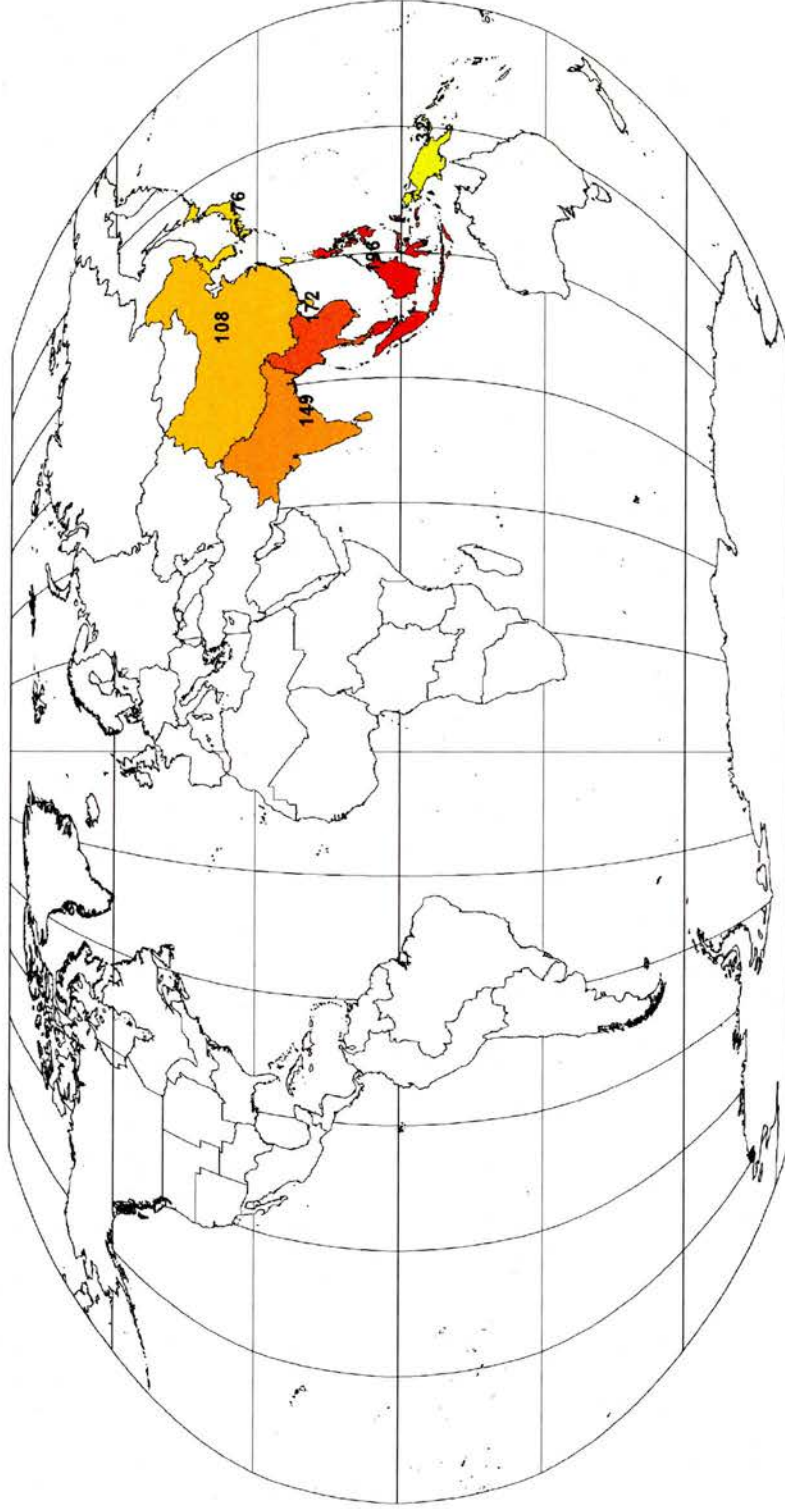
14 genera

Scattered through eastern and tropical Asia to Australia and the Pacific



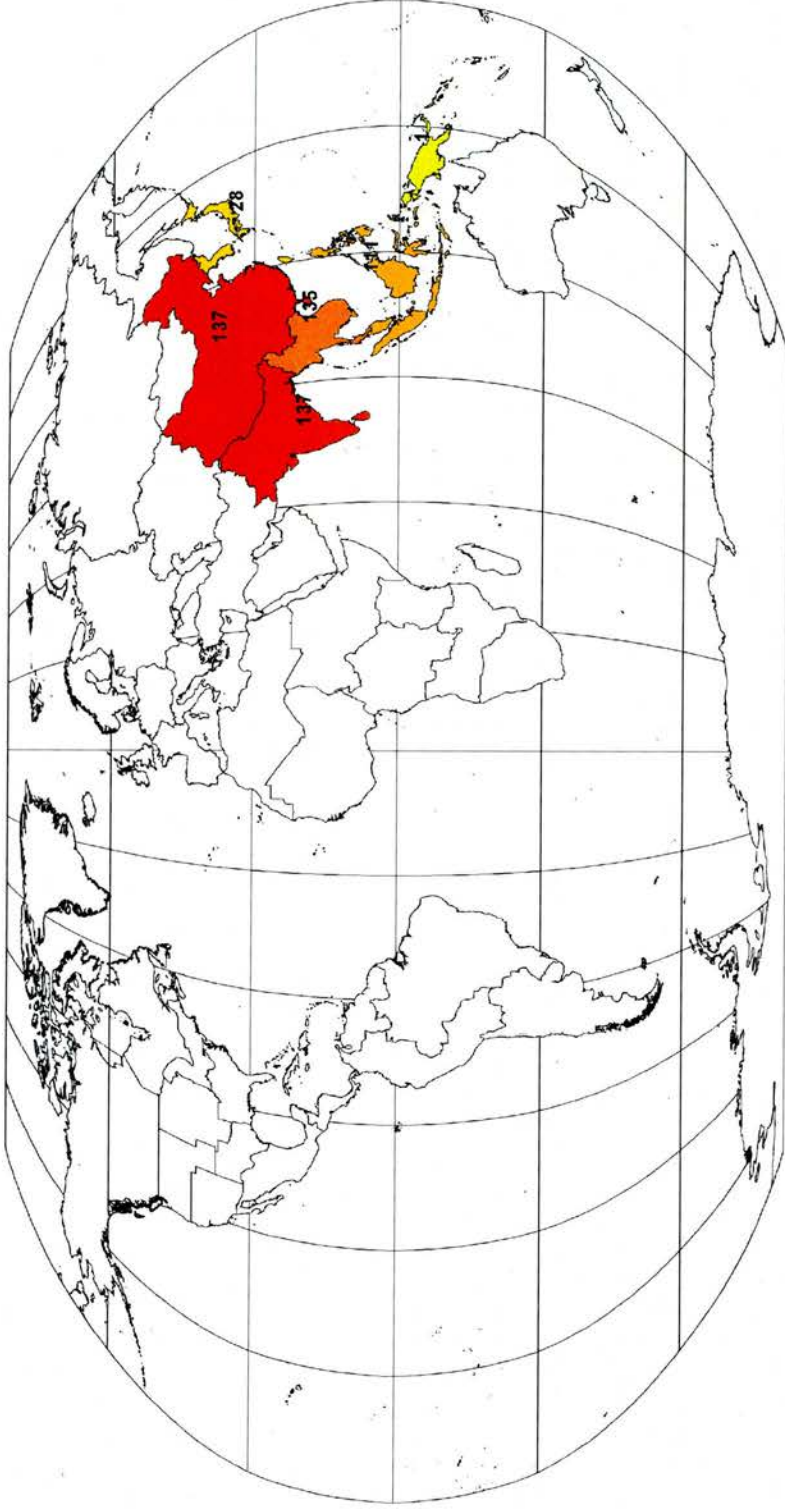
Element 111 **197 genera**

S. China and Eastern Asia to Malaysia and reaching Papuasia

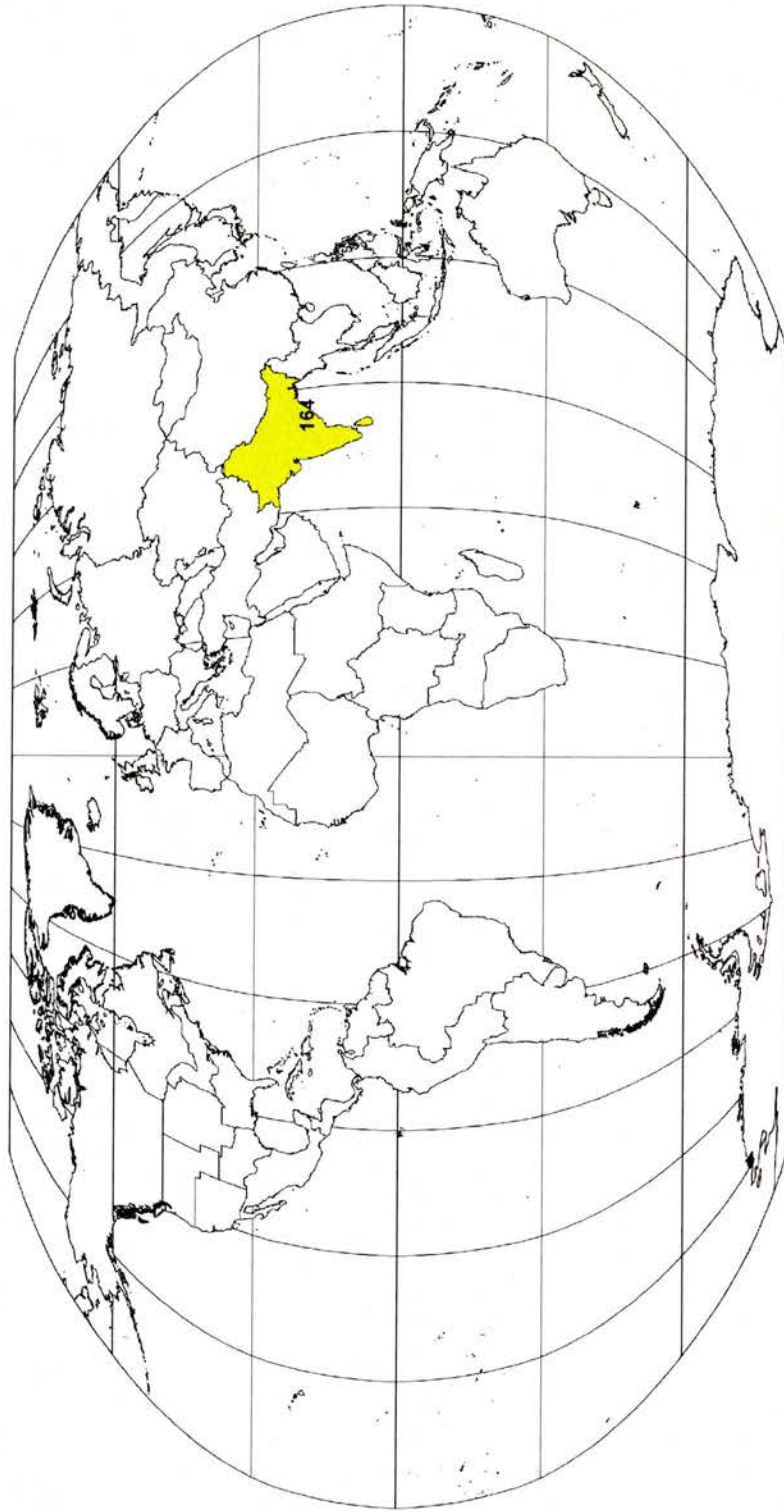


Element 112 **137 genera**

S. China and E. Himalaya to Indo-China and Malasia

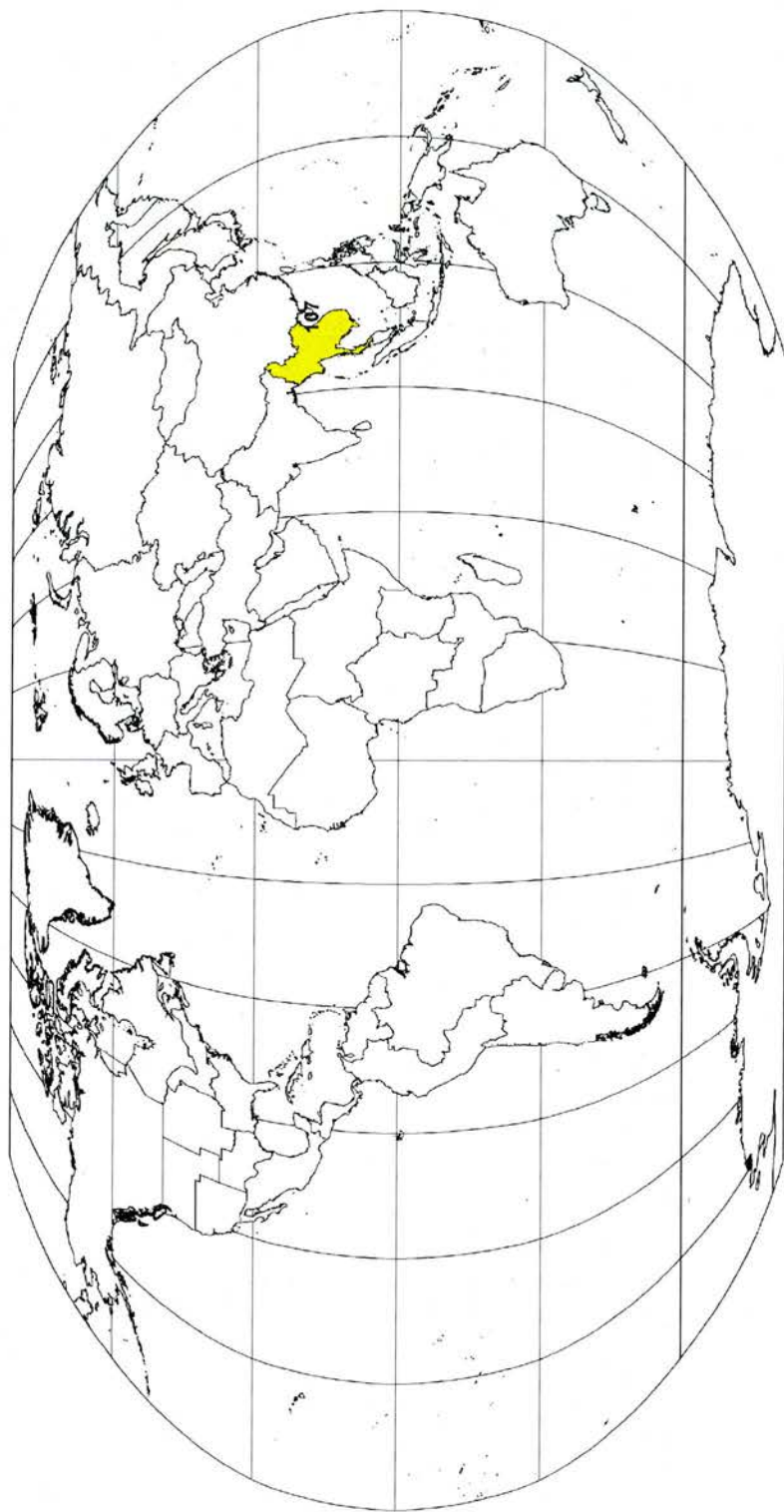


Element 113 **164 genera**
Endemic to Indian Subcontinent



Element 114 **107 genera**

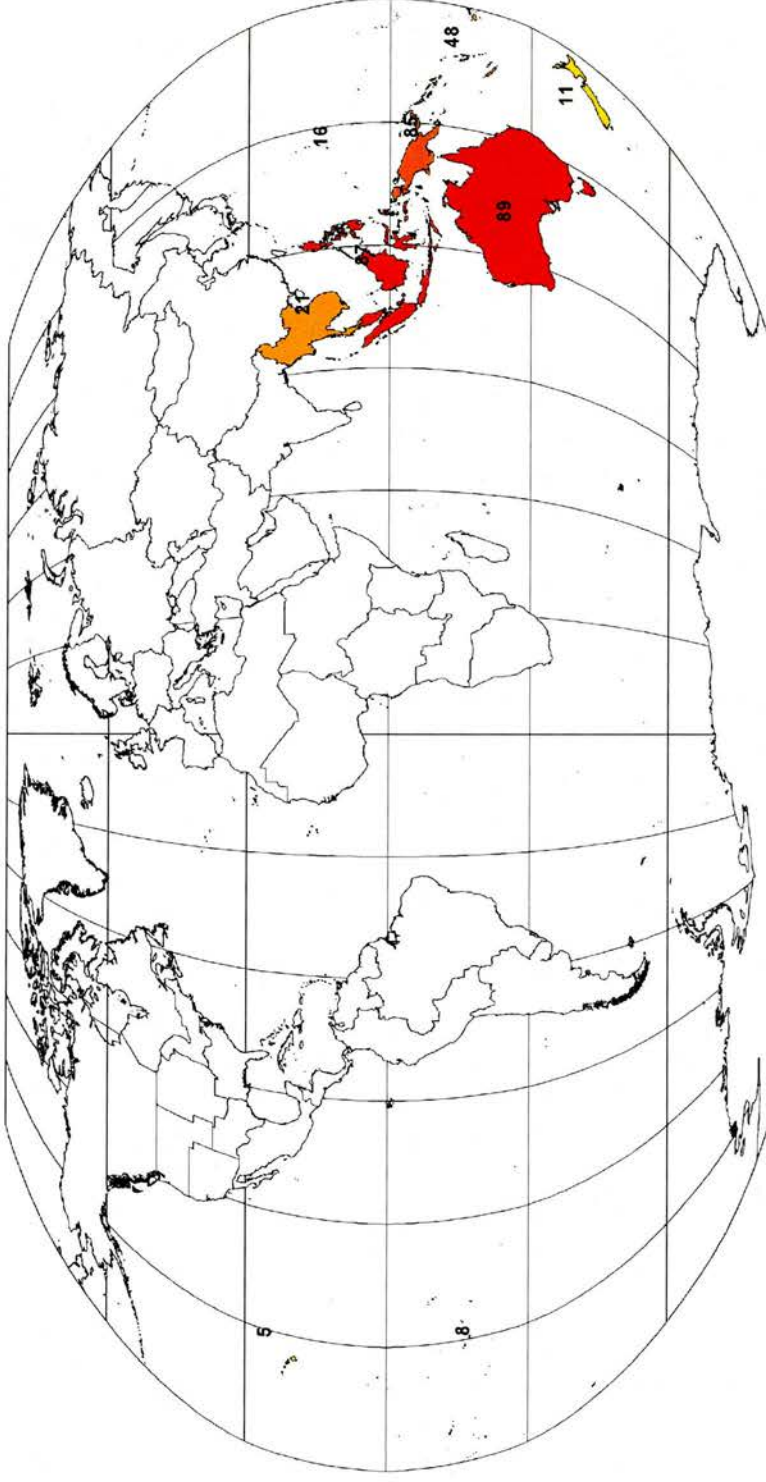
Endemic to Indo-China



Element 115

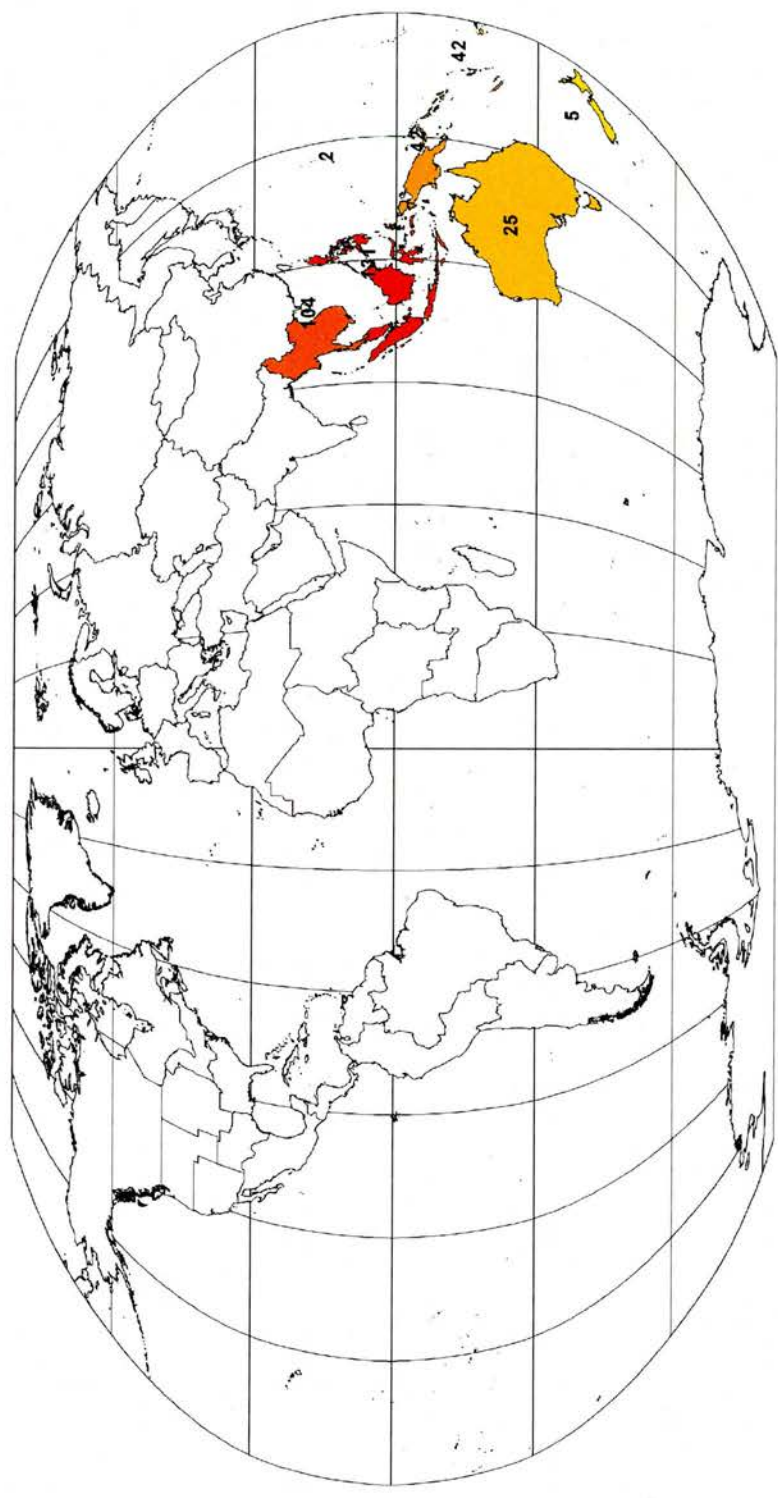
89 genera

Malasia, Papuasia and NE. Australia, reaching Indo-China, New Zealand and the Pacific

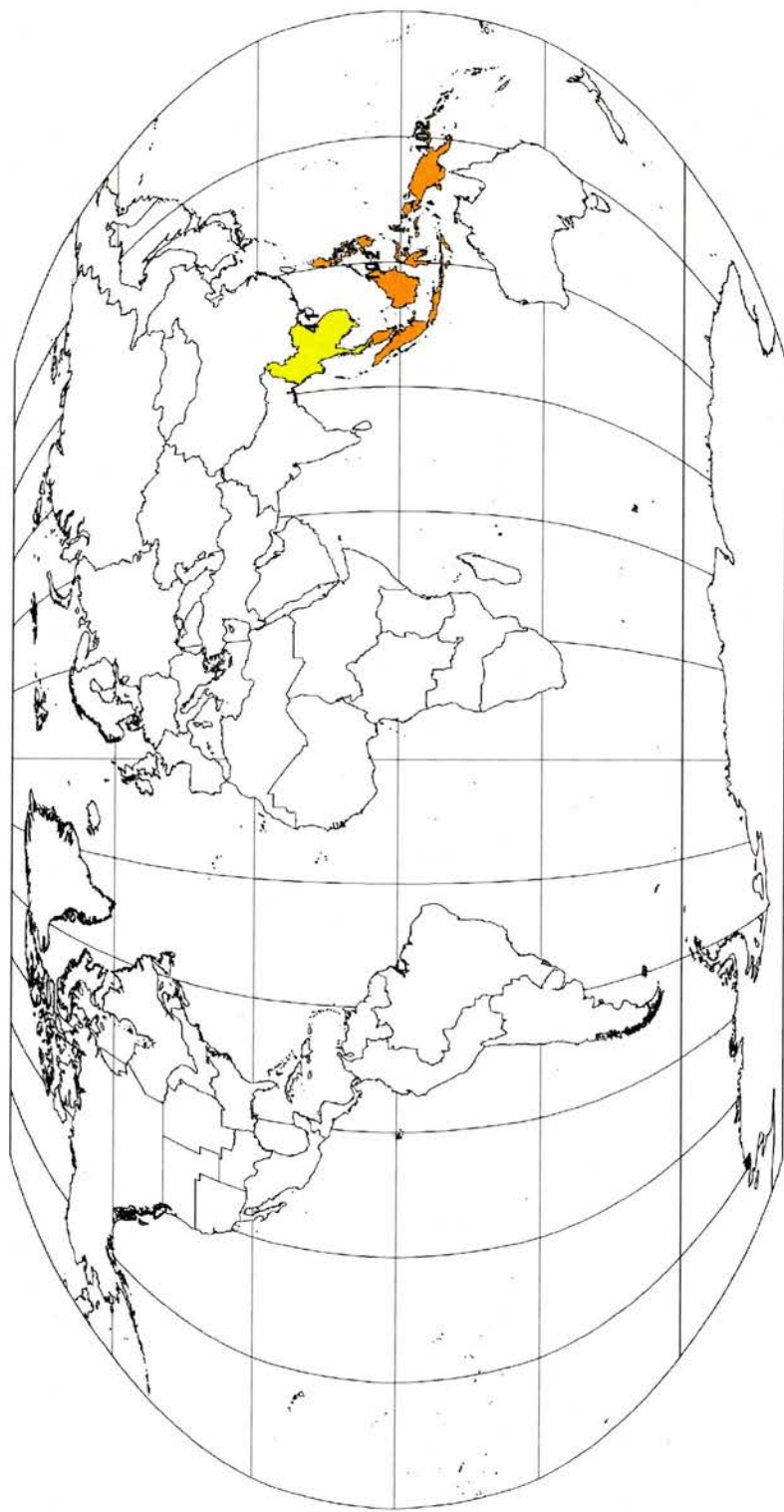


Element 116 **150 genera**

Indo-China and Malesia to Australasia and the Pacific

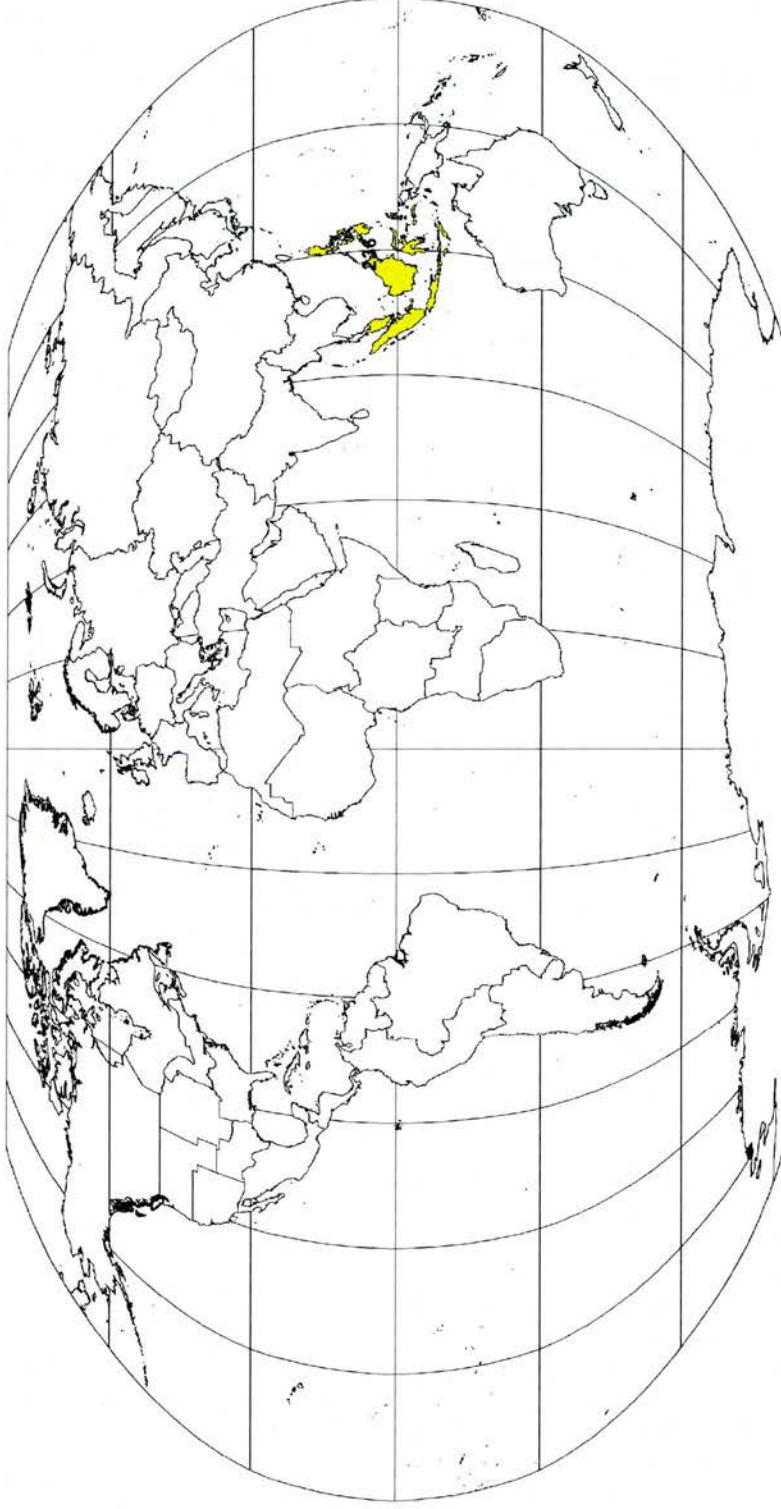


Element 117 **102 genera**
Indo-China to Malesia and Papuasia



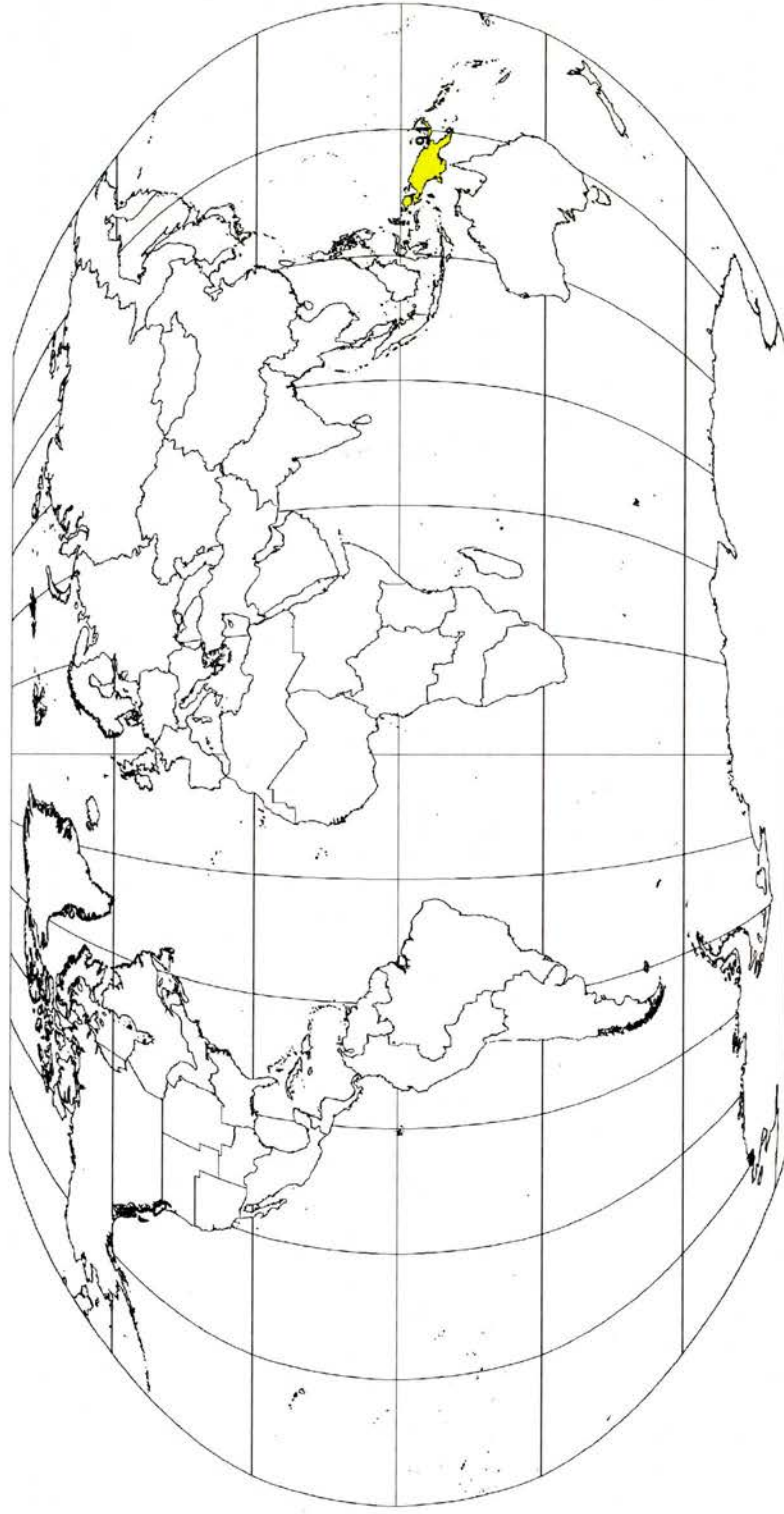
Element 118 **236 genera**

Endemic to Malesia



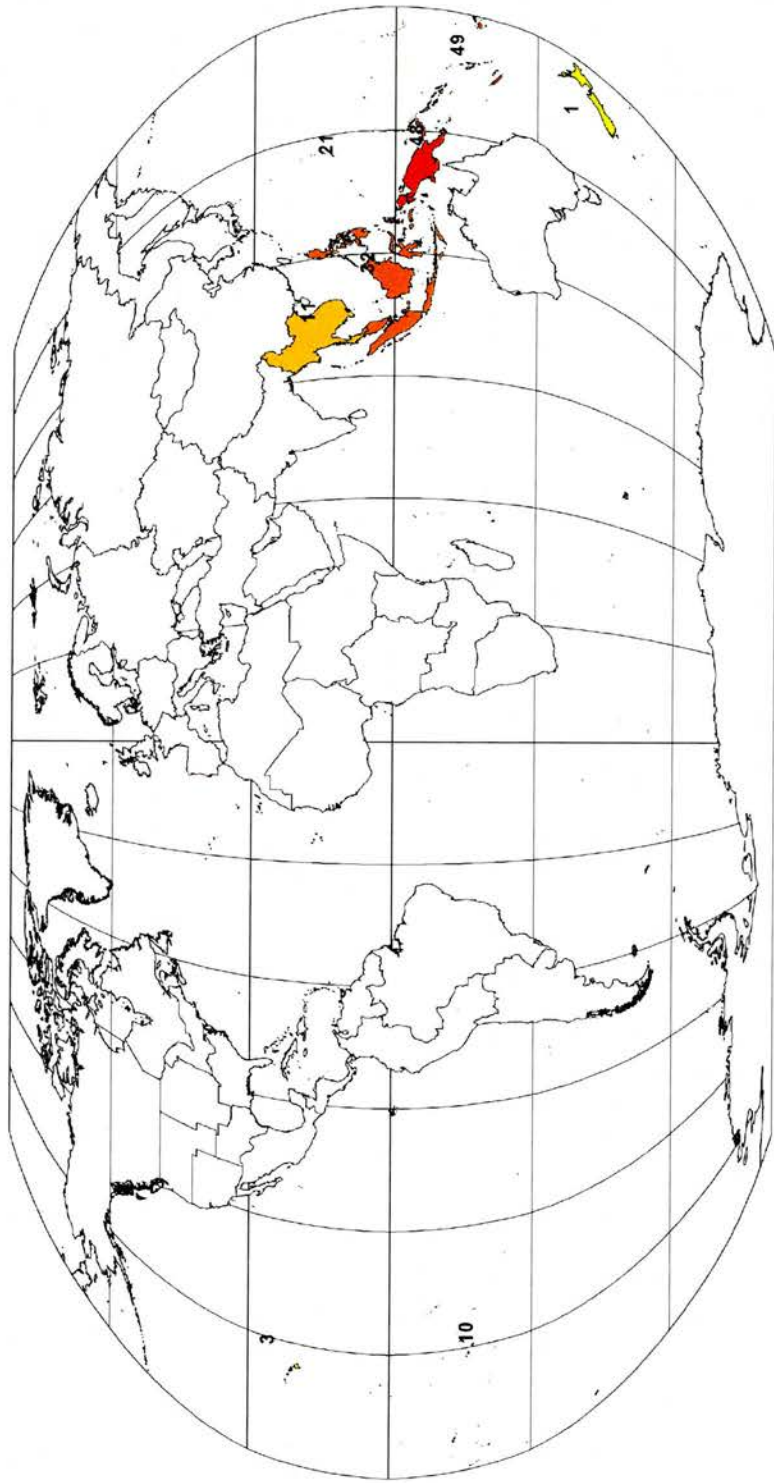
Element 119 **91 genera**

Endemic to Papuasia



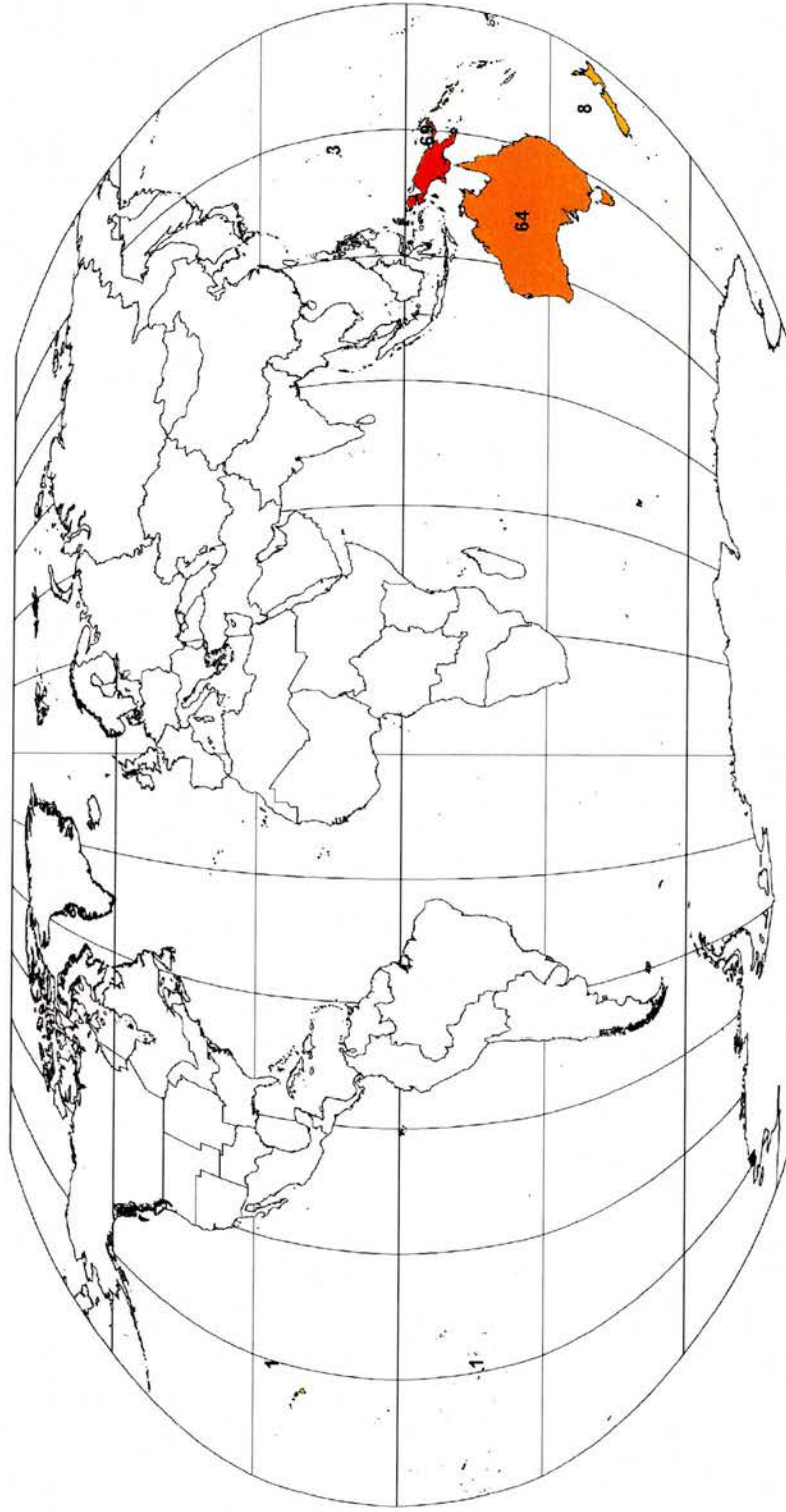
Element 120 **51 genera**

Papuasias and SW. Pacific extending to Indo-China and Hawaiian Islands

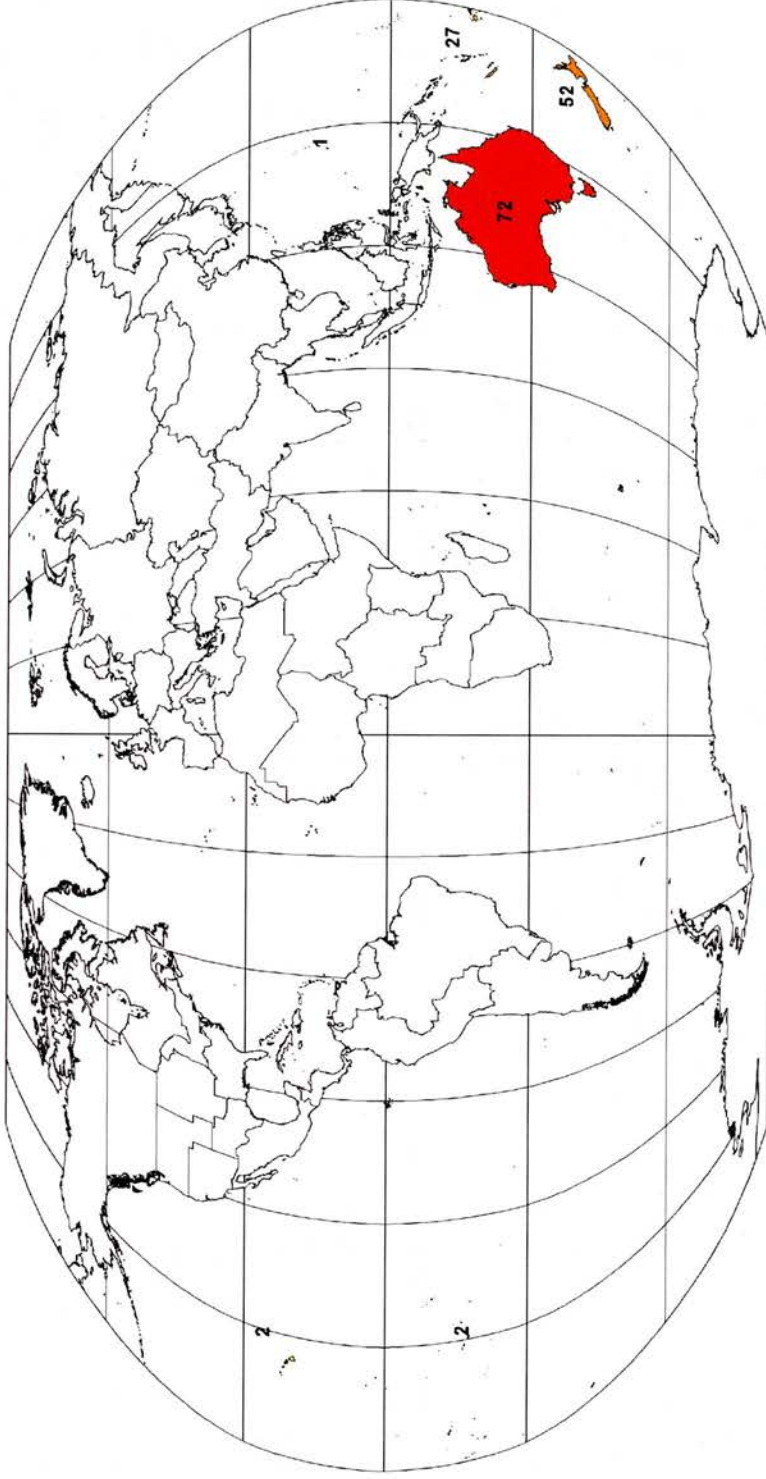


Element 121 **70 genera**

Papuasias and Australias, reaching New Zealand and into the Pacific

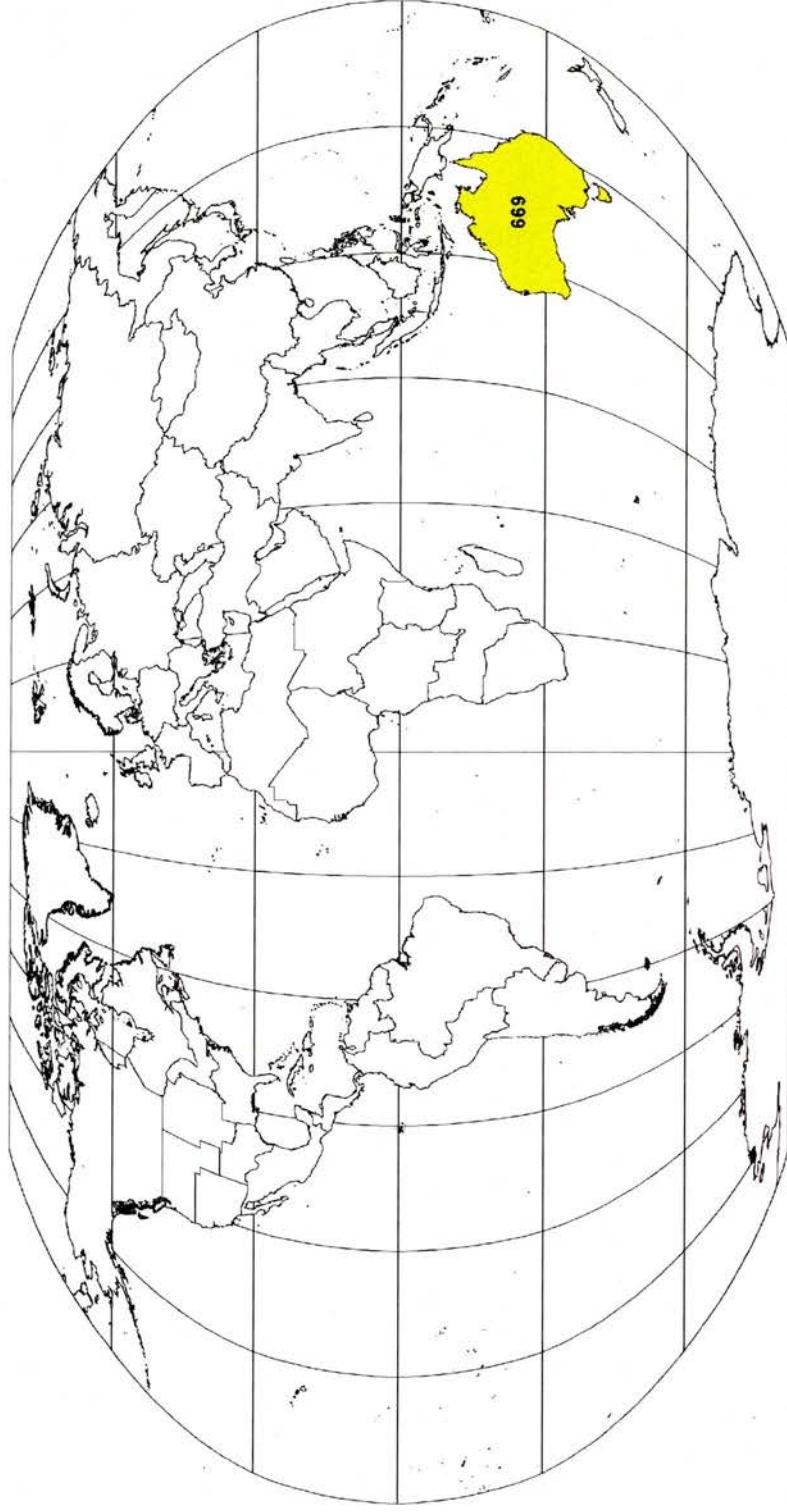


Element 122 **72 genera**
Australasia and the Pacific



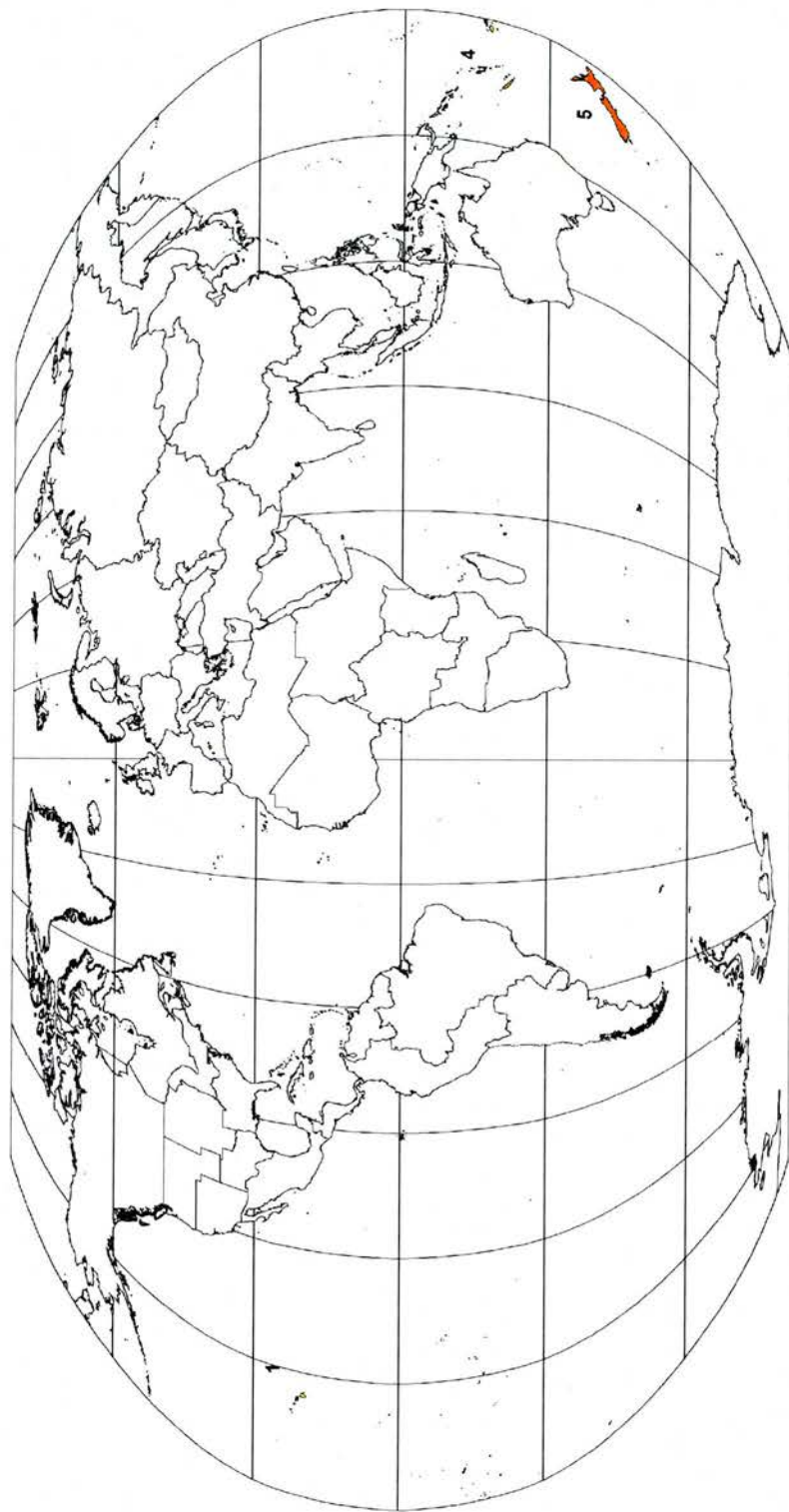
Element 123 **669 genera**

Endemic to Australia

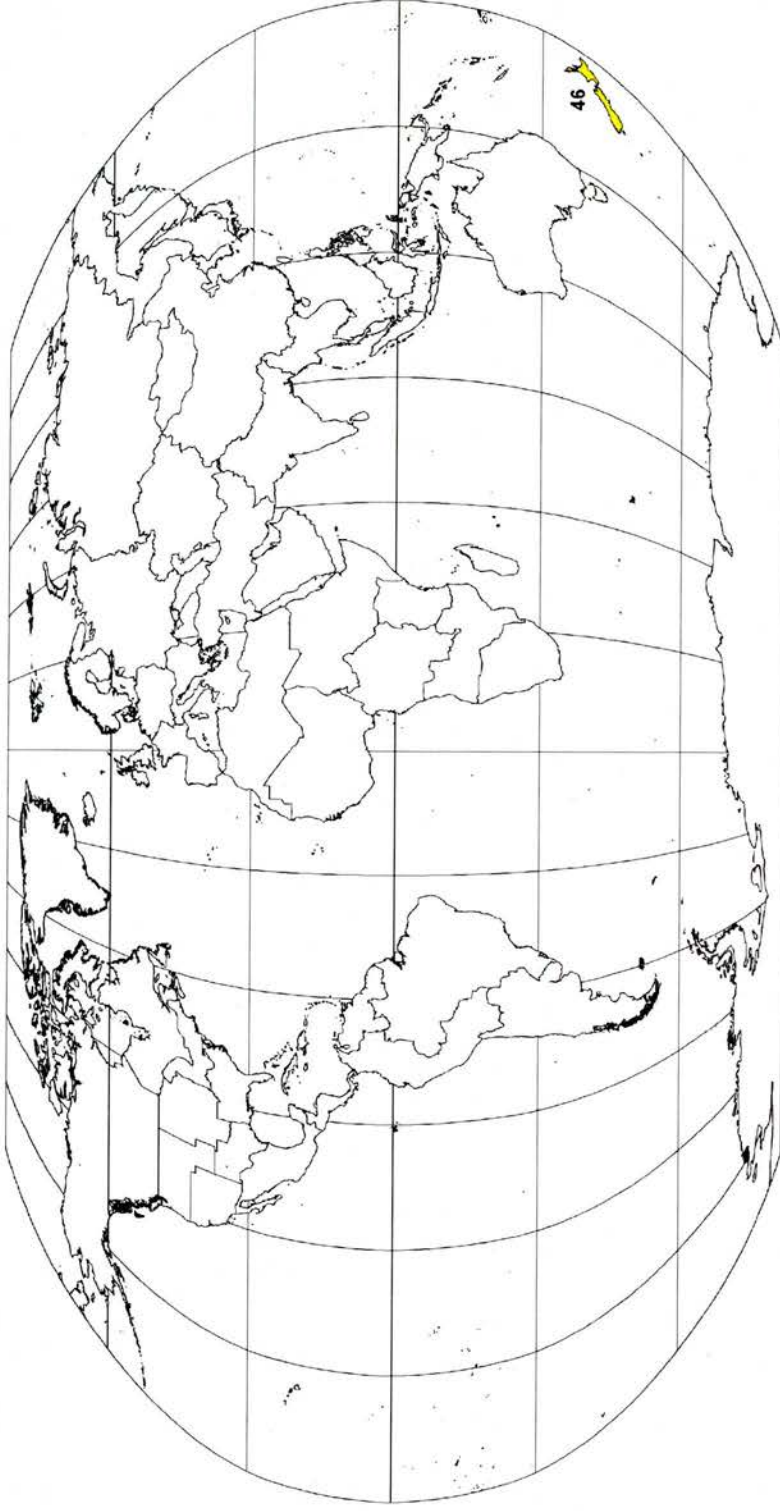


Element 124 **5 genera**

SW. Pacific and New Zealand; 1 also in Hawaiian Islands

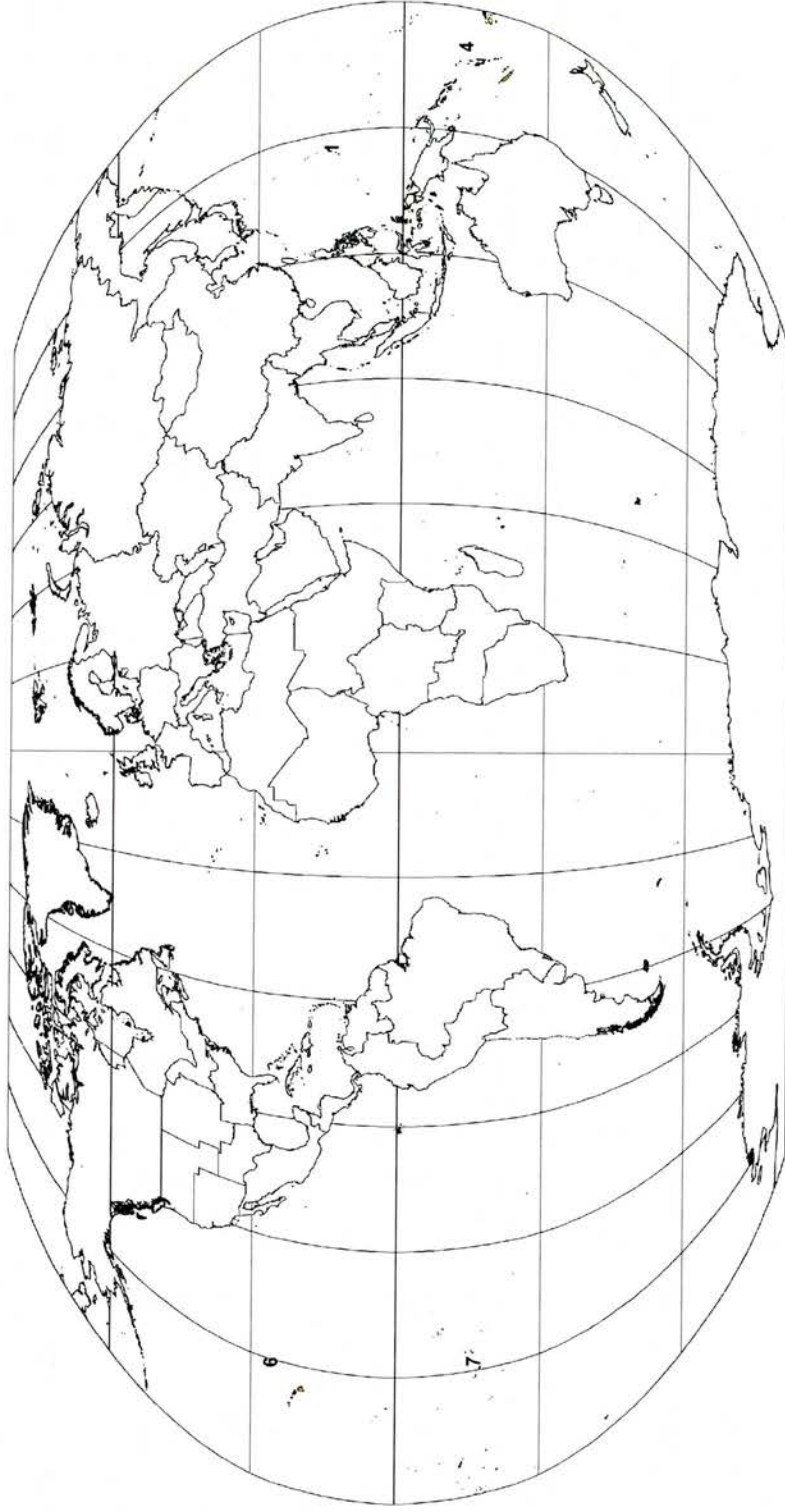


Element 125 **46 genera**
Endemic to New Zealand

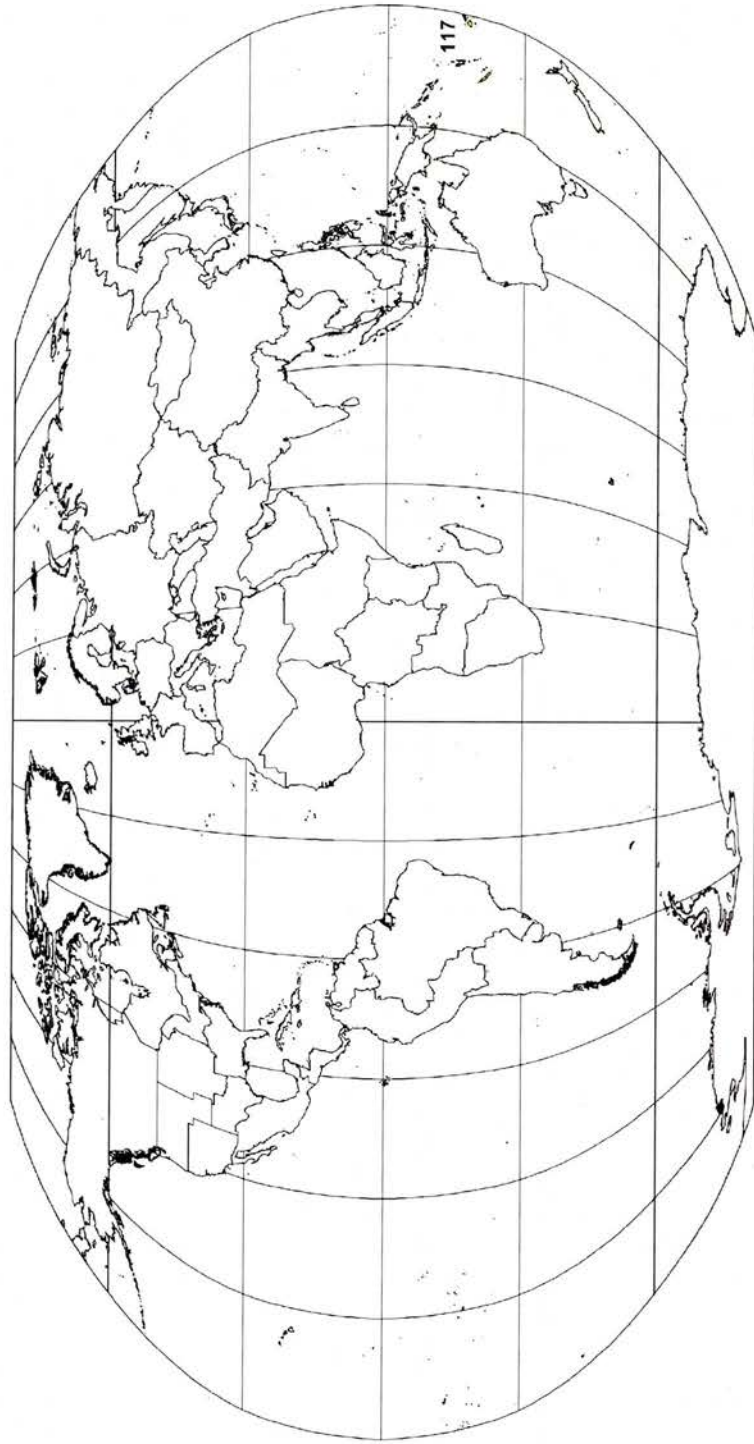


Element 126 **8 genera**

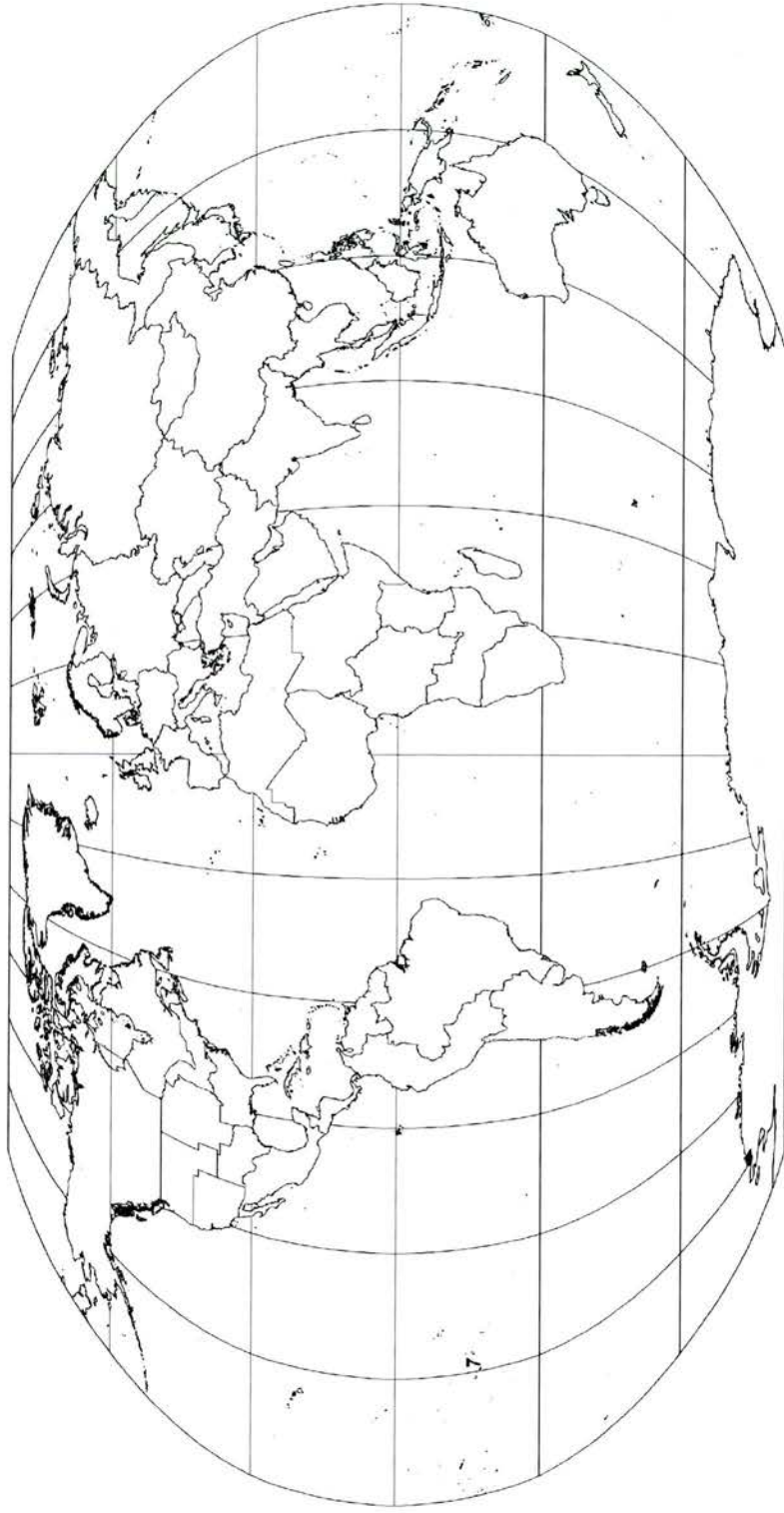
Islands of the Pacific



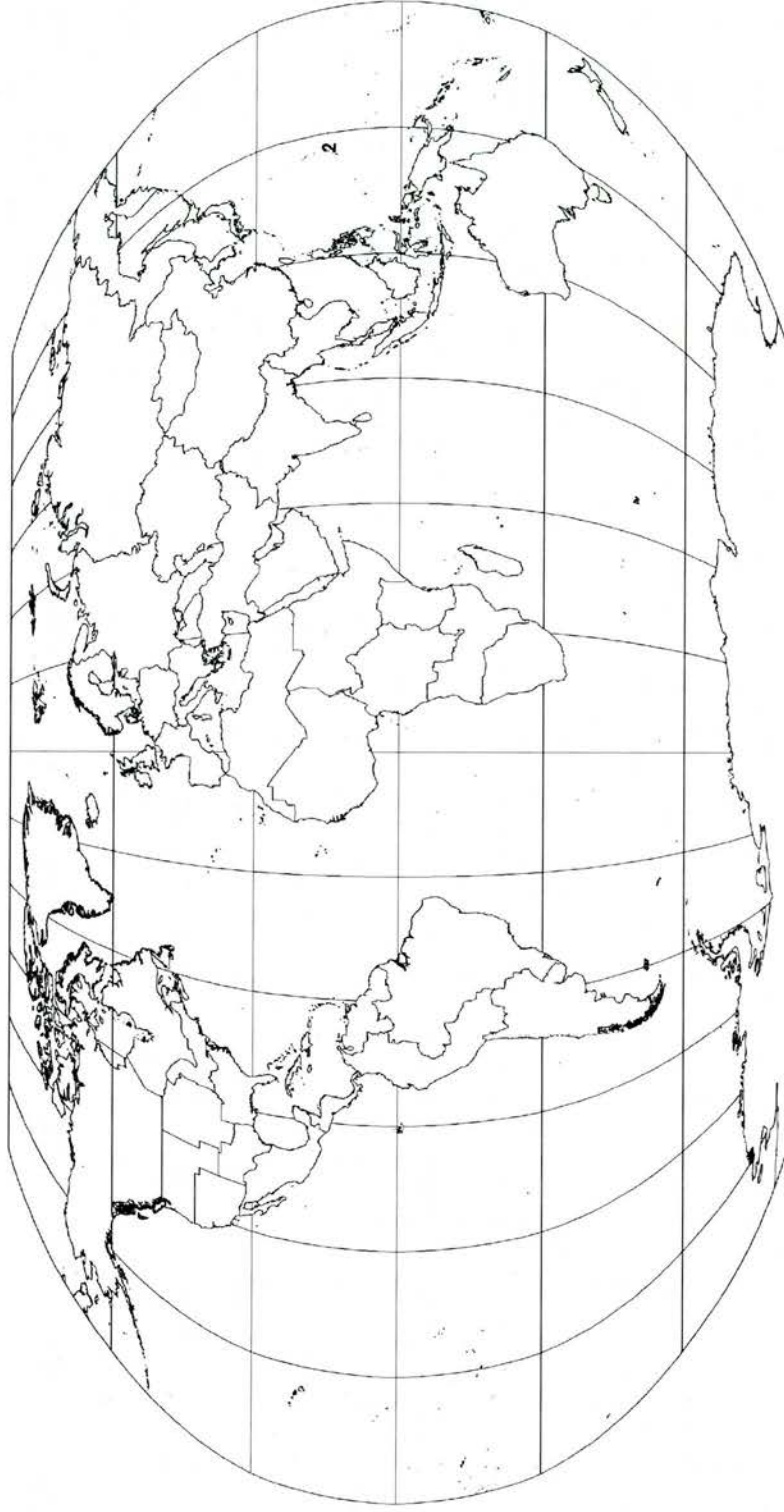
Element 127 **117 genera**
Endemic to Southwestern Pacific



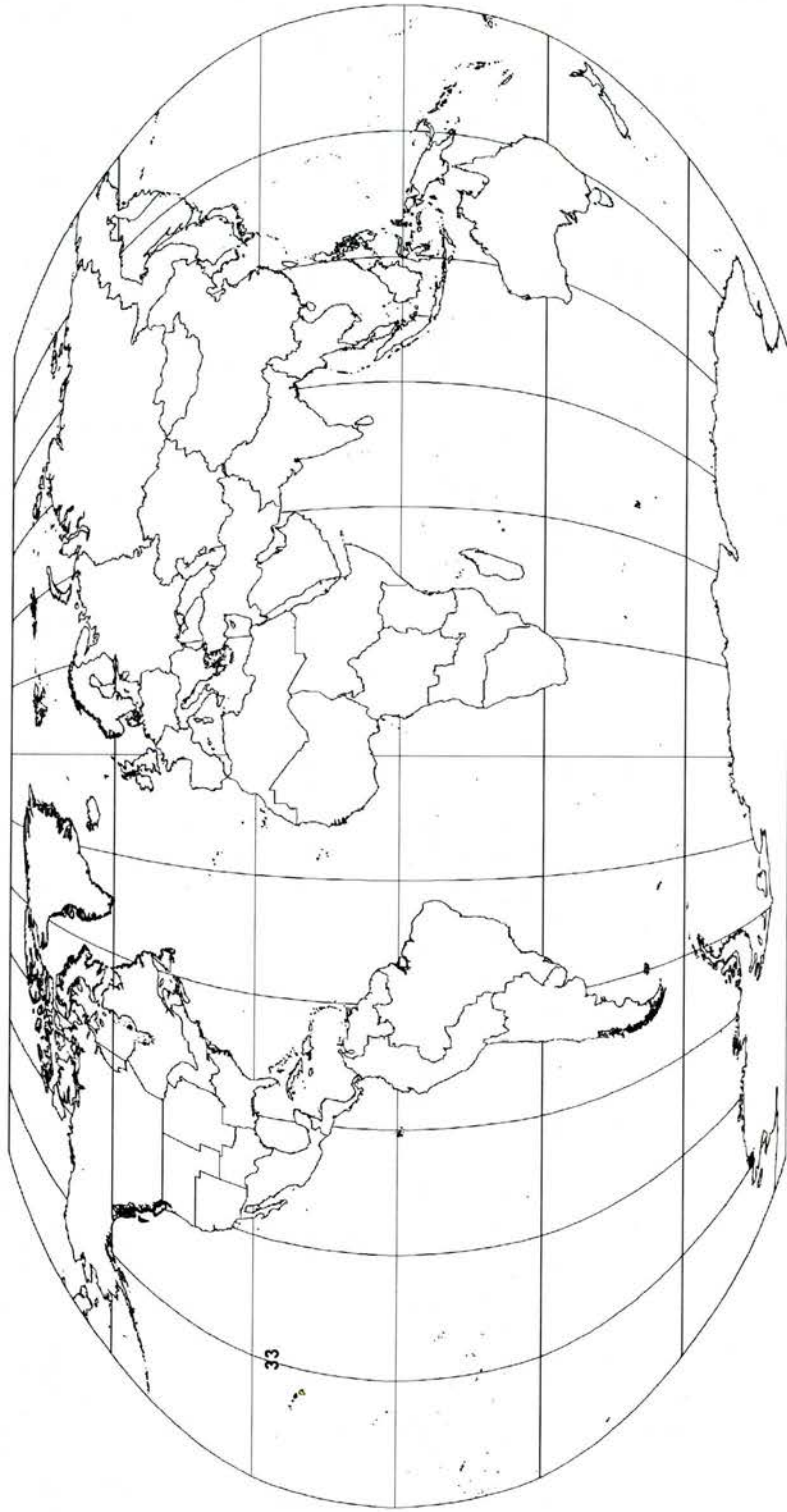
Element 128 **7 genera**
Endemic to South-Central Pacific



Element 129 **2 genera**
Endemic to Northwestern Pacific



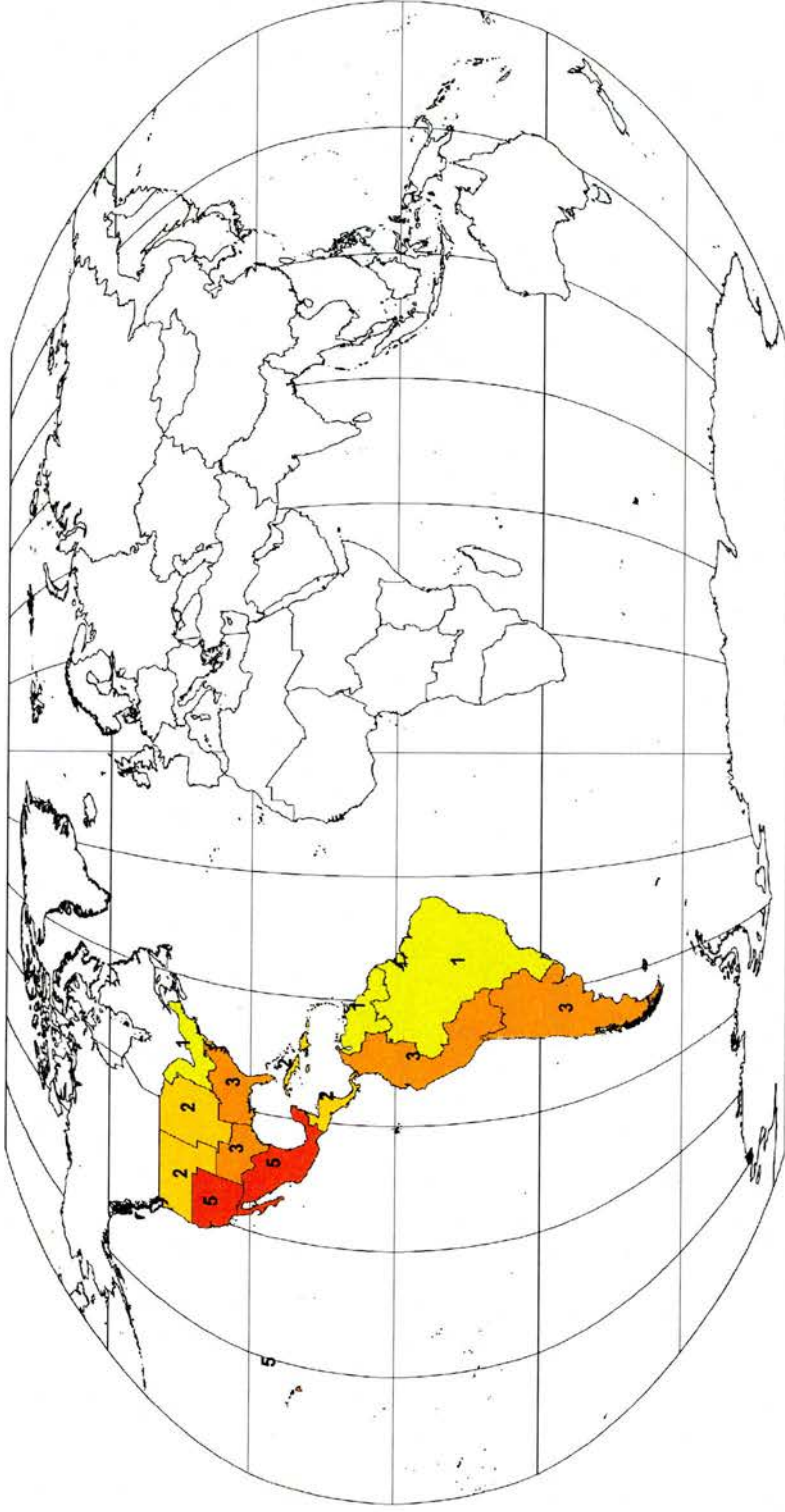
Element 130 **33 genera**
Endemic to North-Central Pacific



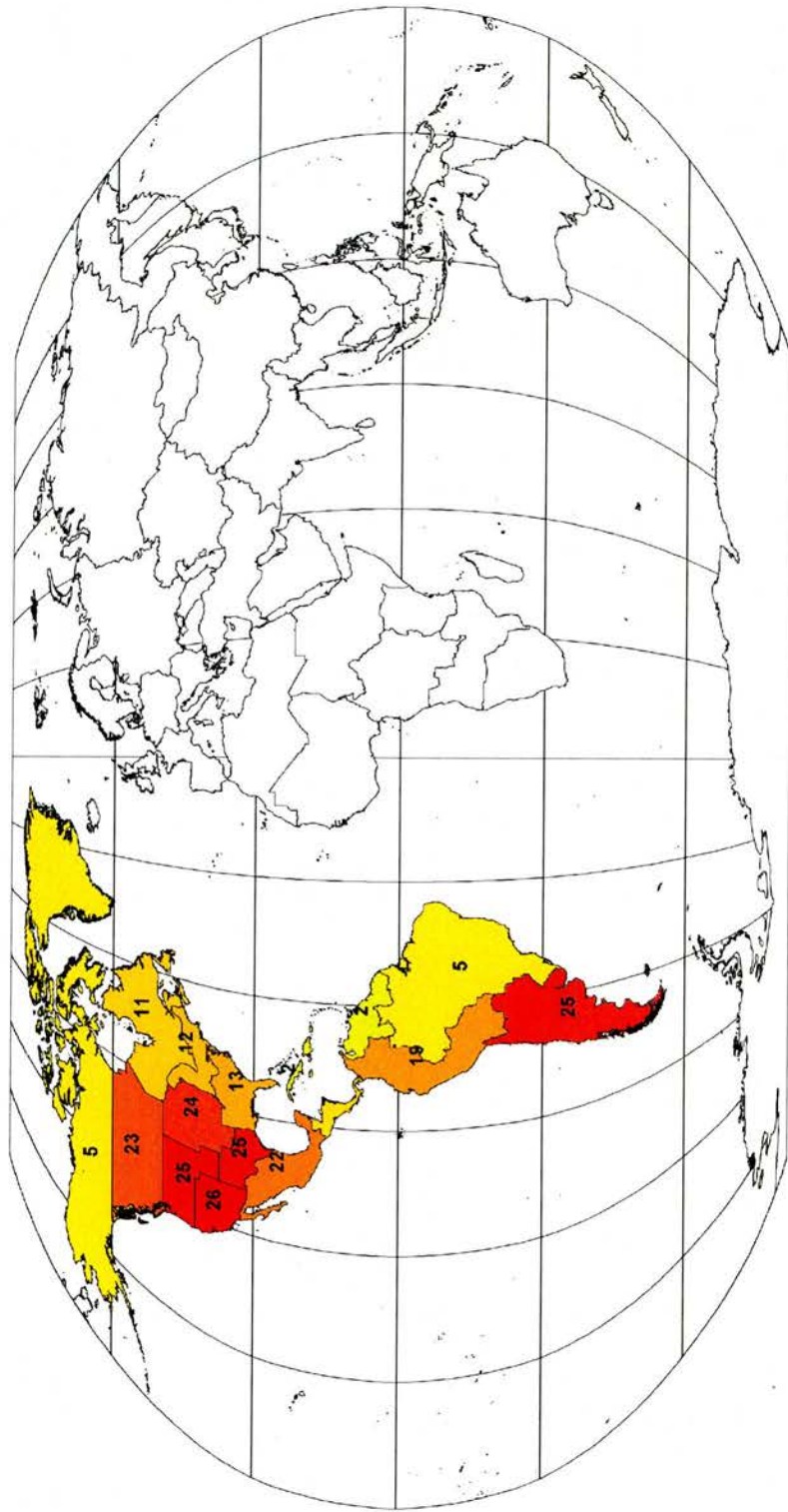
Element 131

5 genera

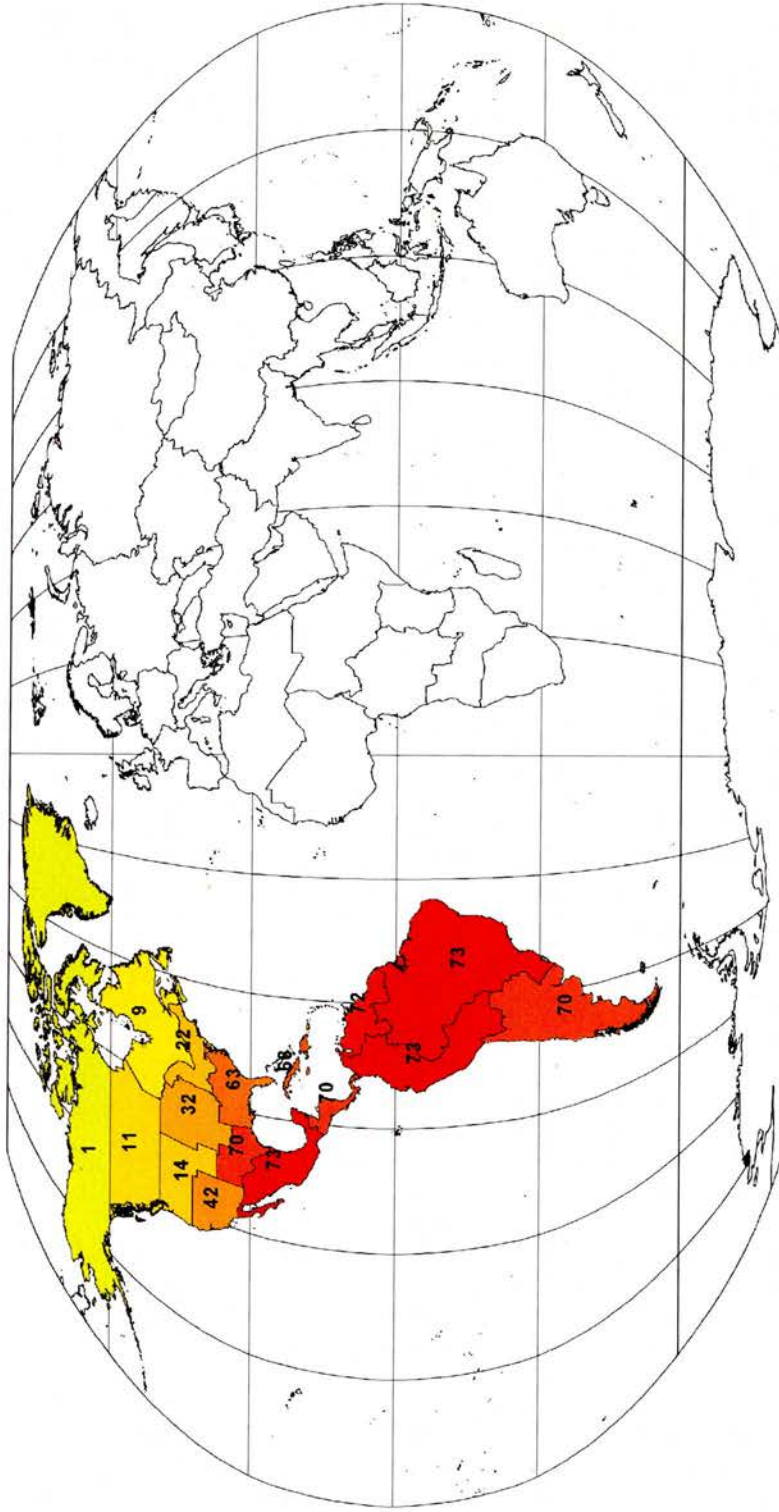
Hawaiian Islands; U.S.A. south to southern South America



Element 132 **27 genera**
Widespread through North and South America



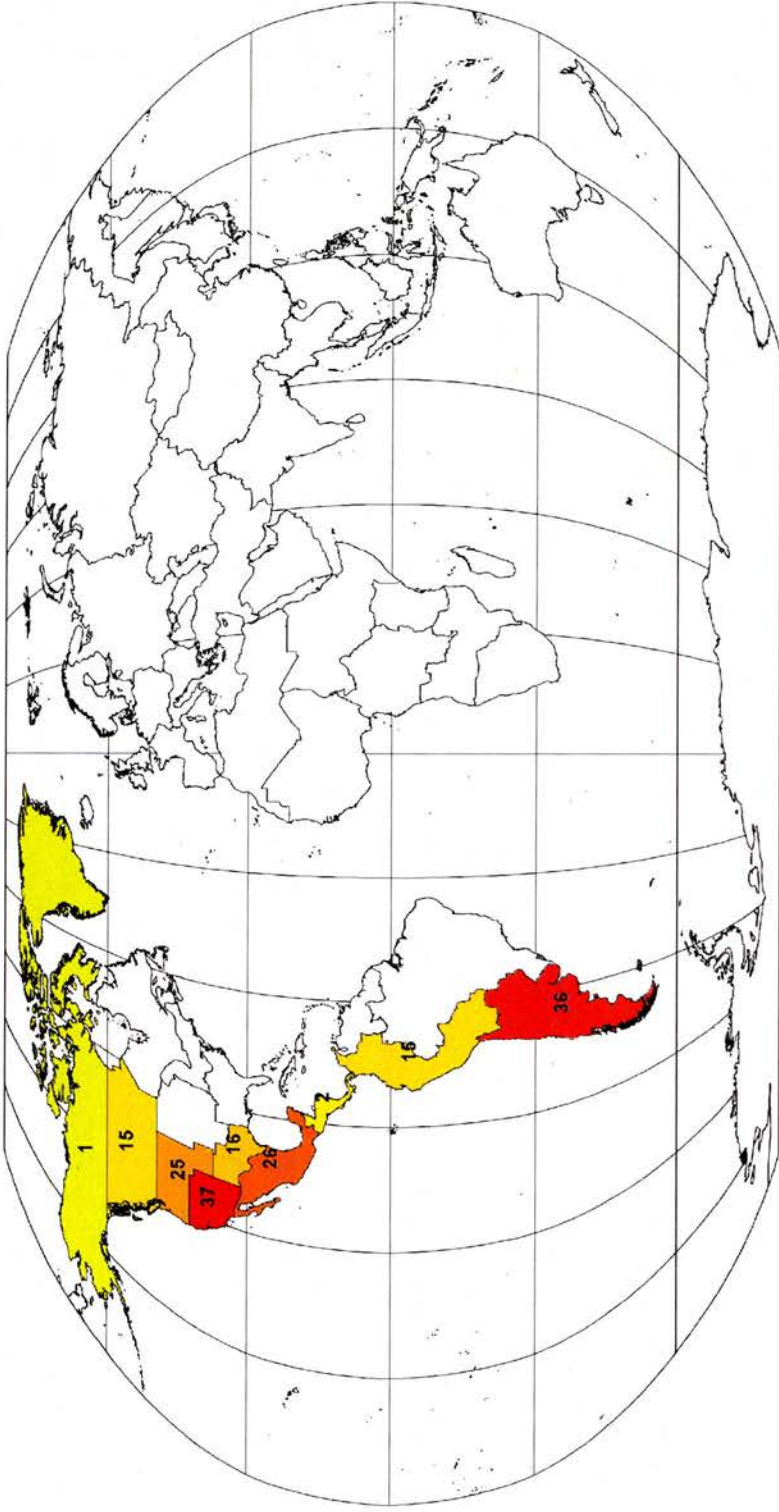
Element 133 **73 genera**
Temperate and tropical North and South America



Element 134

38 genera

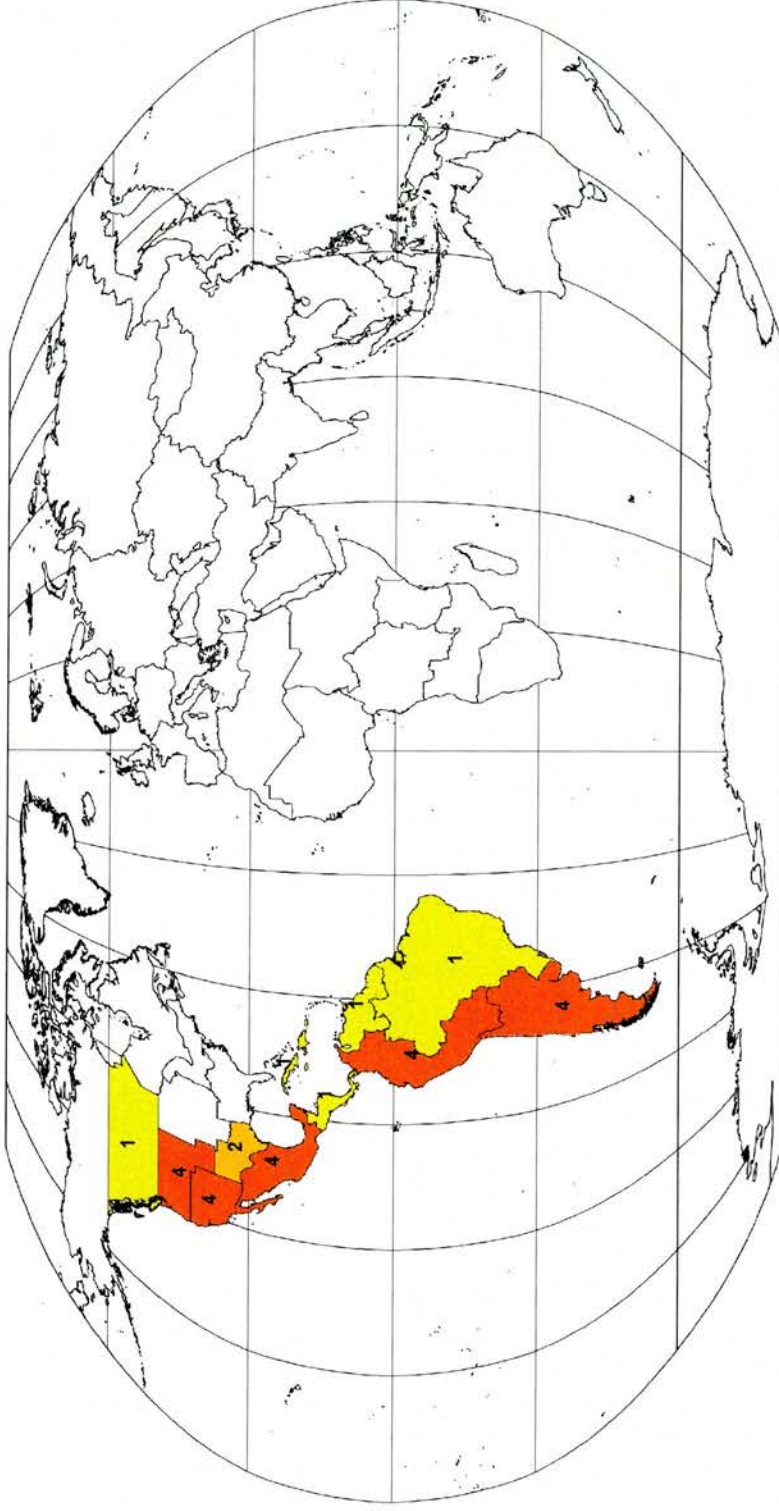
Western North America to Western and Southern South America



Element 135

4 genera

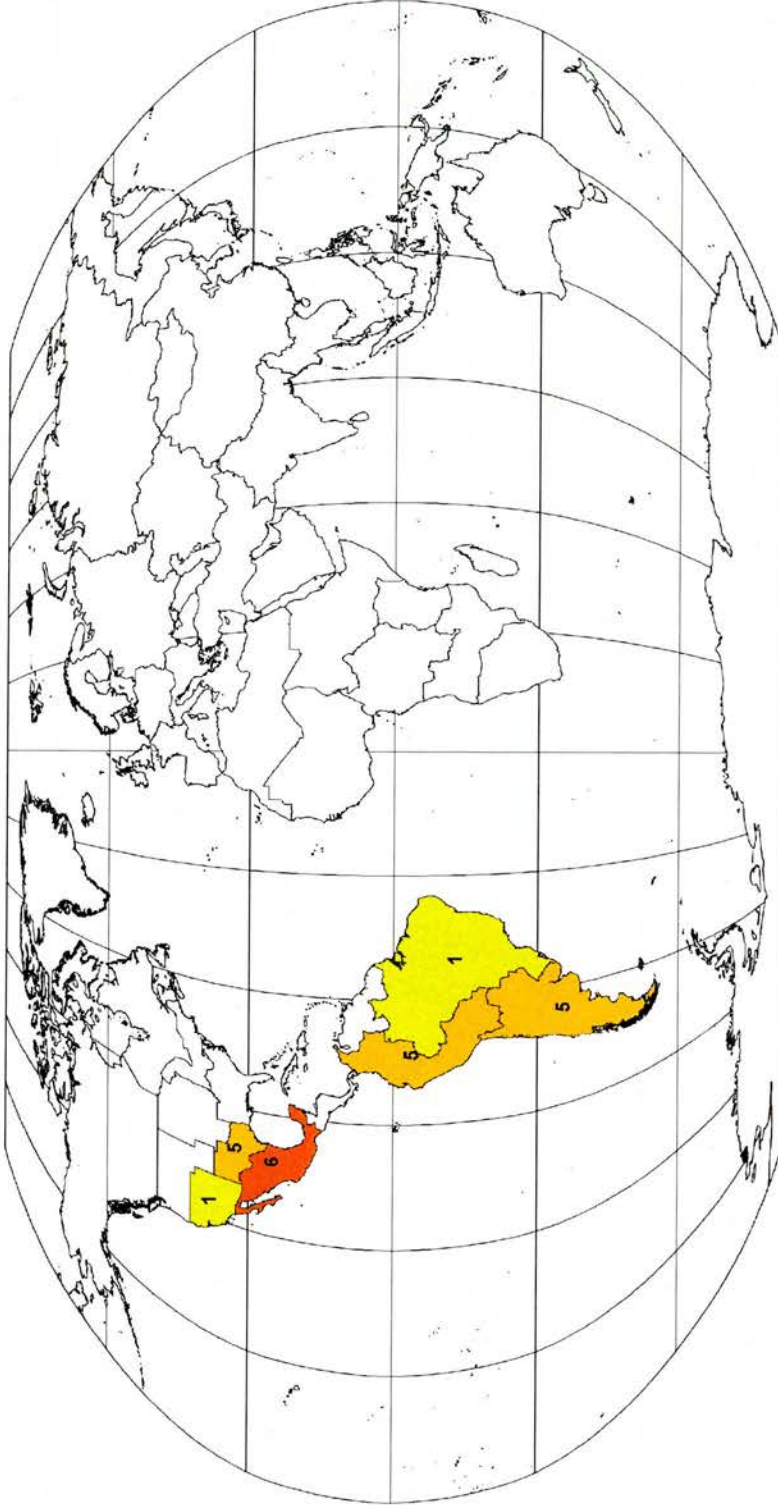
Scattered through western North and South America



Element 136

6 genera

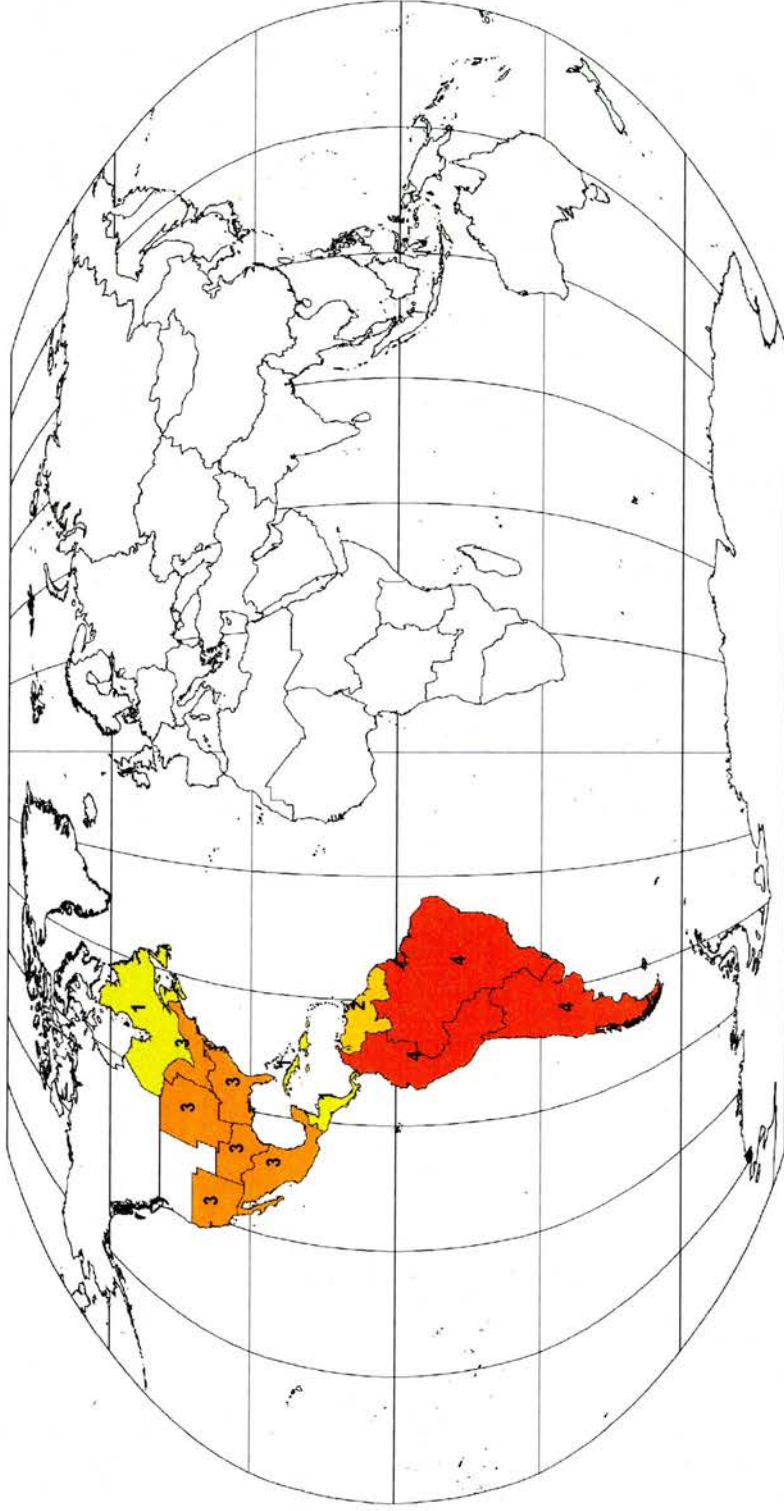
Southern U.S.A. and Mexico; Western and Southern South America



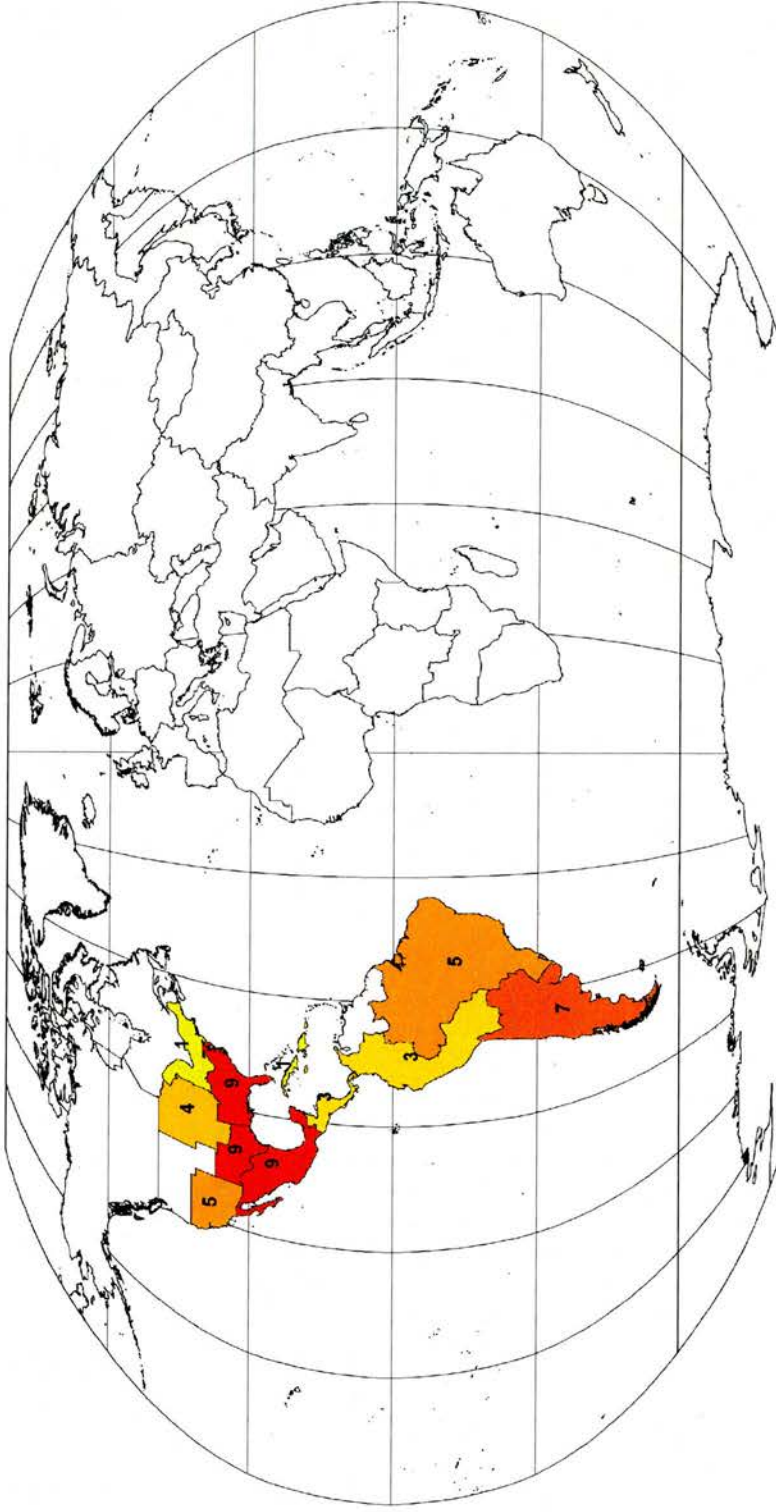
Element 137

4 genera

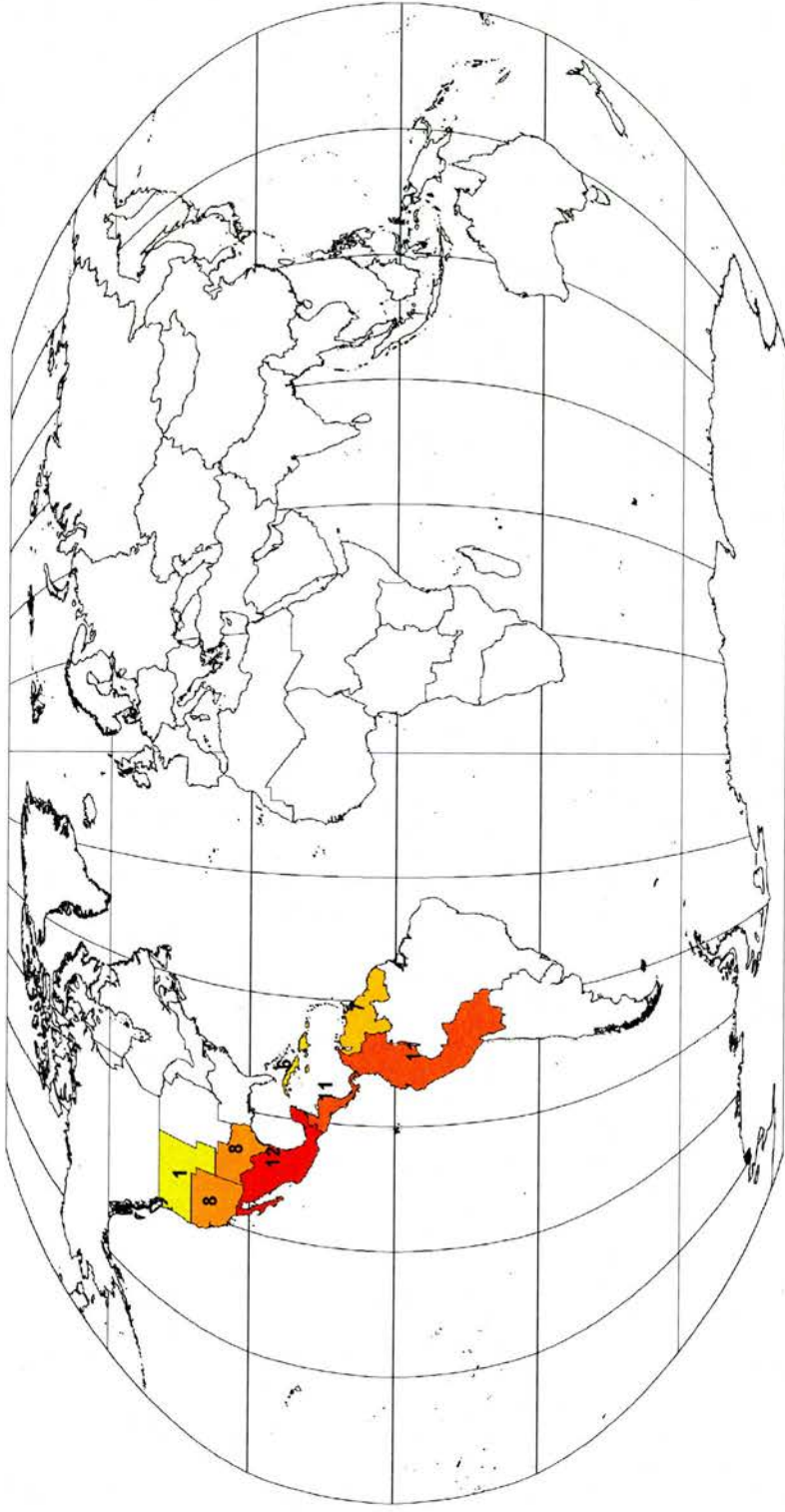
Eastern North America south to Southern South America



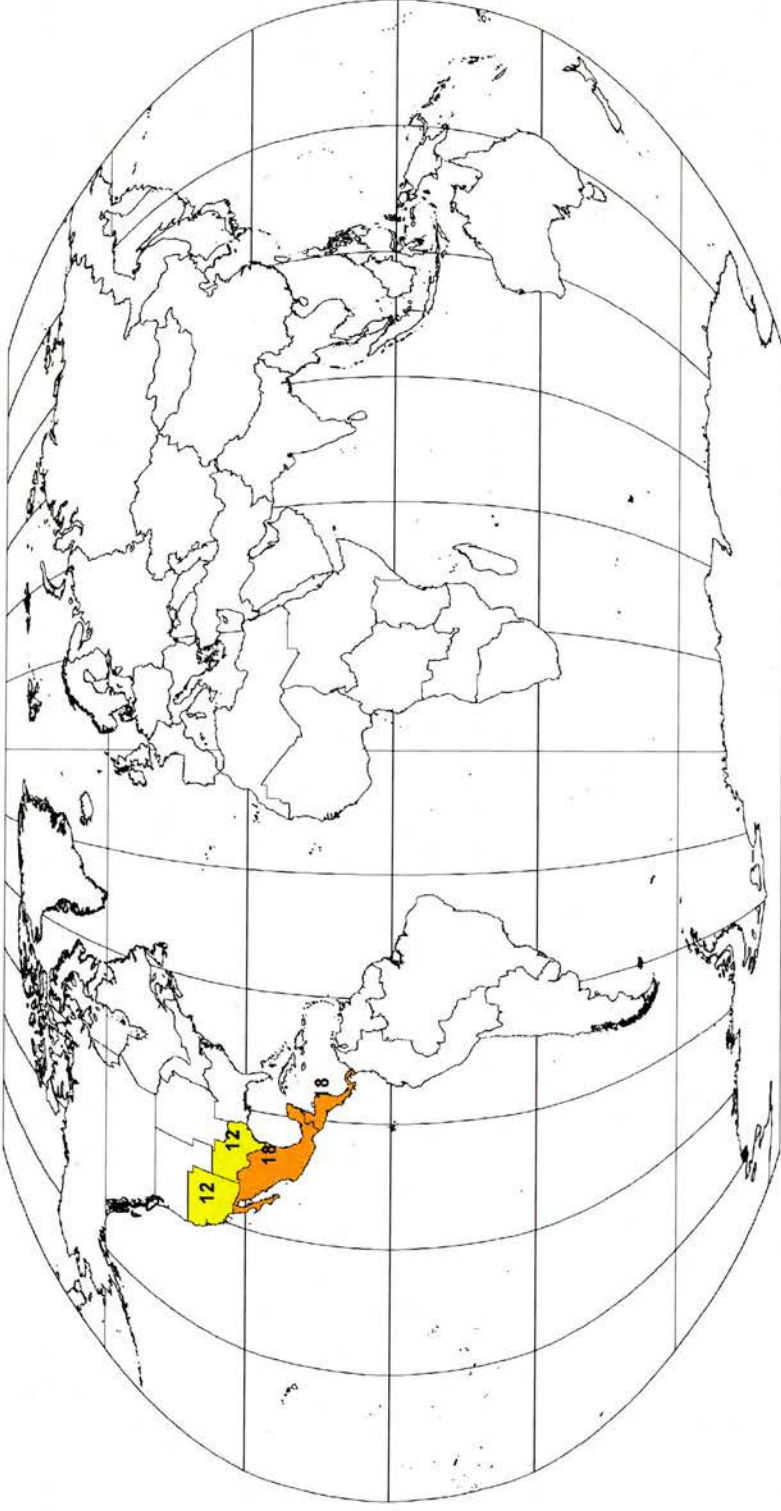
Element 138 **10 genera**
U.S.A. south to Southern South America



Element 139 **12 genera**
Western U.S.A. to Western South America



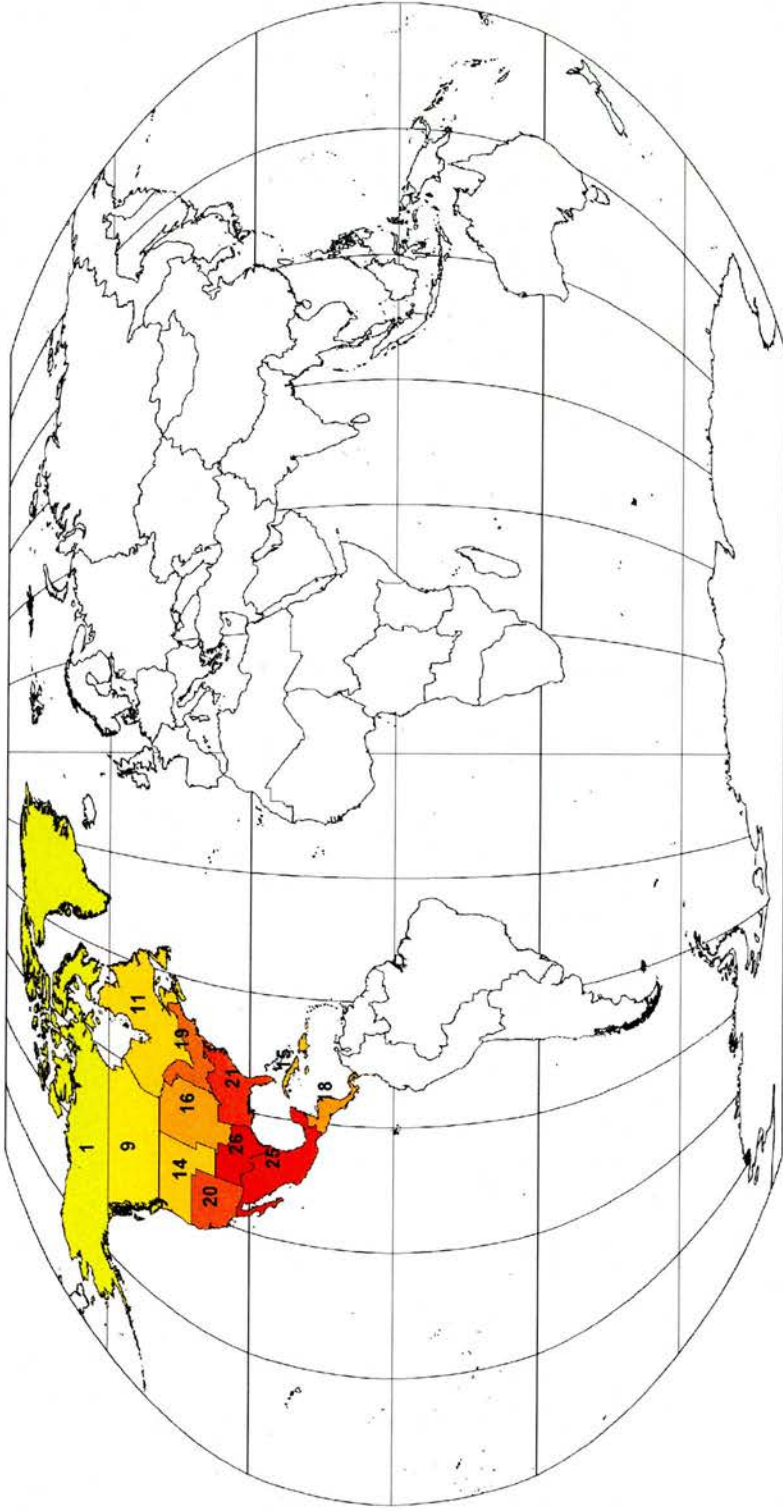
Element 140 18 genera
SW. U.S.A. to Central America



Element 141

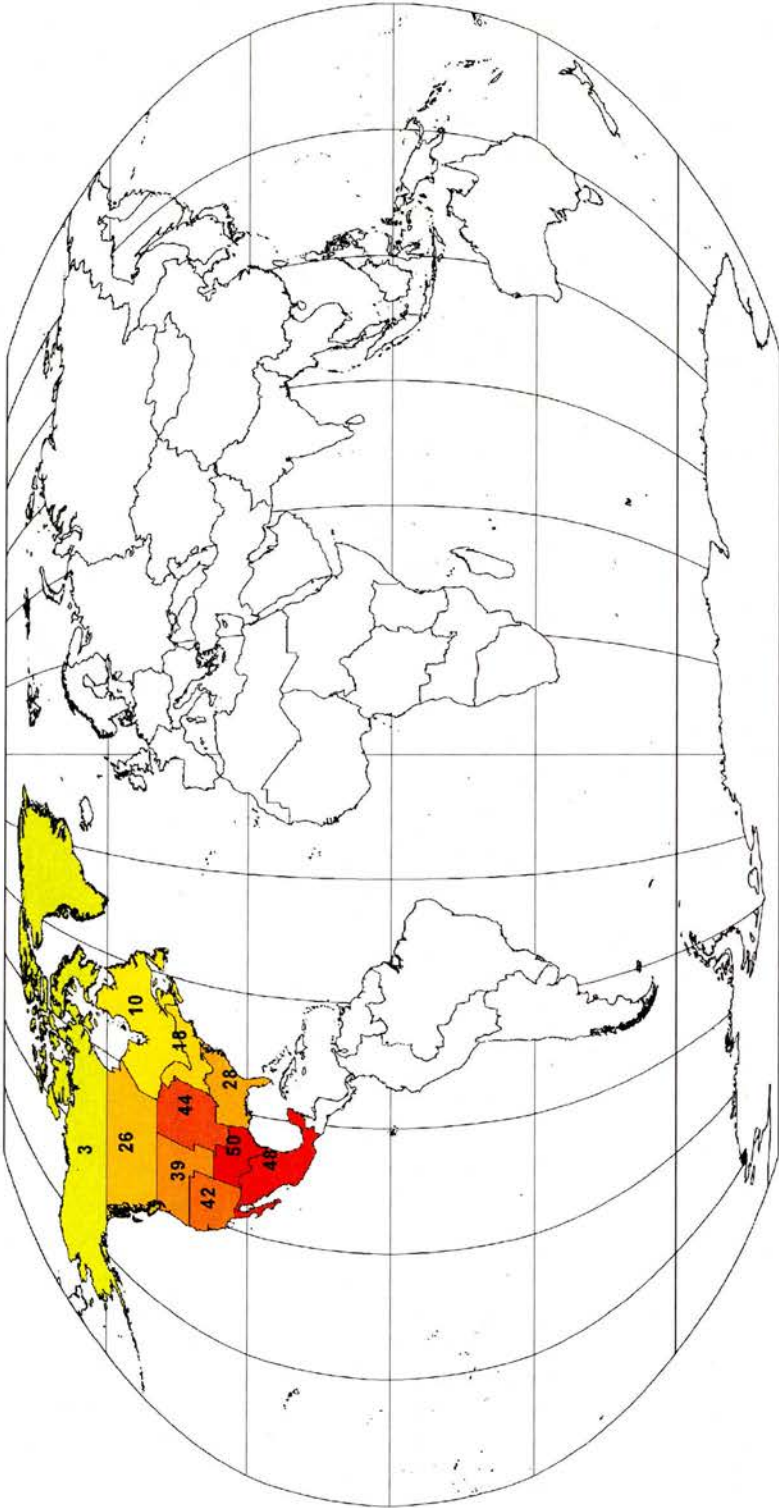
29 genera

North America south to Central America and Caribbean



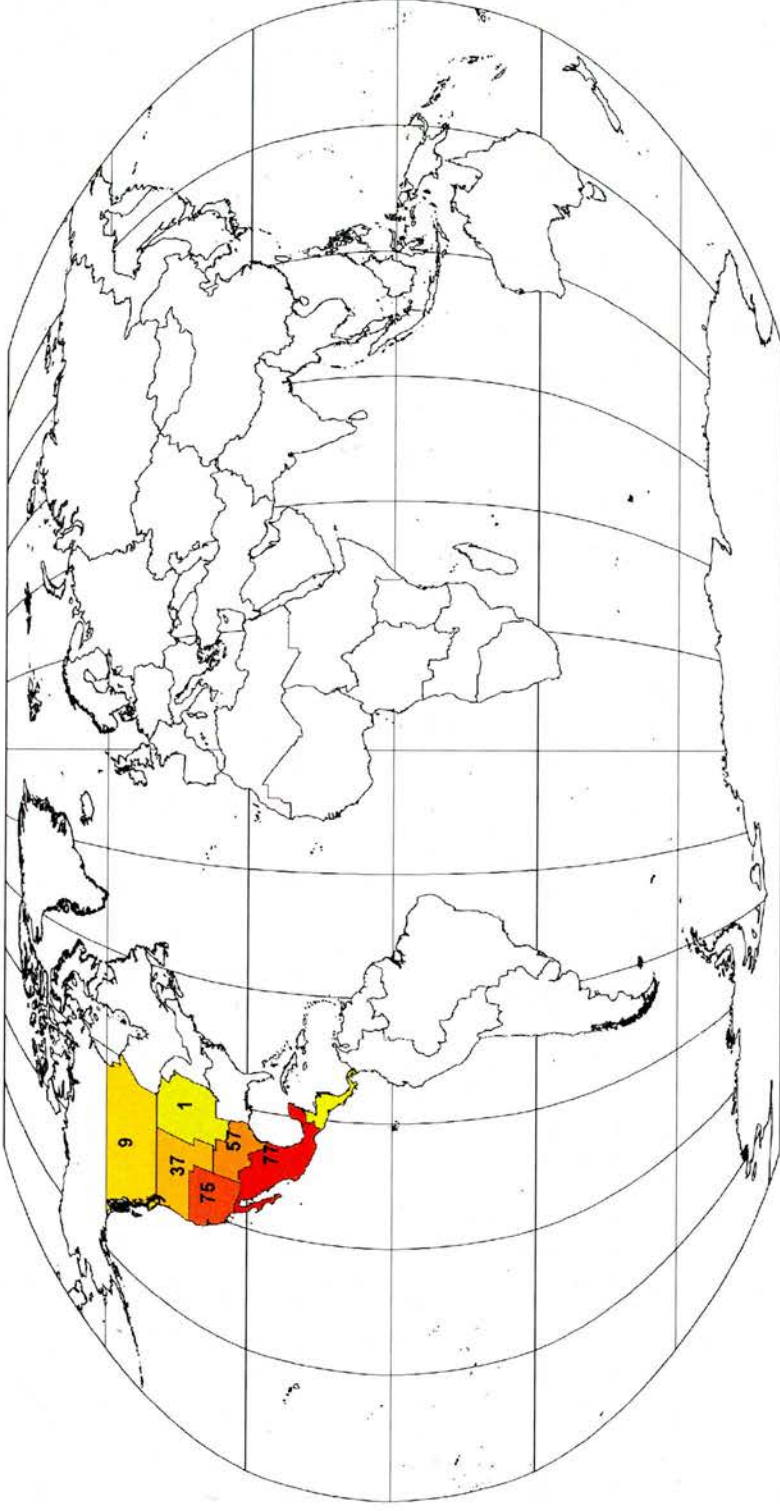
Element 142 **50 genera**

North America south to Mexico

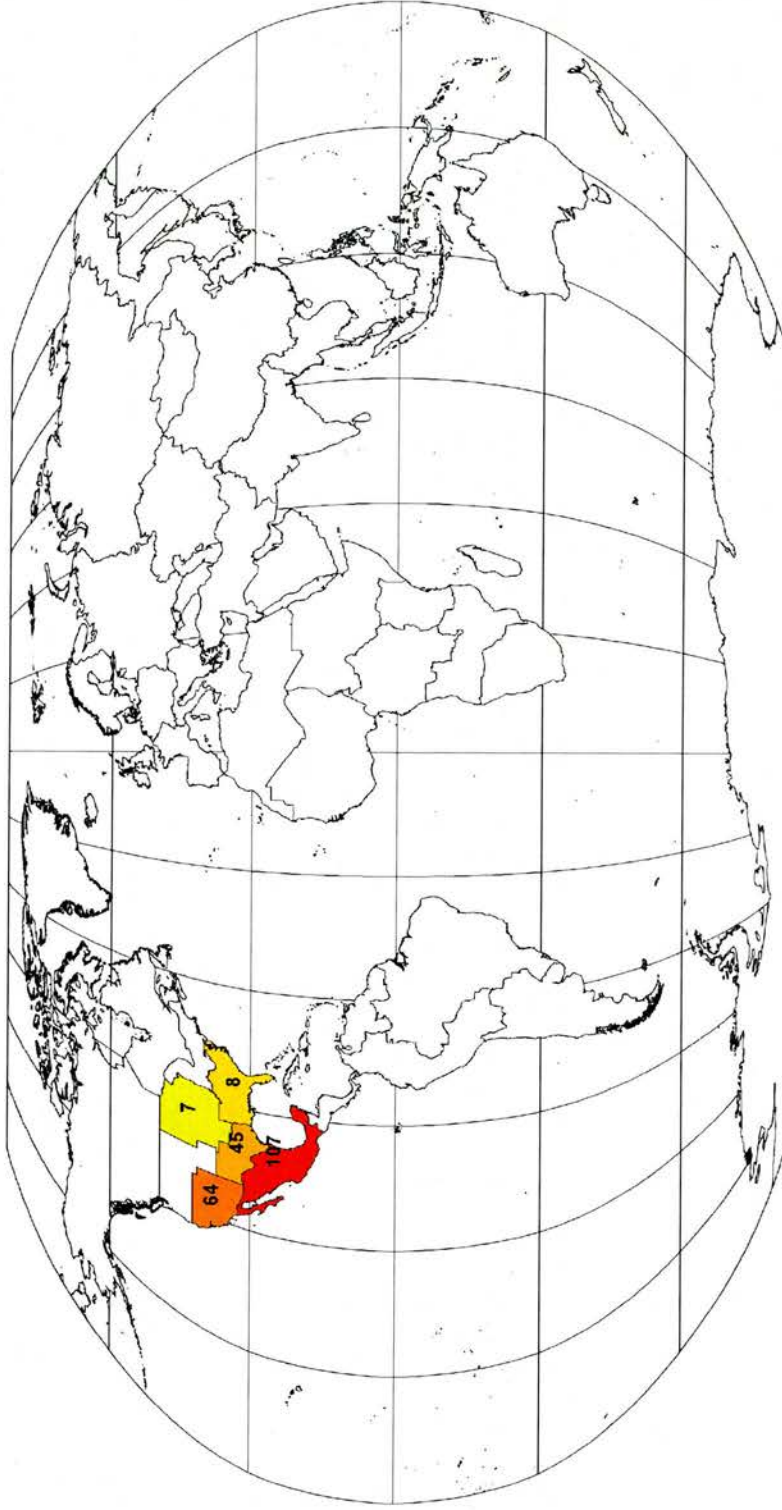


Element 143 **77 genera**

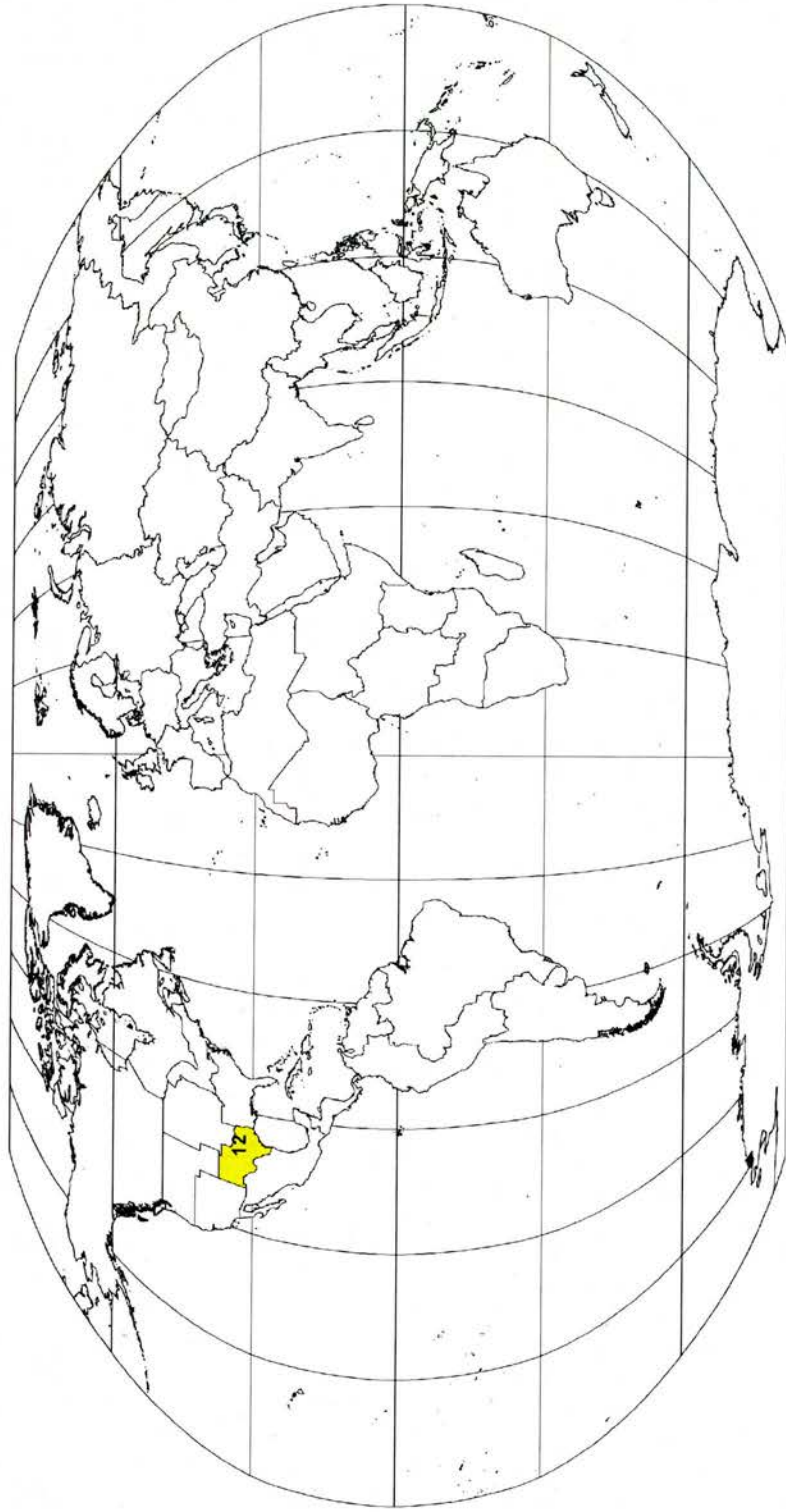
Western North America and Mexico, extending into Central America



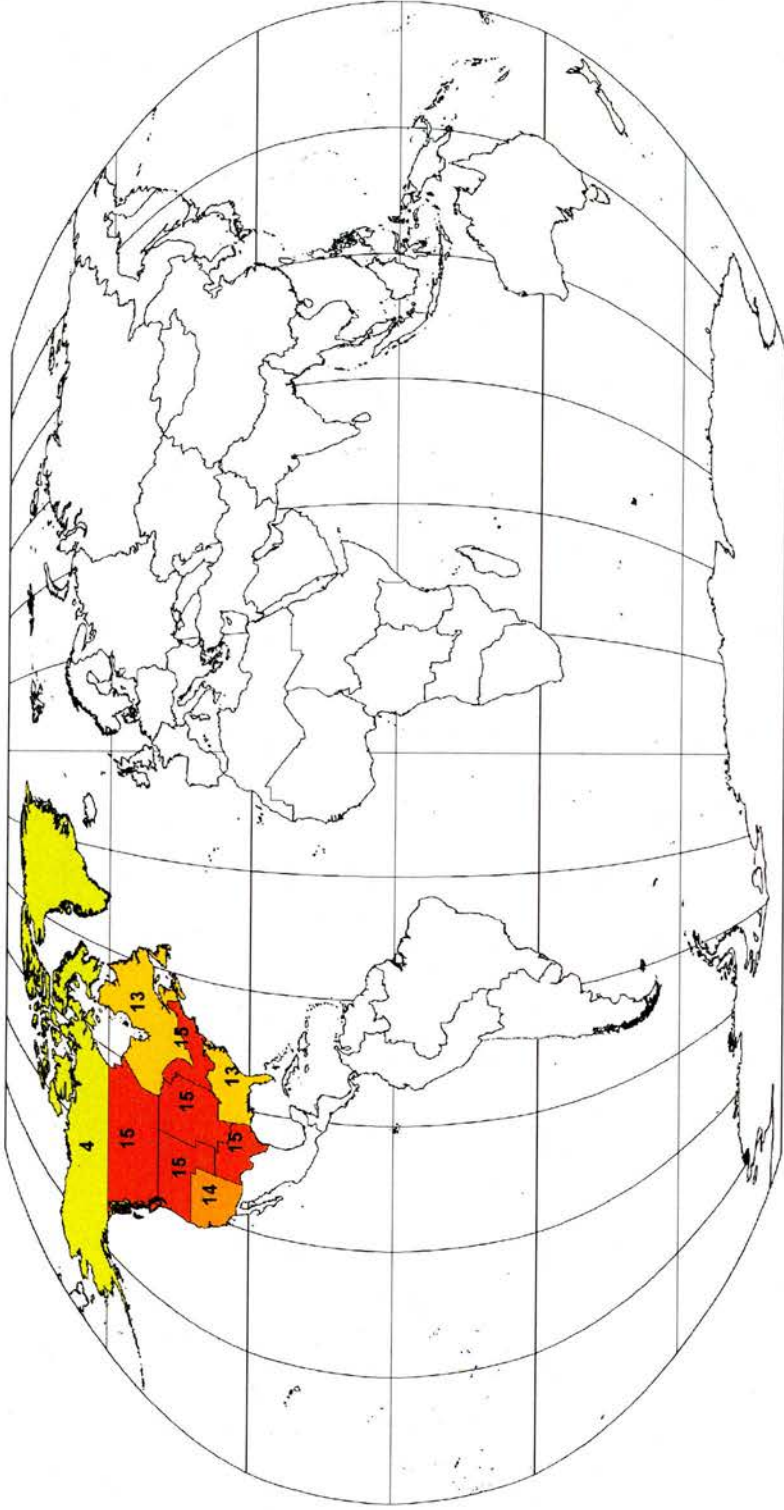
Element 144 **107 genera**
Southern U.S.A. and Mexico



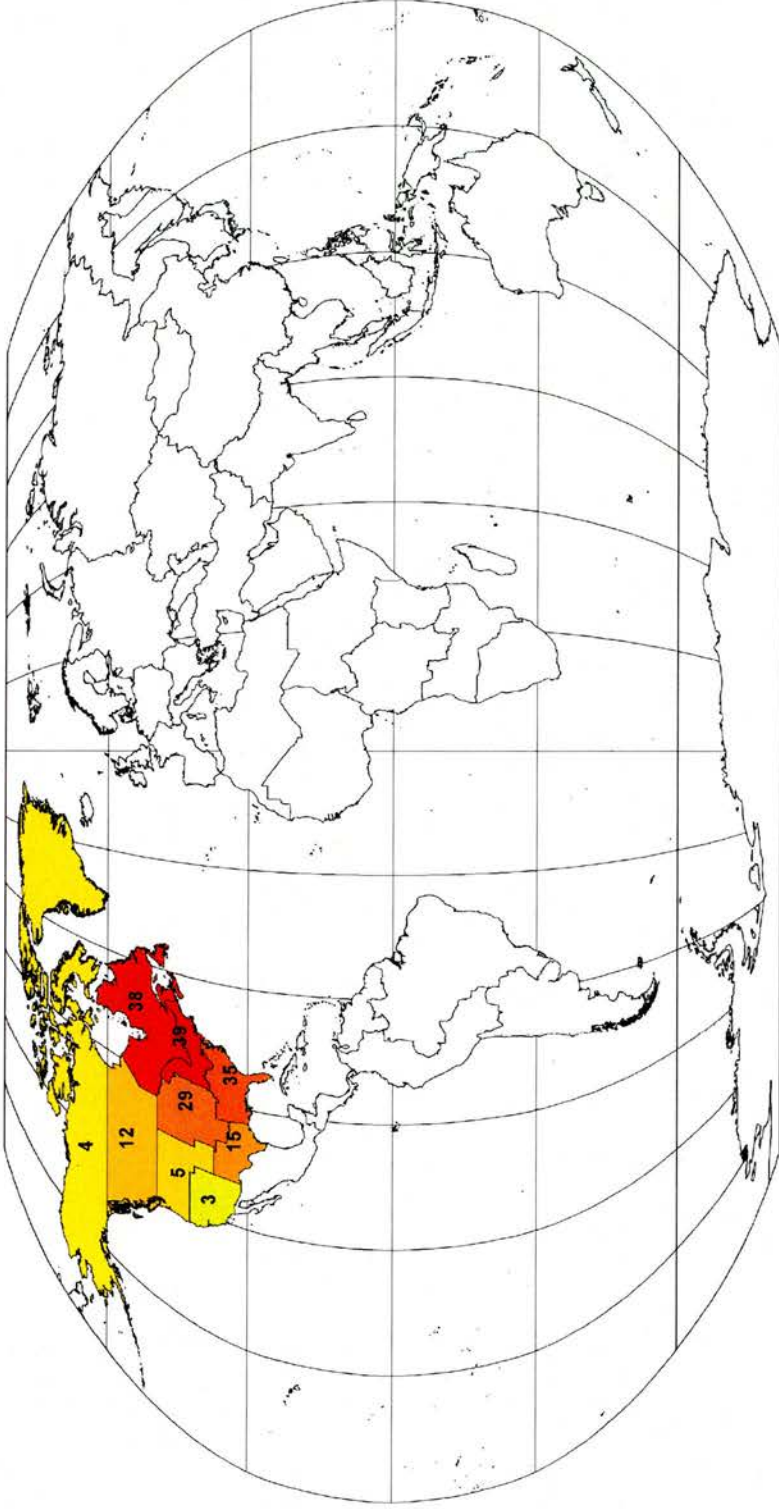
Element 145 **12 genera**
Endemic to South-Central U.S.A.



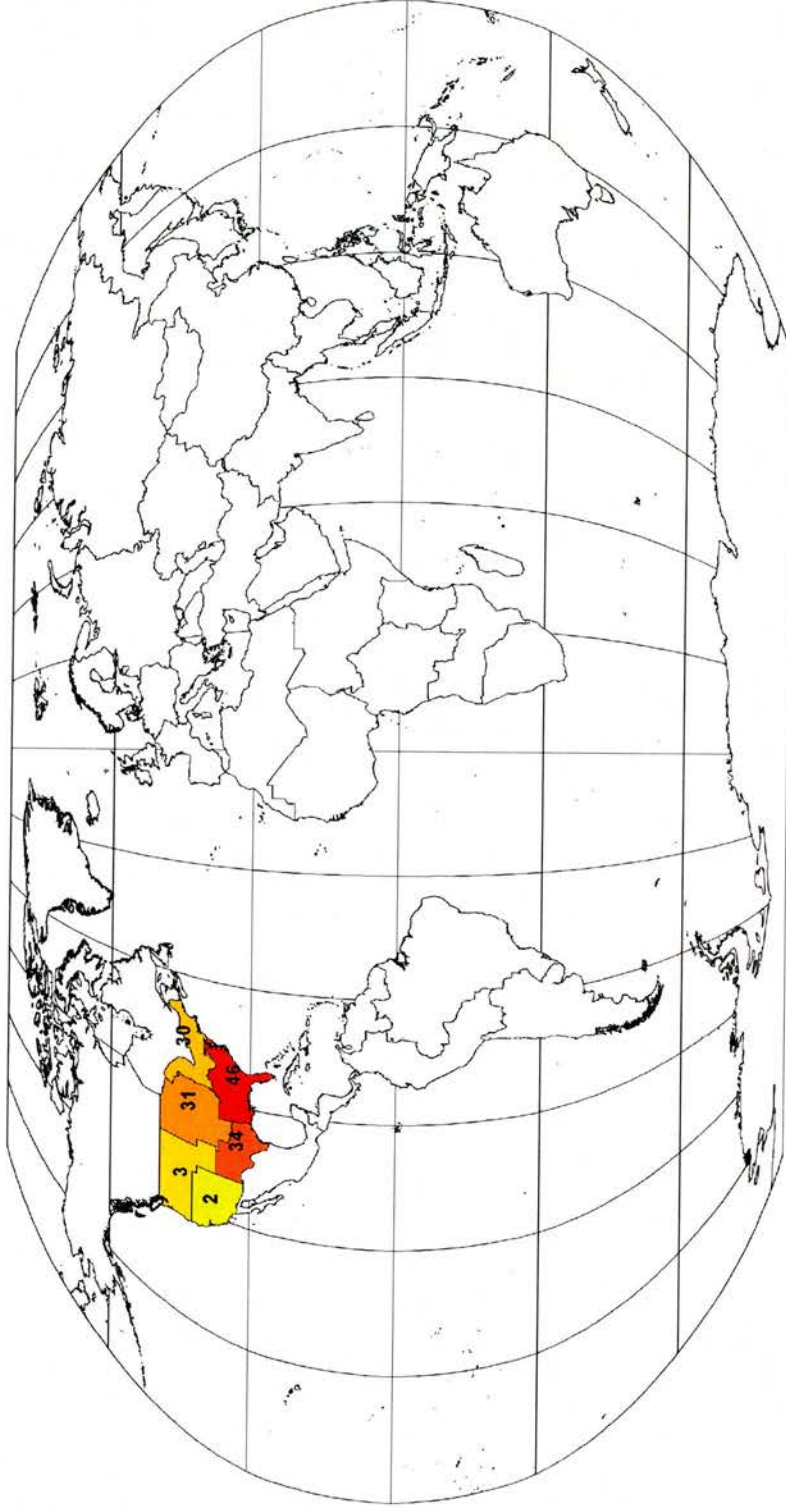
Element 146 **15 genera**
Widespread through North America



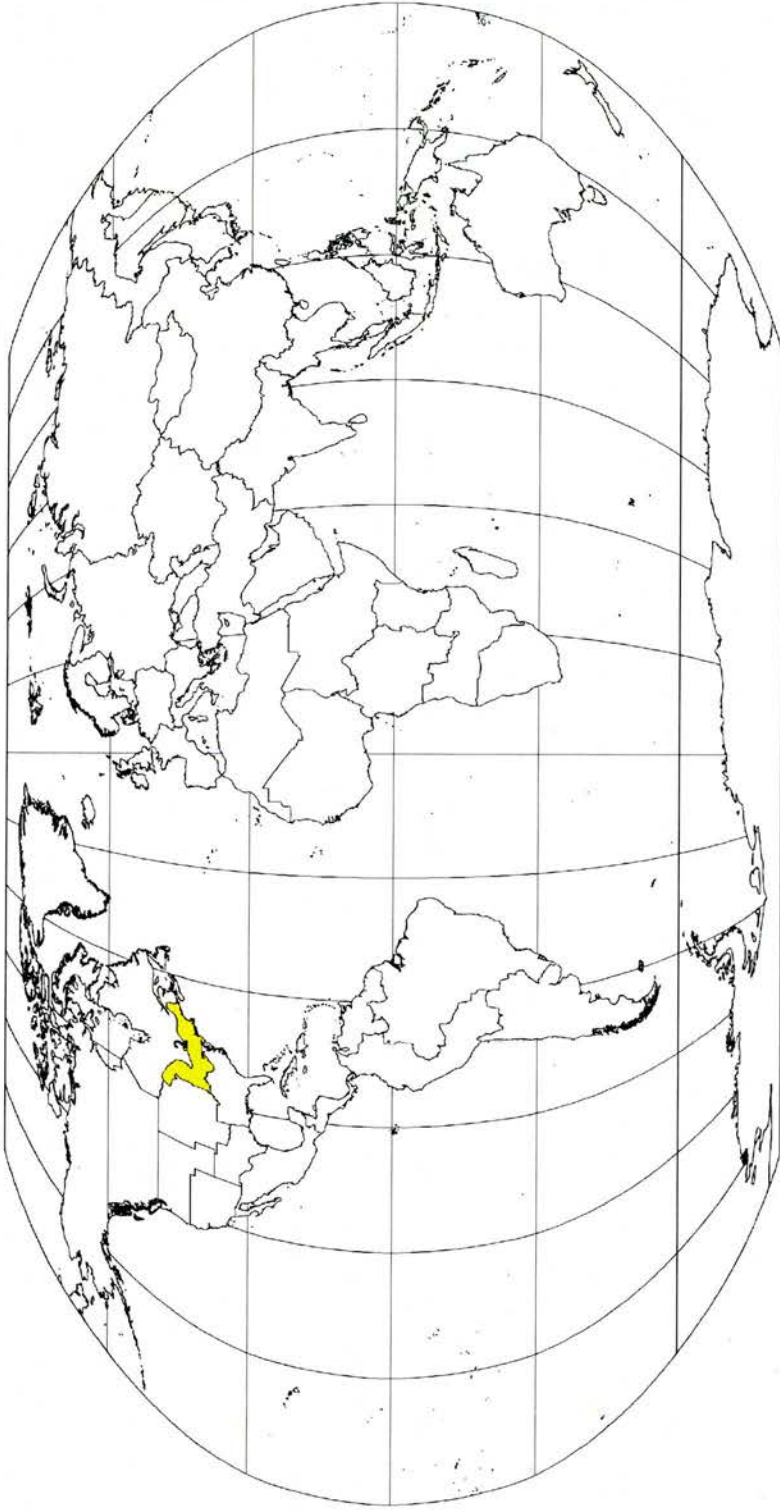
Element 147 **39 genera**
Central and Eastern North America



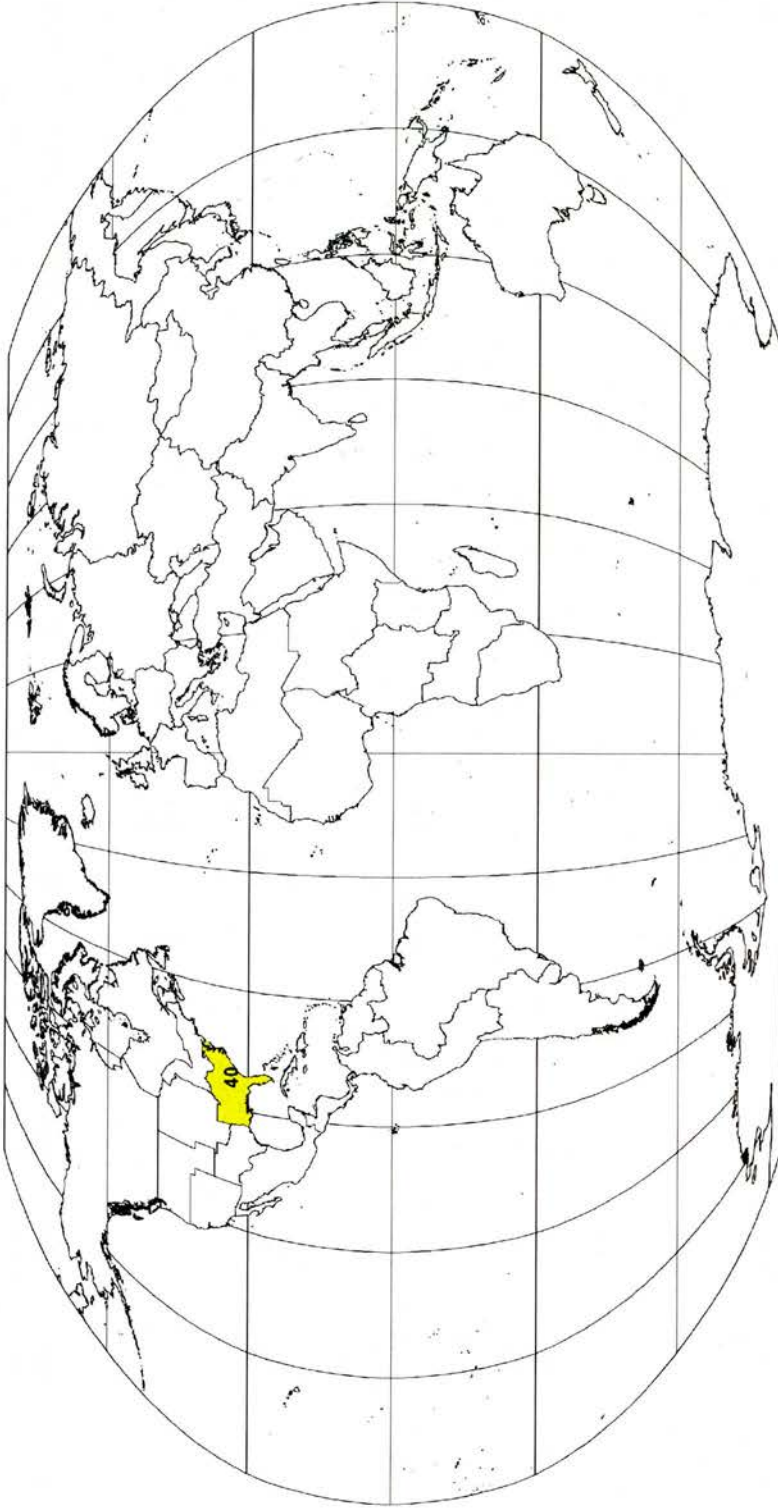
Element 148 **53 genera**
Central and Eastern U.S.A.



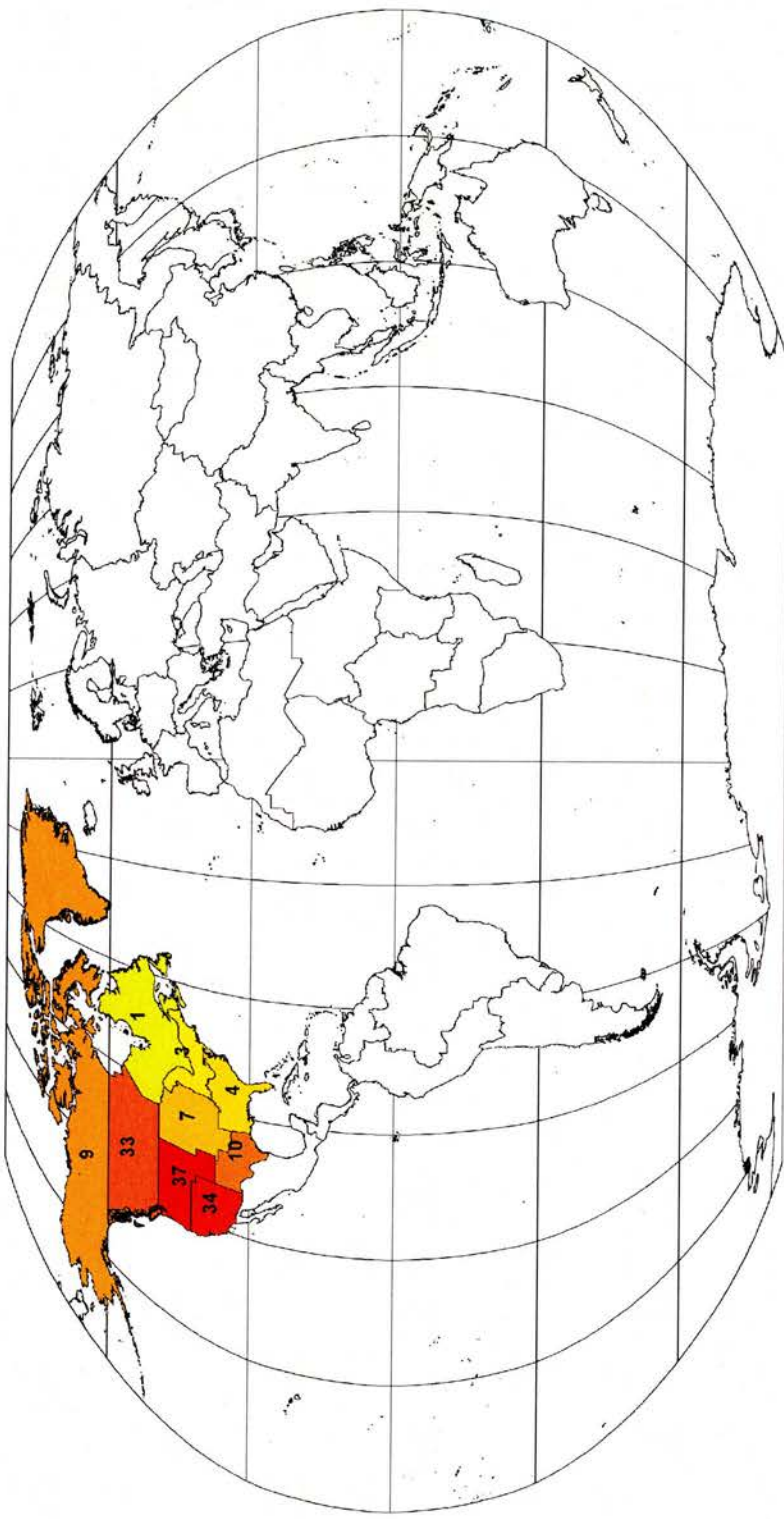
Element 149 **2 genera**
Endemic to Northeastern U.S.A.



Element 150 **40 genera**
Endemic to Southeastern U.S.A.

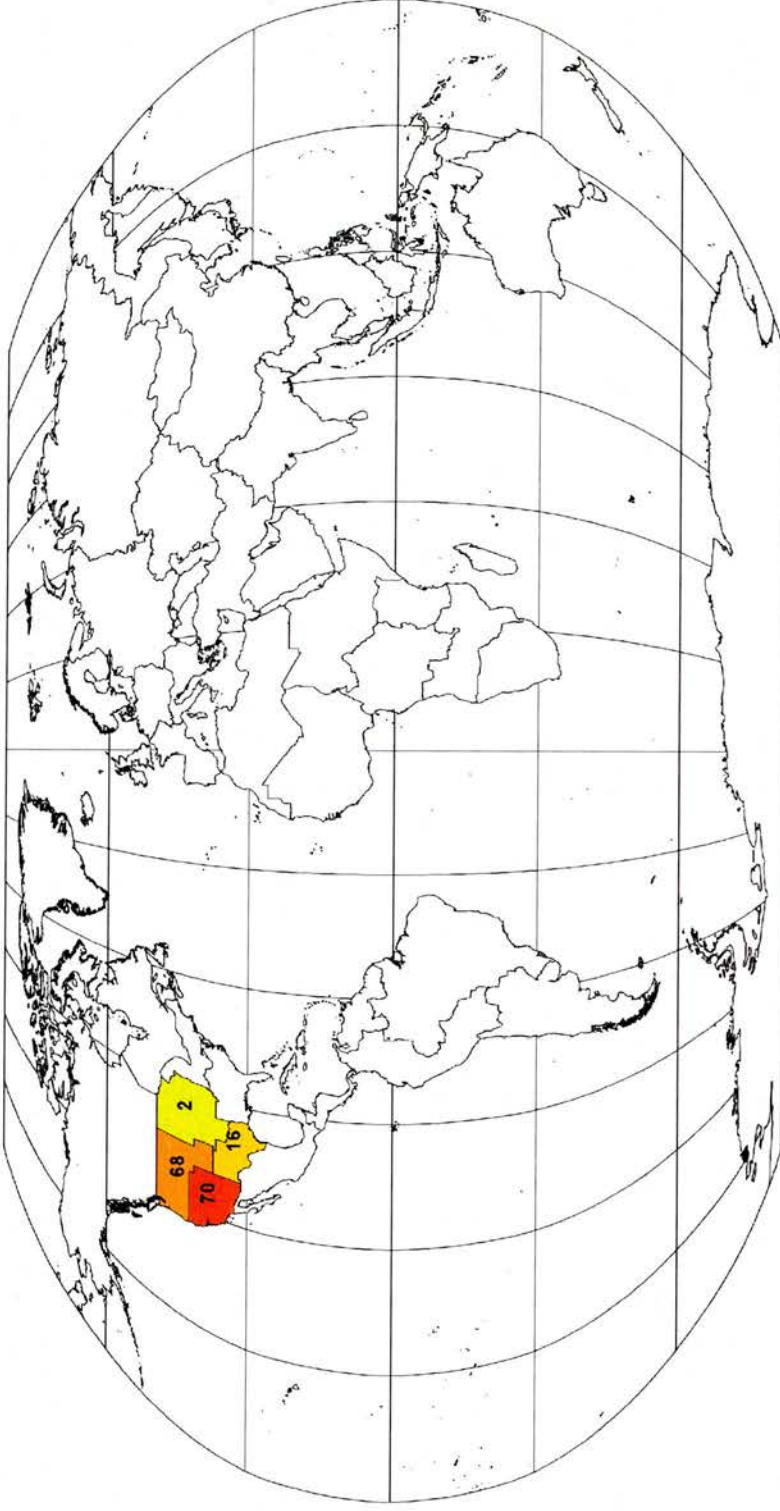


Element 151 **37 genera**
Western and Central North America

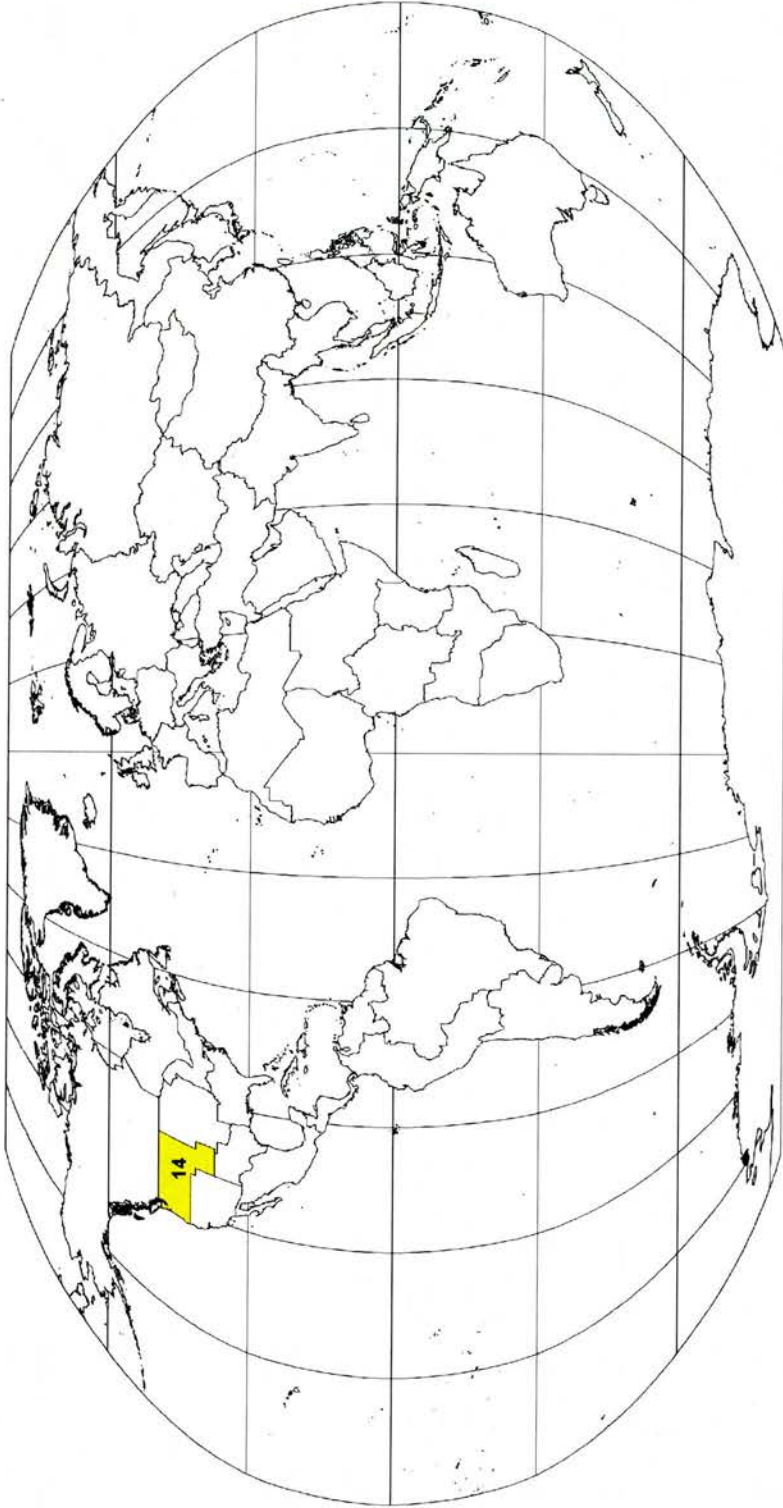


Element 152
Western U.S.A.

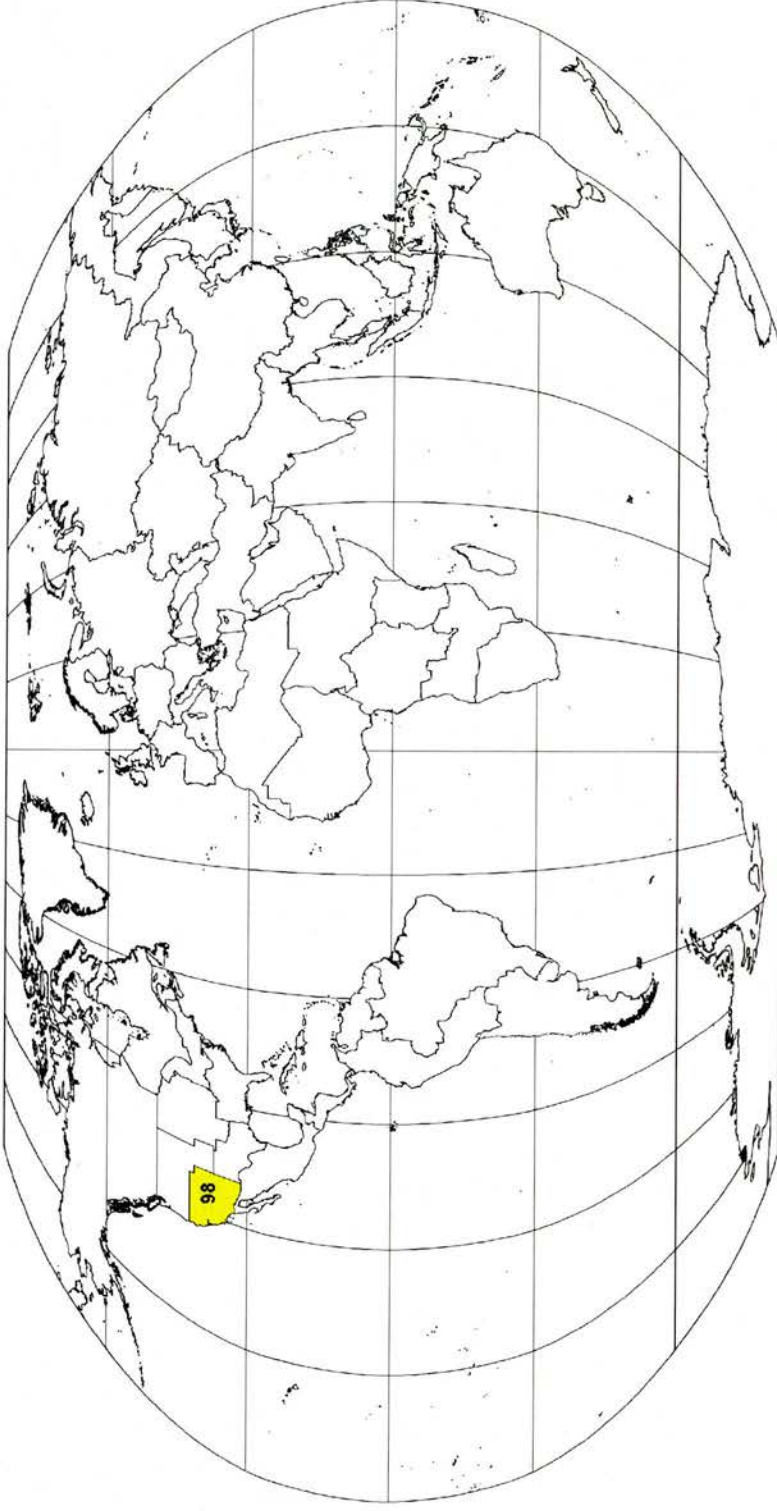
71 genera



Element 153 **14 genera**
Endemic to Northwestern U.S.A.

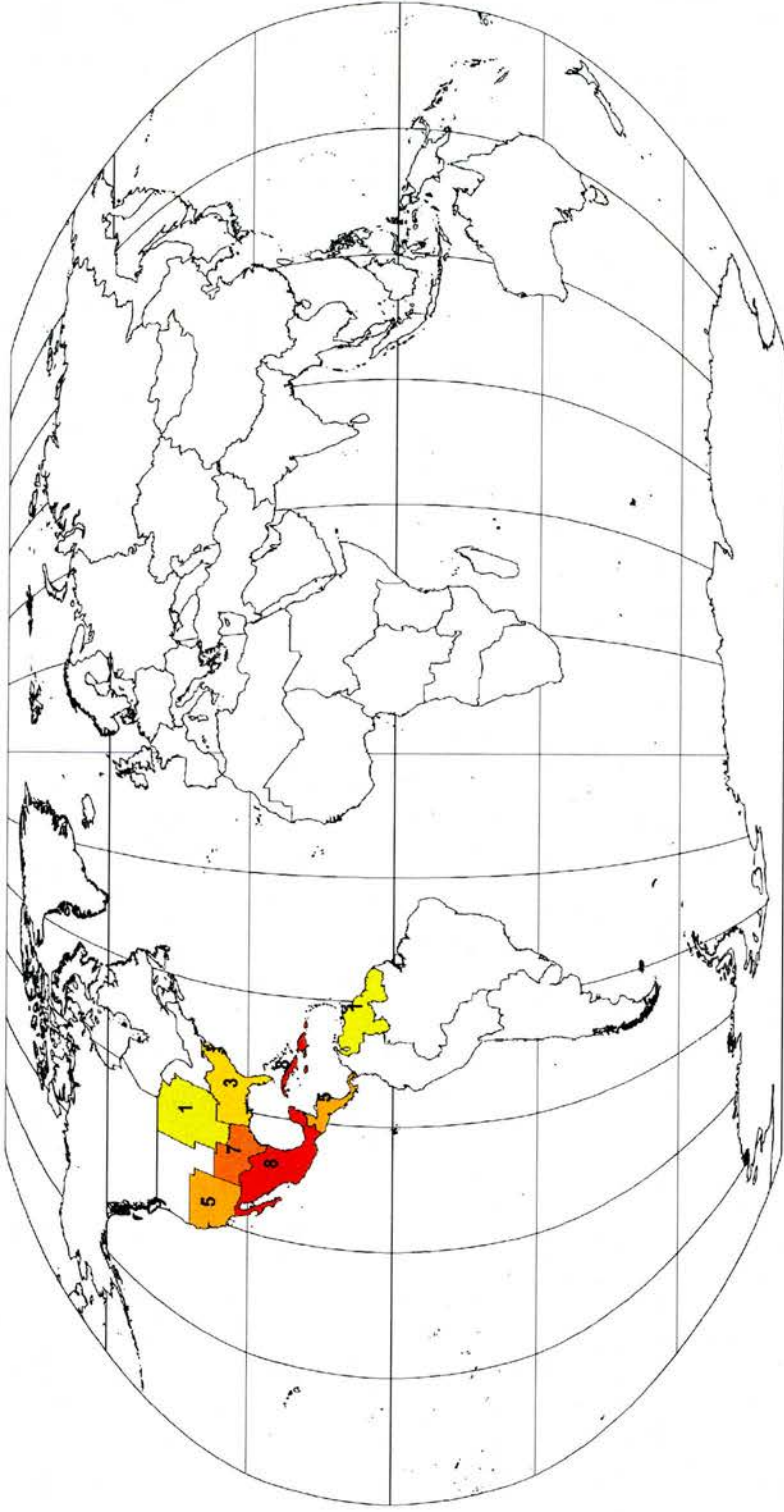


Element 154 **98 genera**
Endemic to Southwestern U.S.A.

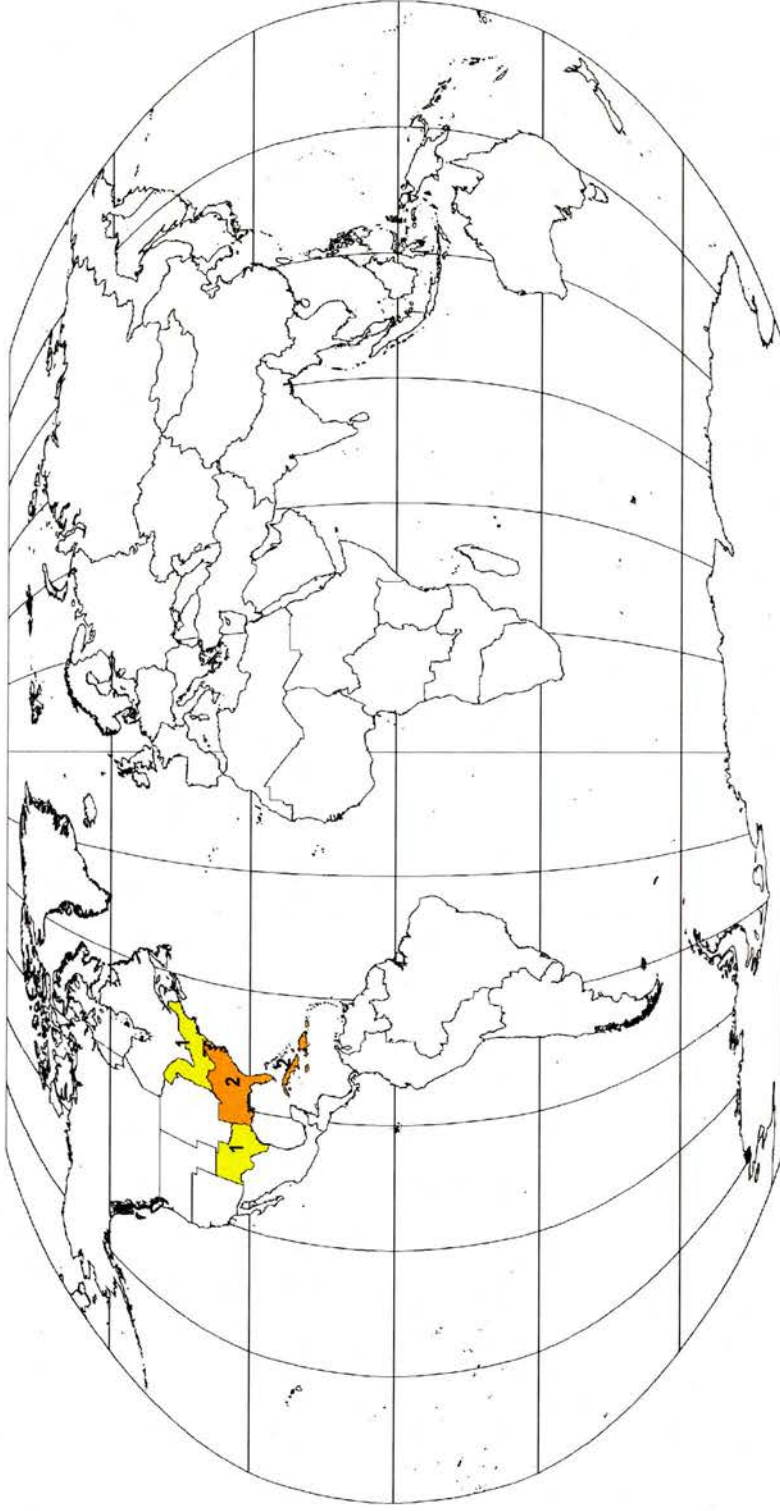


Element 155 **8 genera**

Southern U.S.A., Mexico and Caribbean reaching to Central U.S.A. and Northern South America

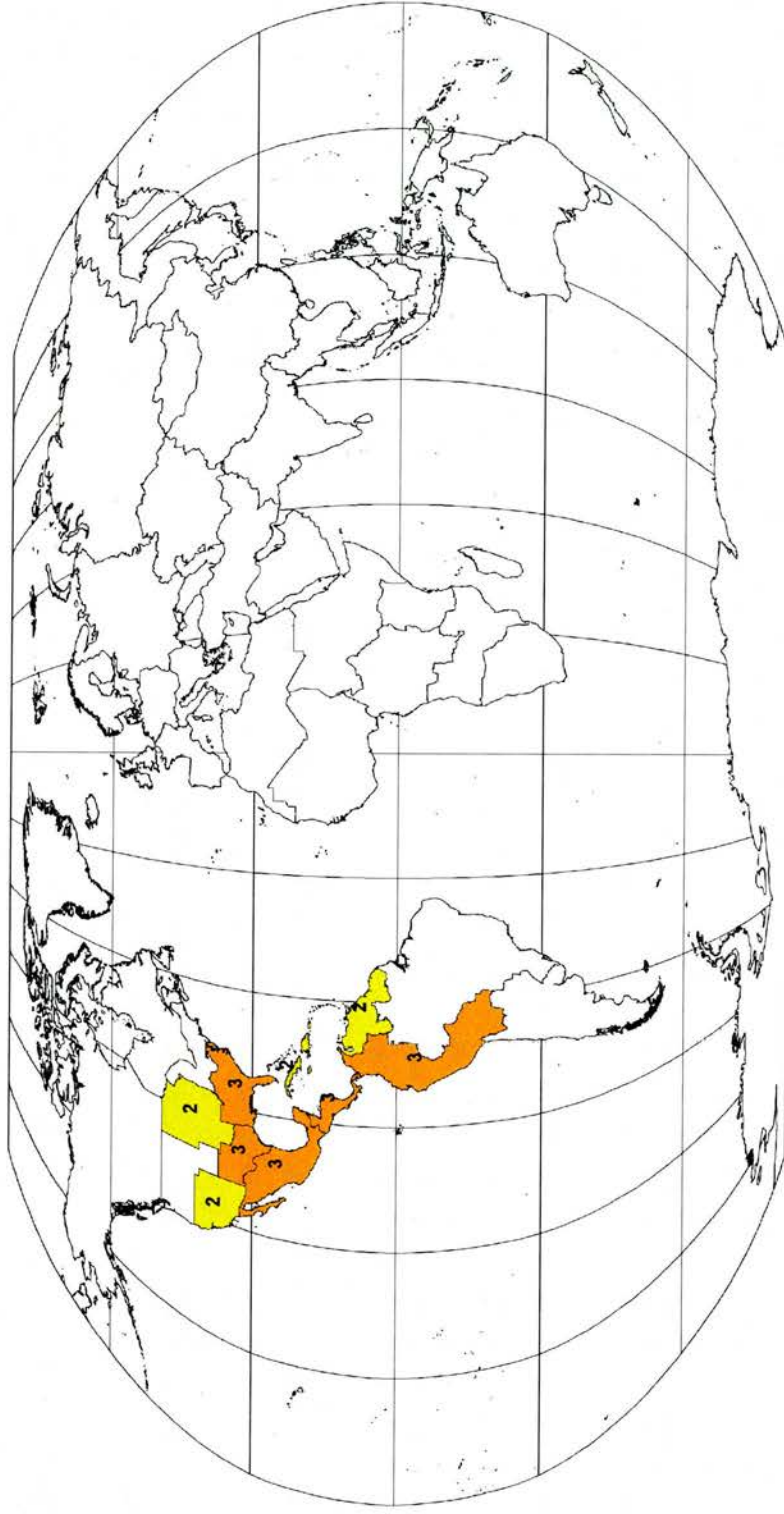


Element 156 **2 genera**
Eastern U.S.A. and Caribbean

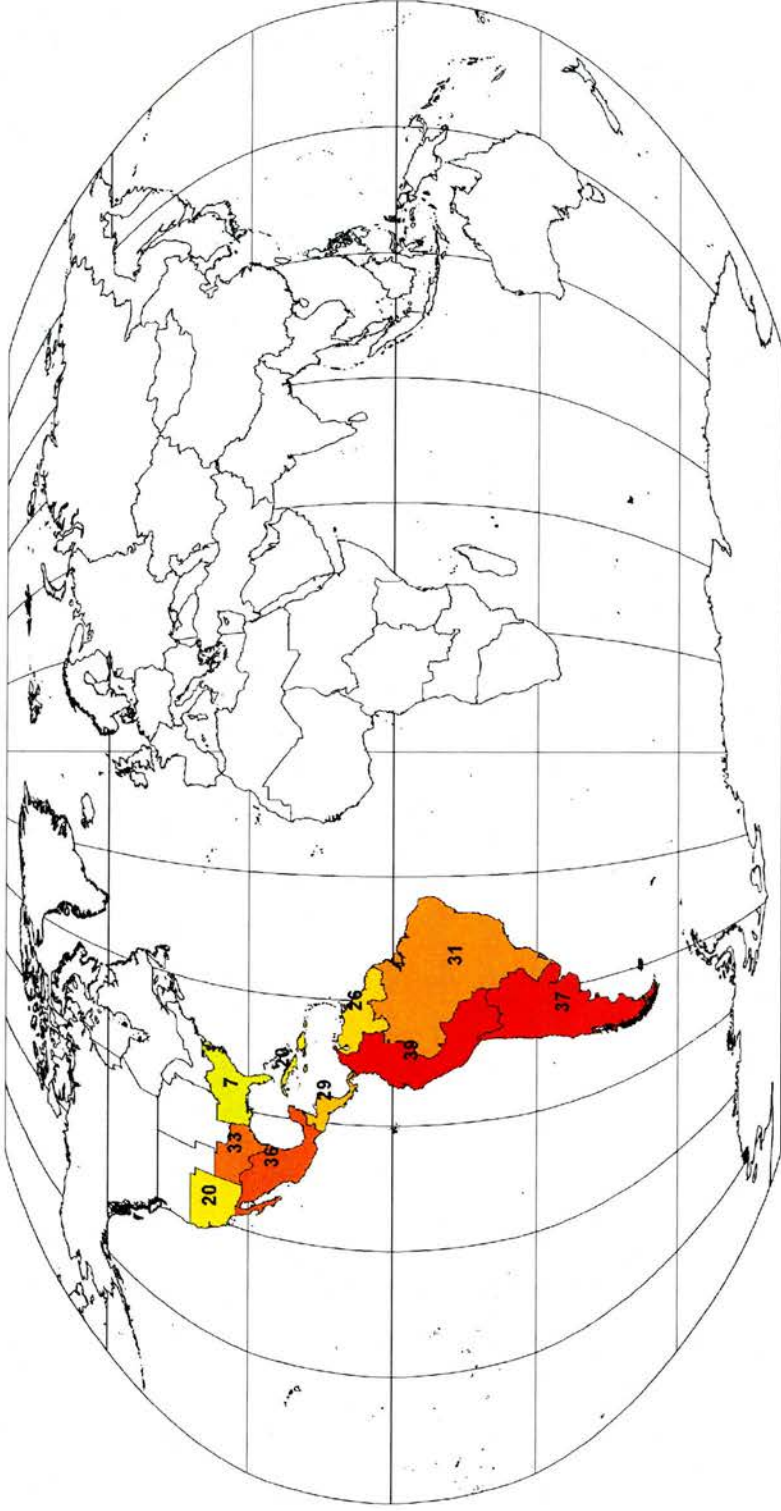


Element 157 **3 genera**

Central and Eastern U.S.A. south into Northern and Western South America

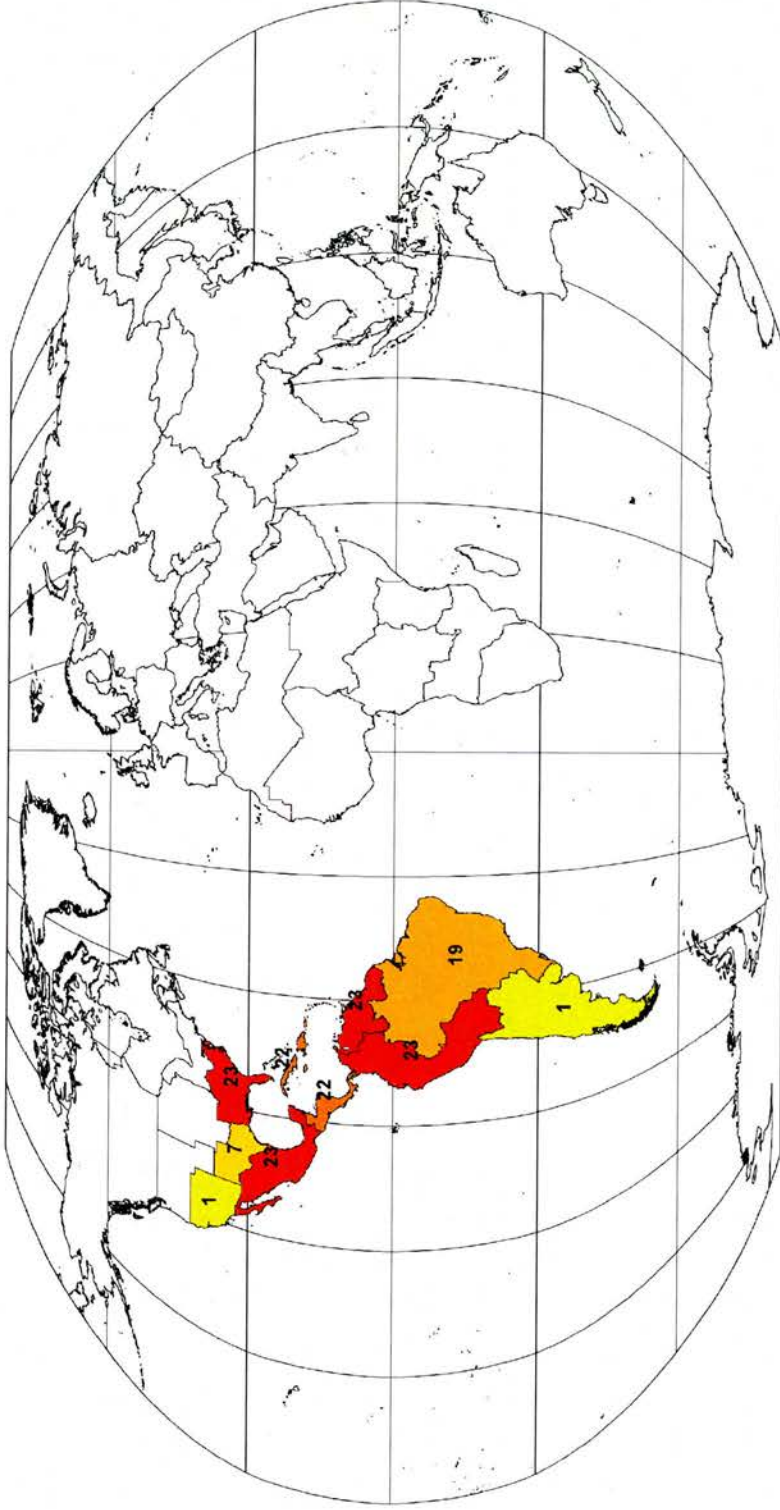


Element 158 **40 genera**
Southern U.S.A. south to Southern South America



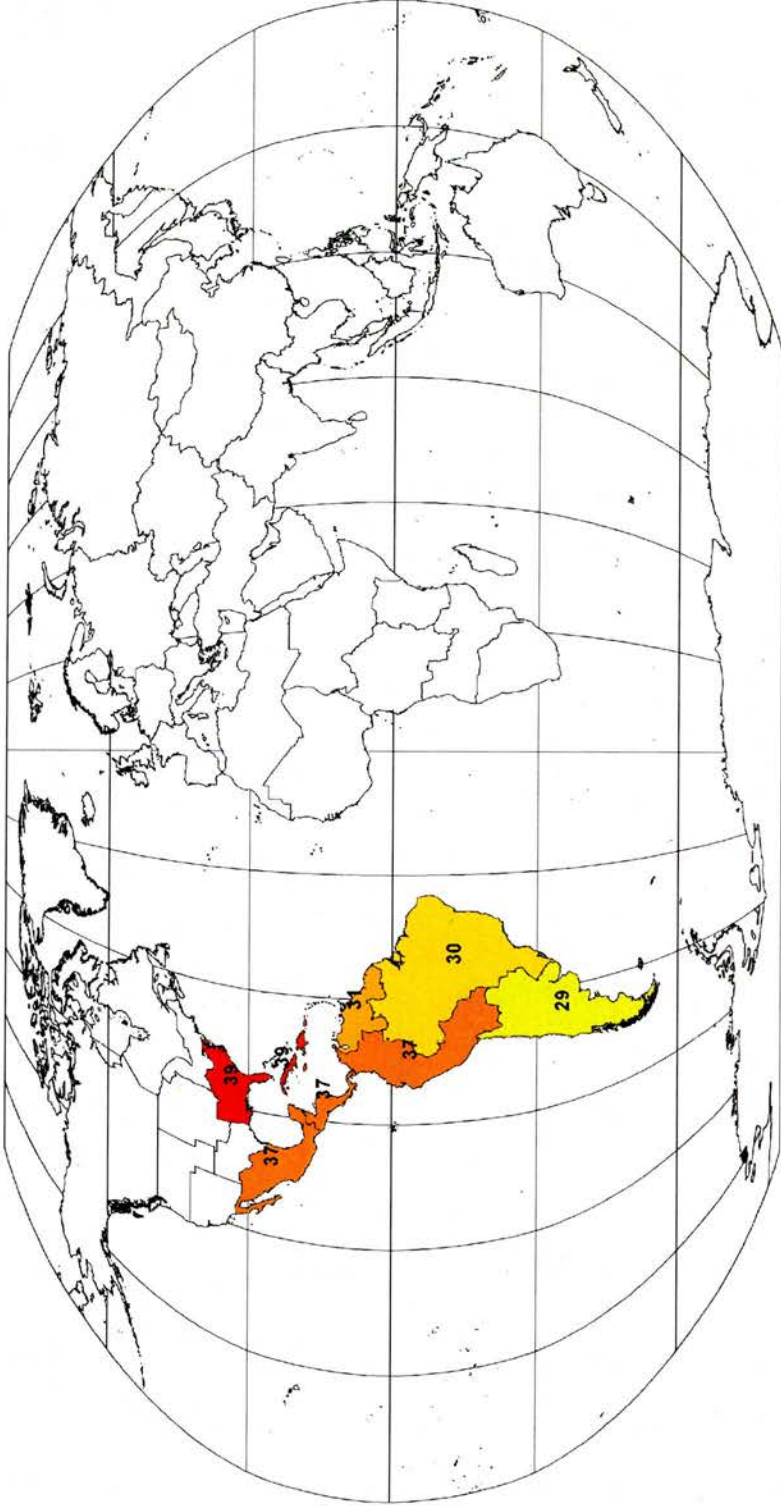
Element 159 **23 genera**

SE. U.S.A. to Brazil, reaching SW. U.S.A. and Southern South America



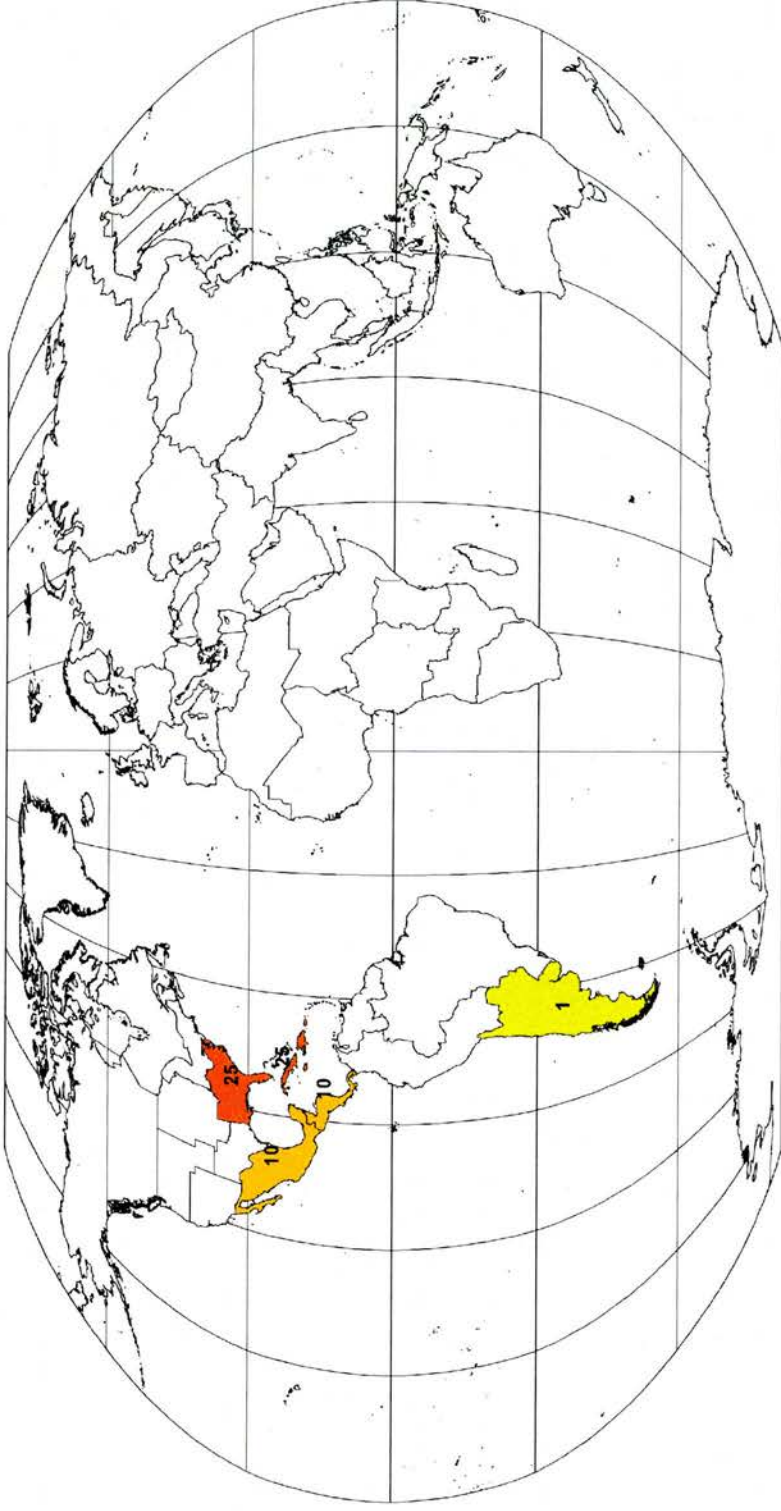
Element 160 **39 genera**

Florida and Caribbean, Mexico south to Southern South America

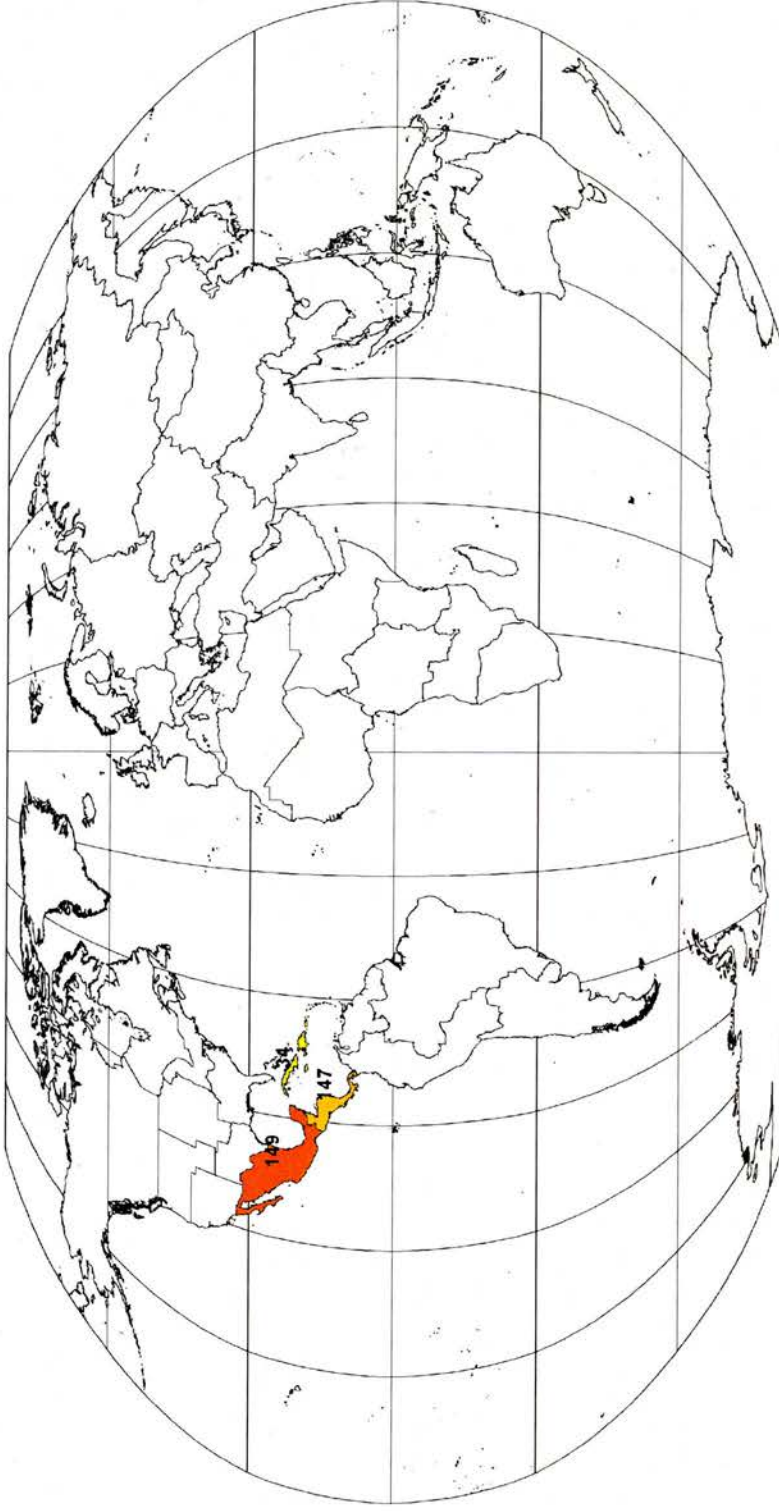


Element 161 **25 genera**

Florida and Caribbean, Mexico and Central America

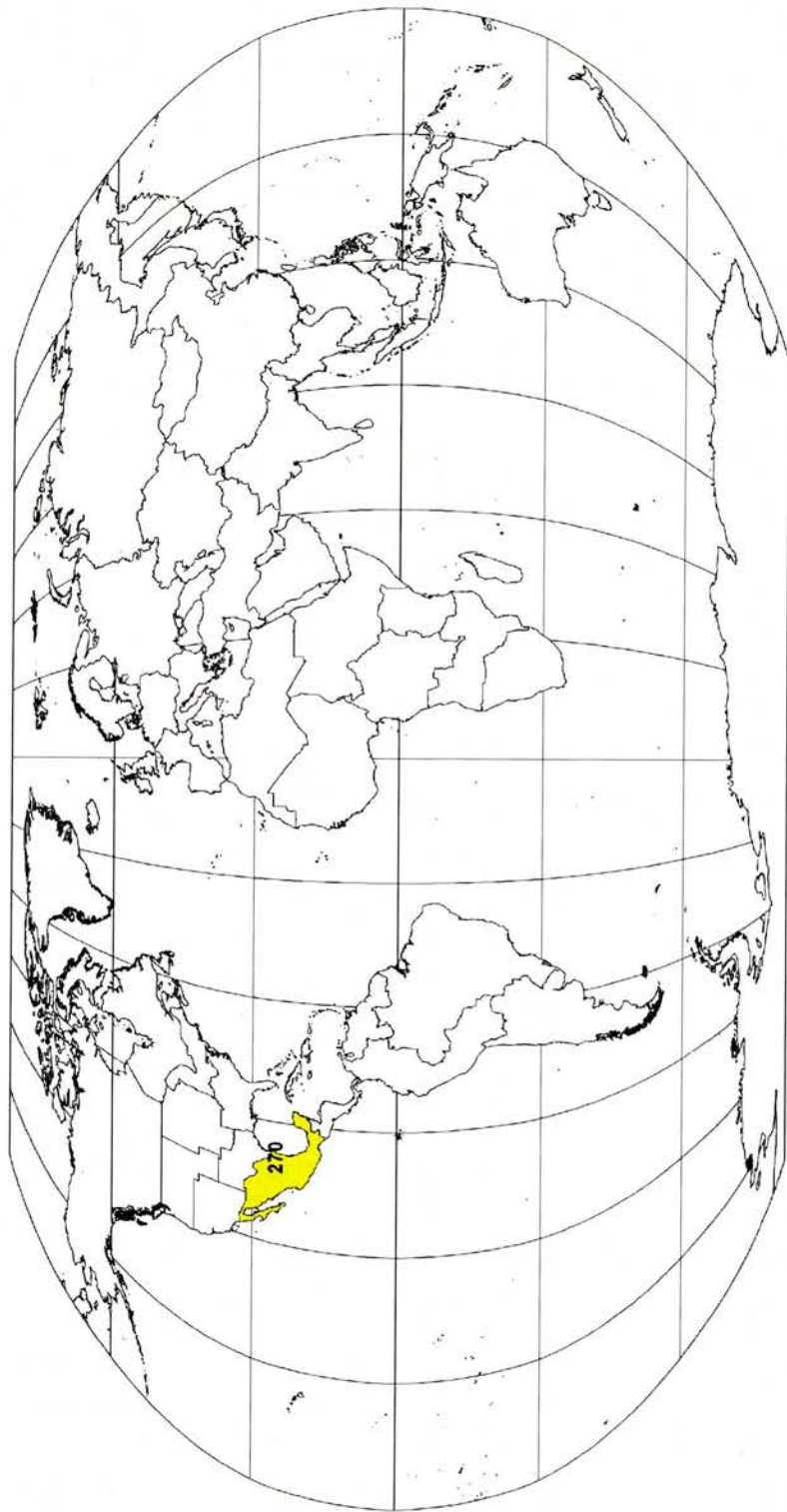


Element 162 **156 genera**
Mexico, Central America and Caribbean

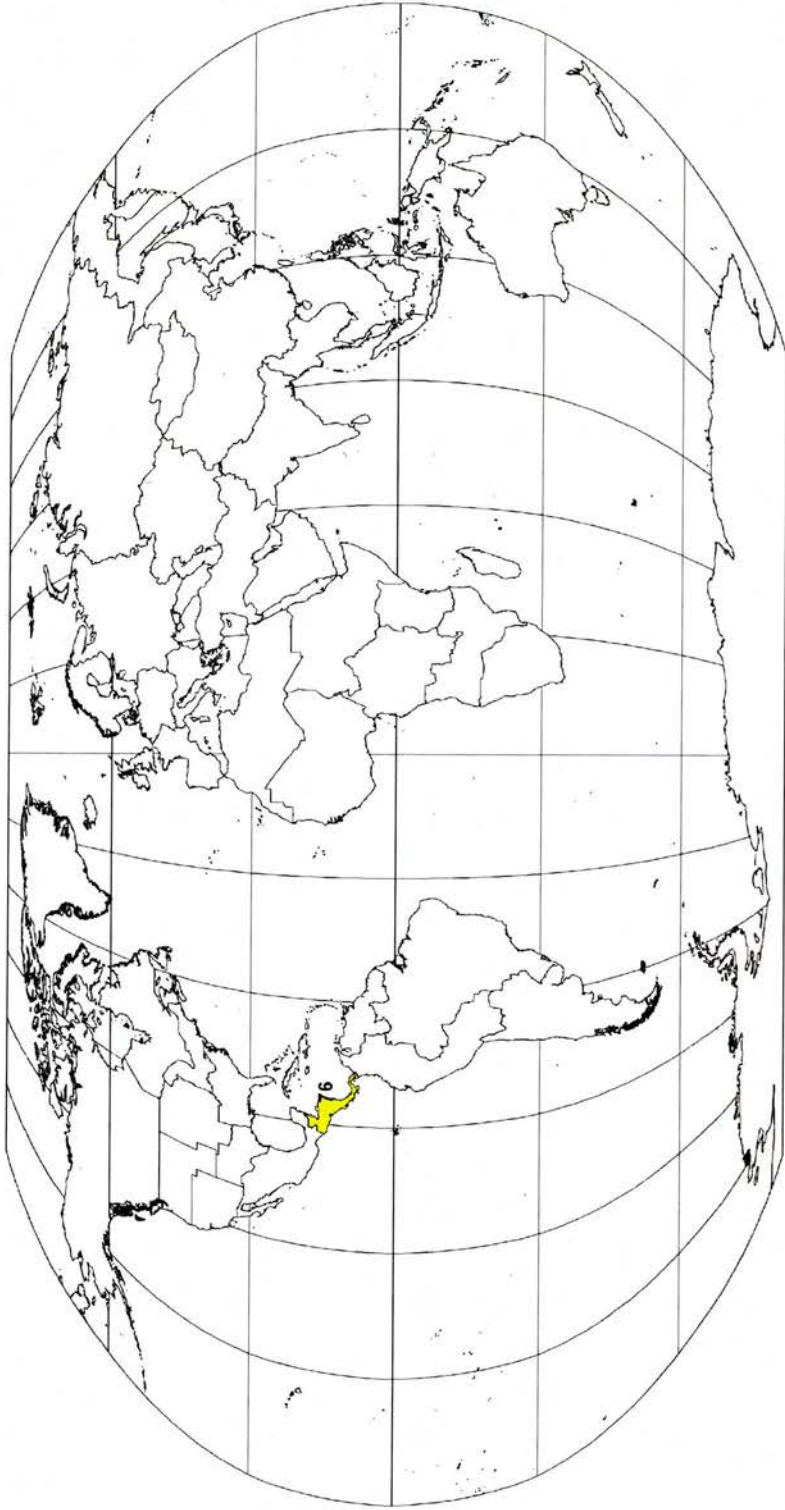


Element 163 **270 genera**

Endemic to Mexico

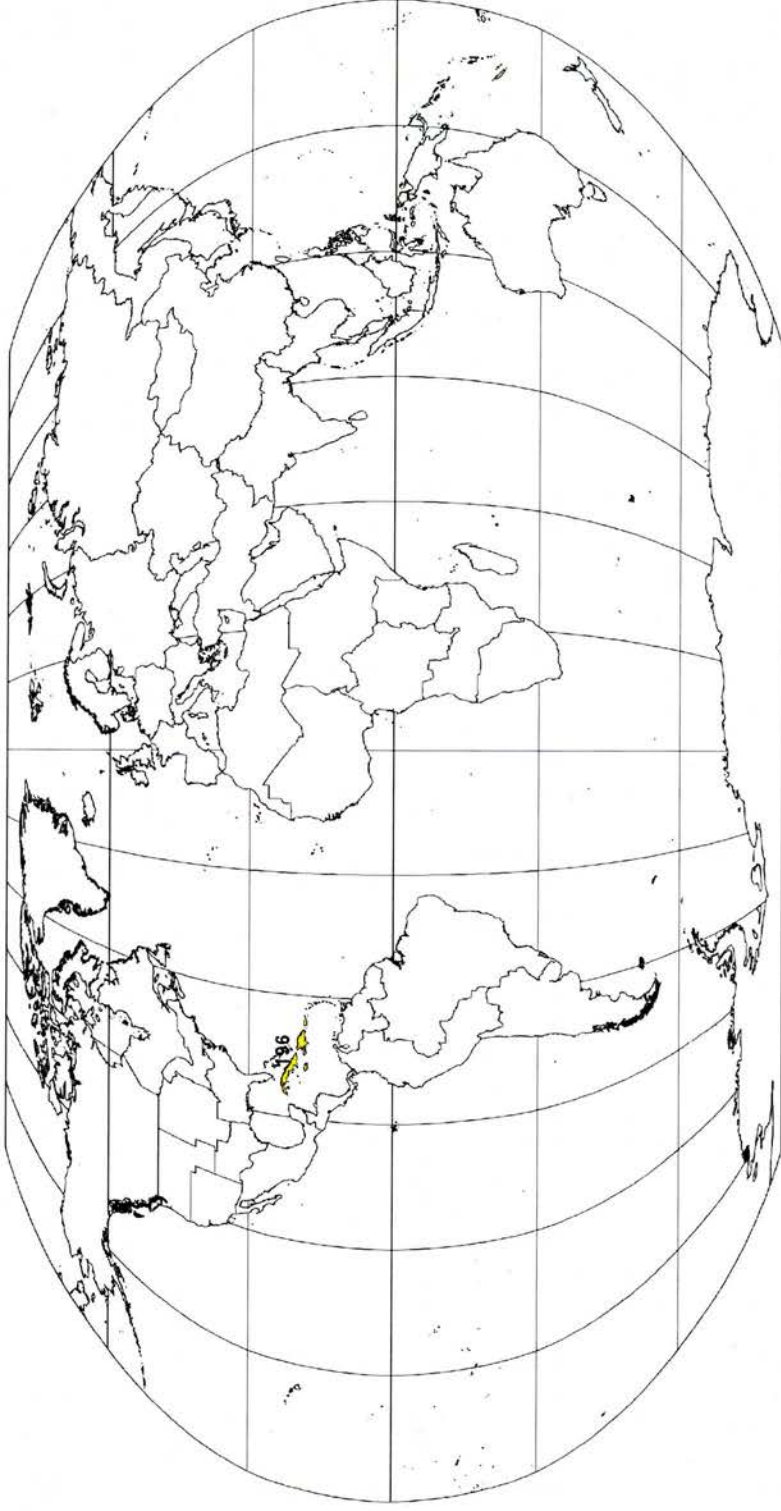


Element 164 **76 genera**
Endemic to Central America



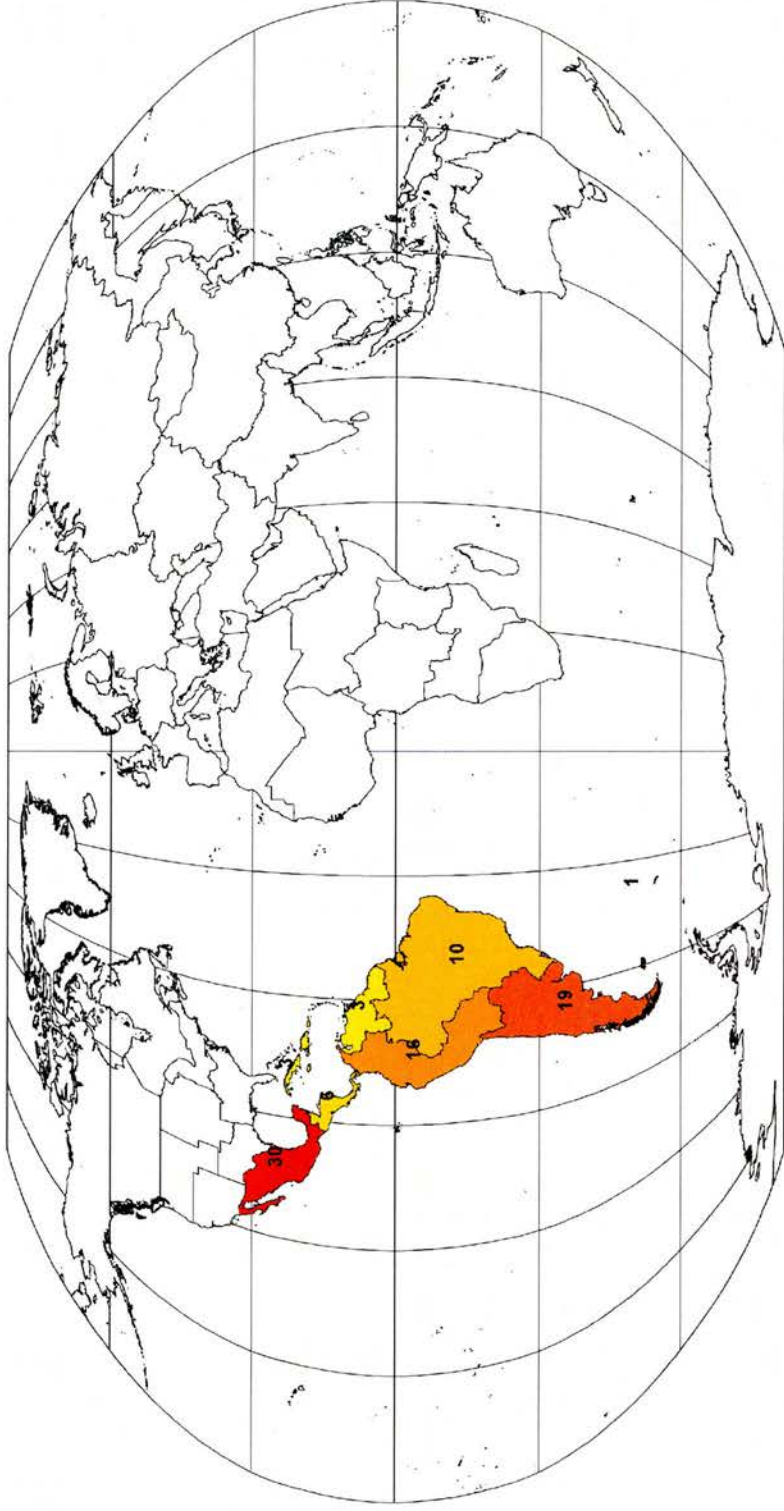
Element 165 **196 genera**

Endemic to Caribbean



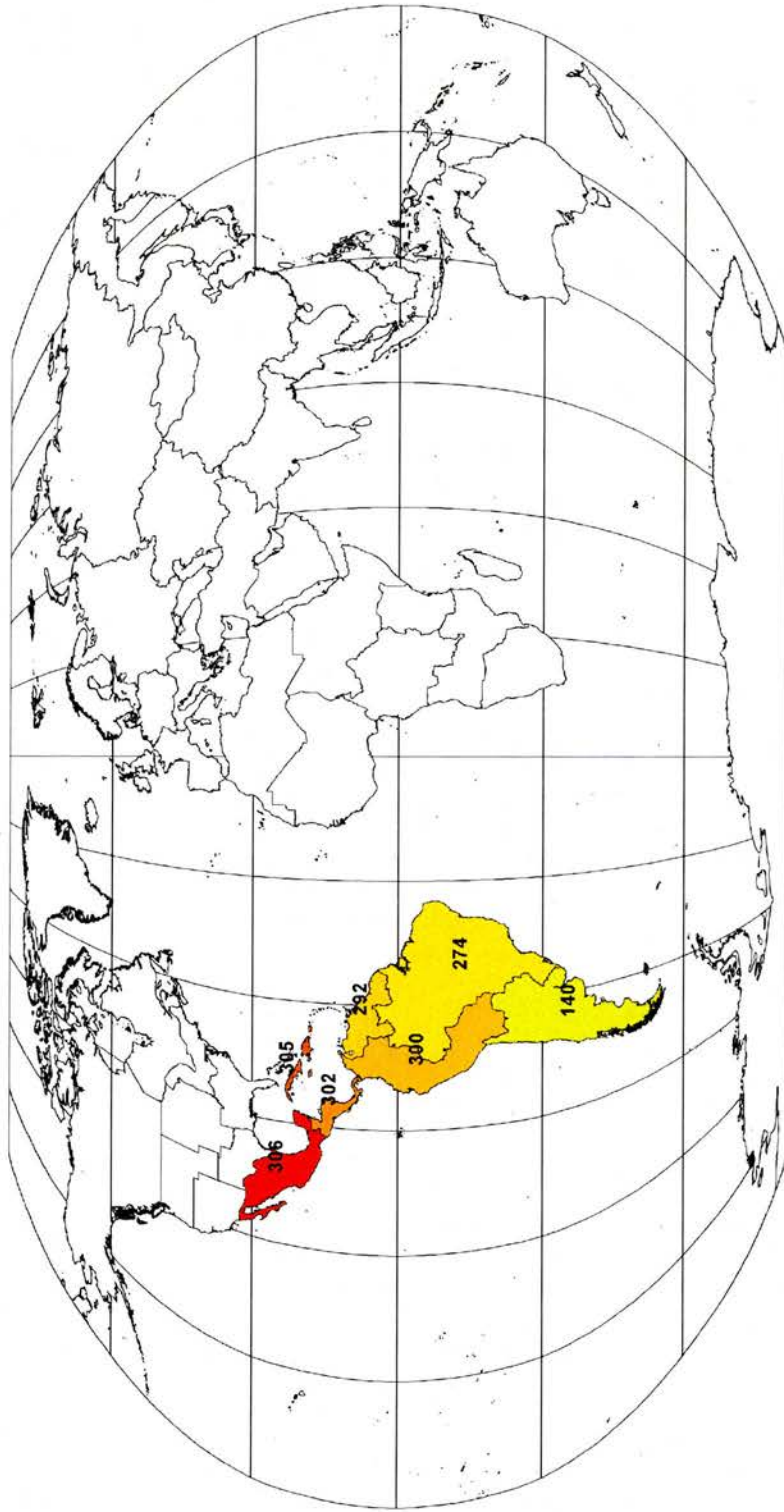
Element 166 **30 genera**

Mexico and Southern South America, reaching Subantarctic Islands

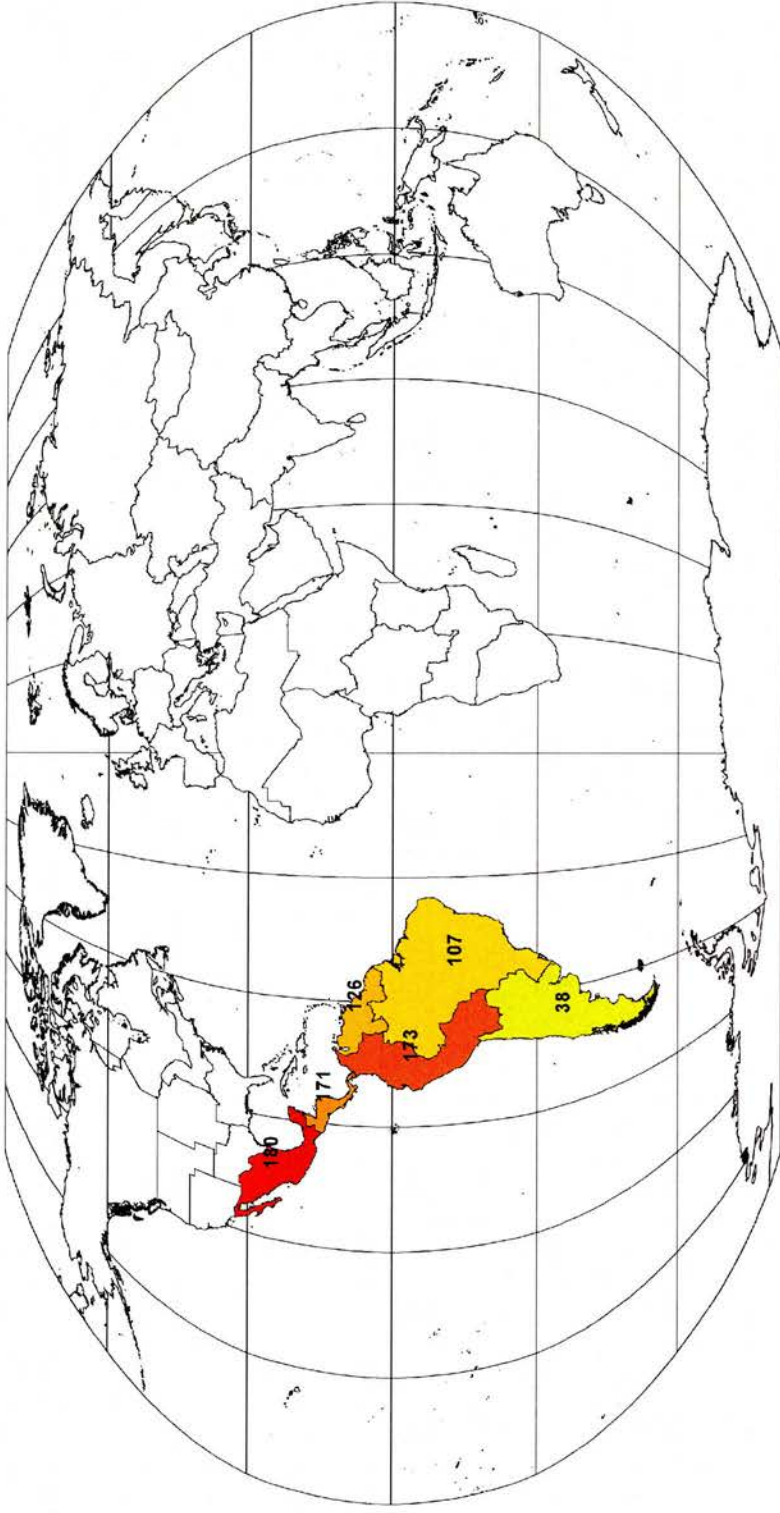


Element 167 **306 genera**

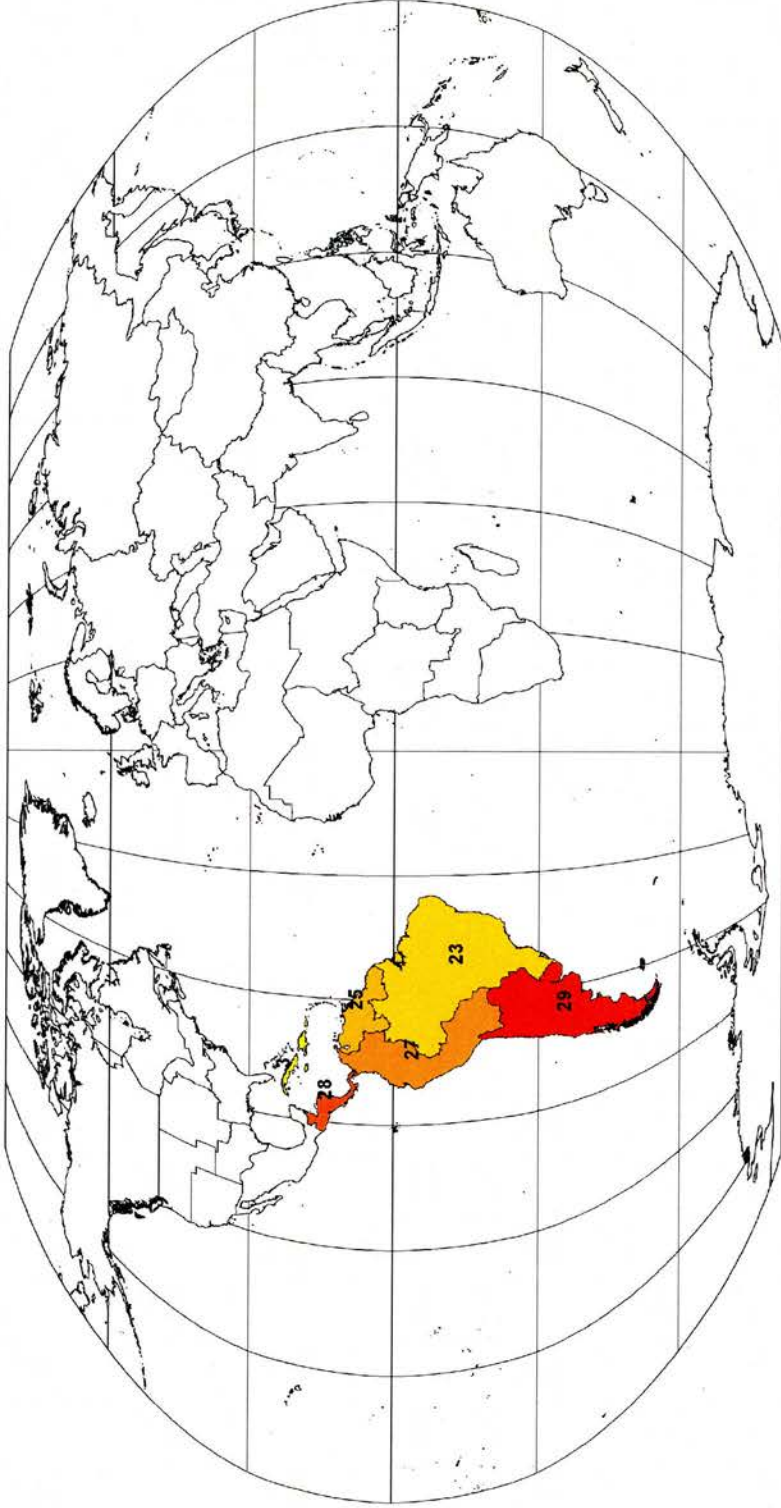
Mexico and Caribbean south to Southern South America



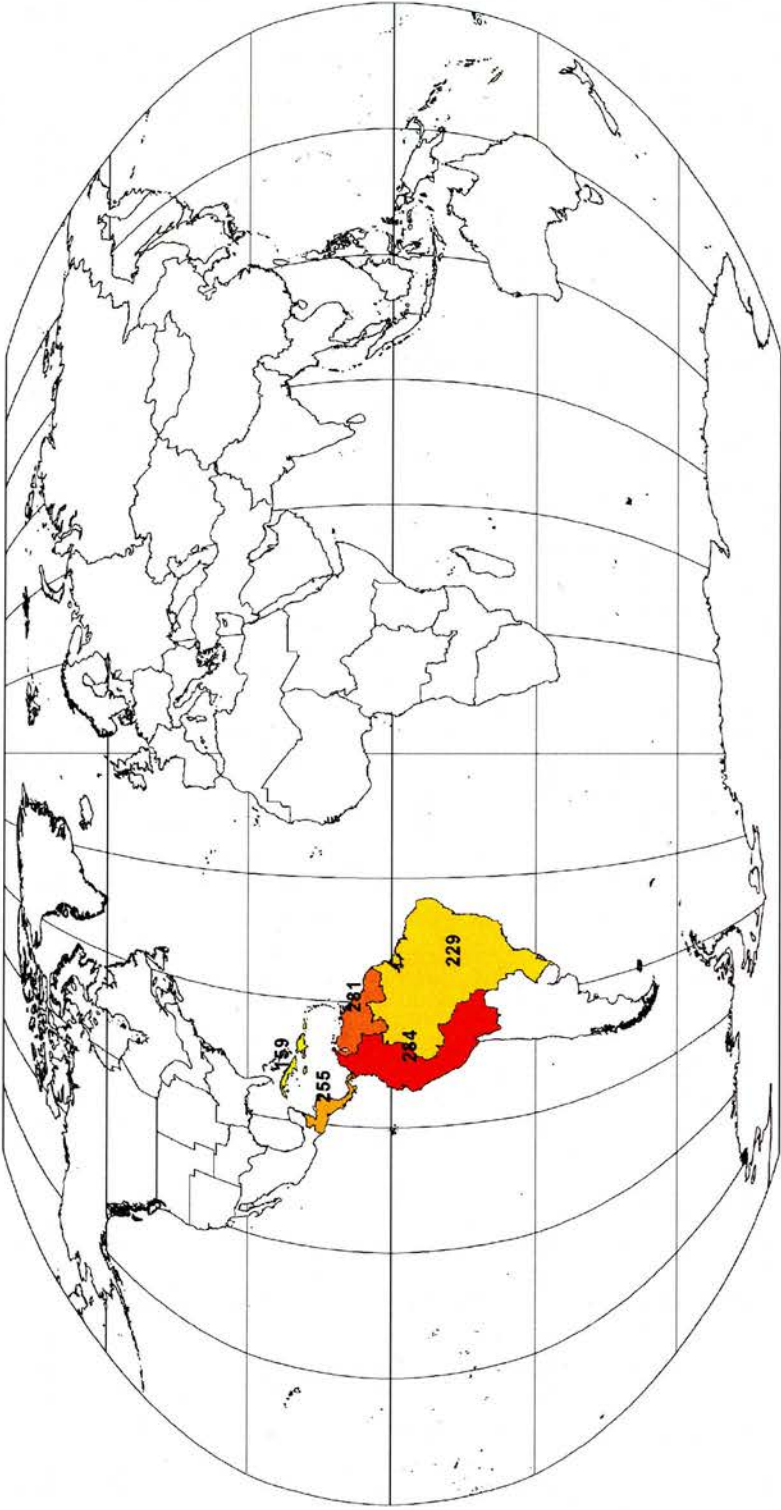
Element 168 **182 genera**
Mexico south to Southern South America



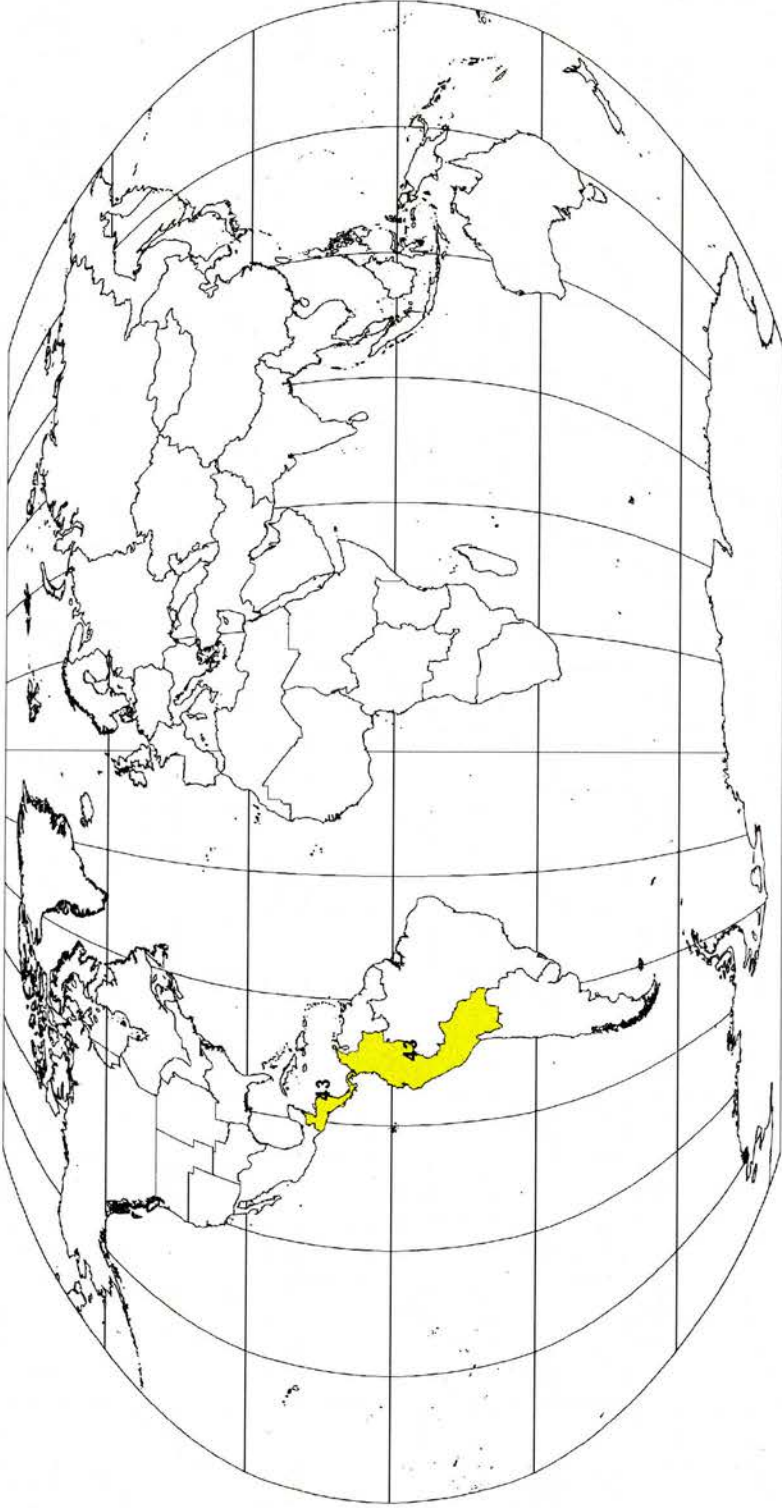
Element 169 **29 genera**
Central America south to Southern South America



Element 170 **317 genera**
Central America and tropical South America

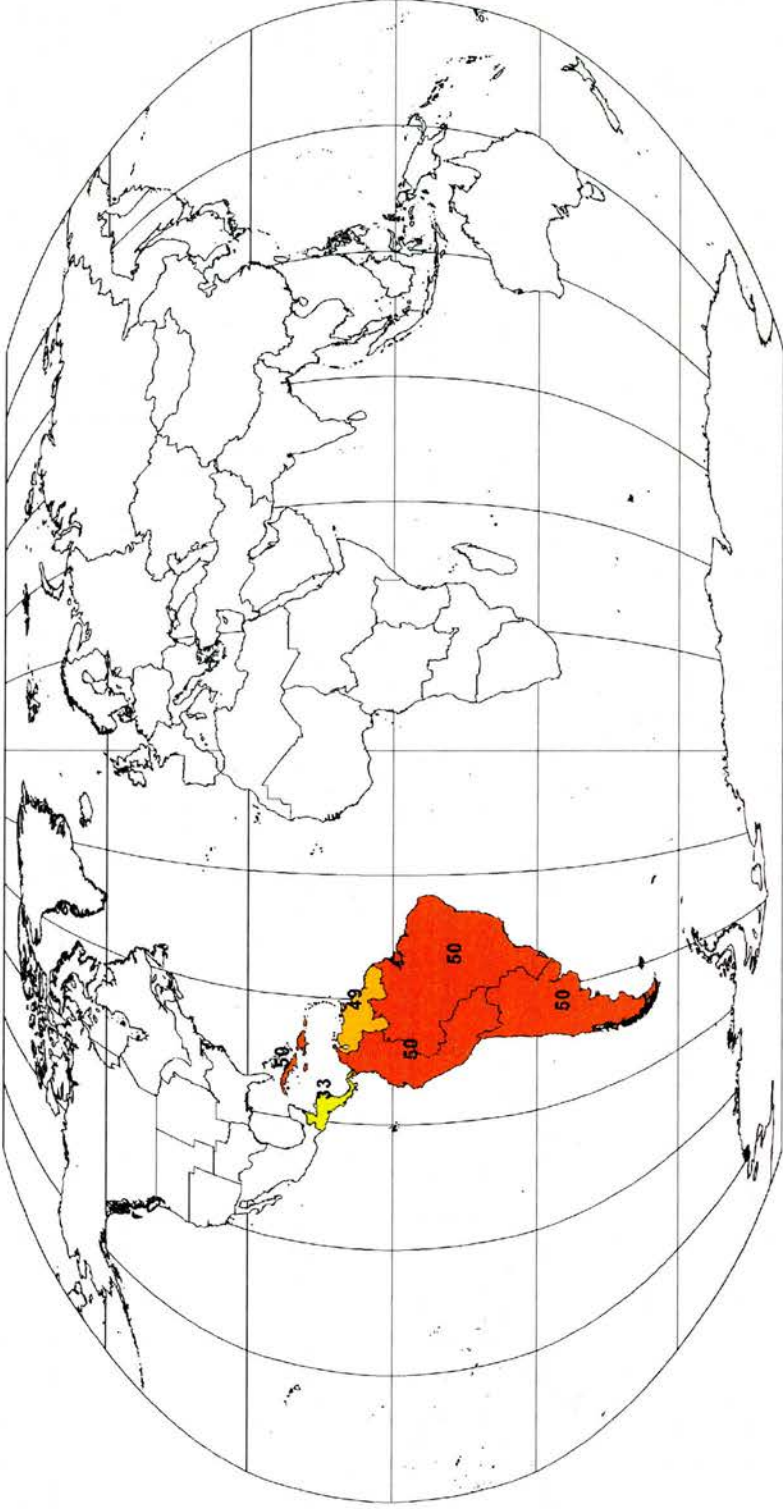


Element 171 **43 genera**
Central America and Western South America



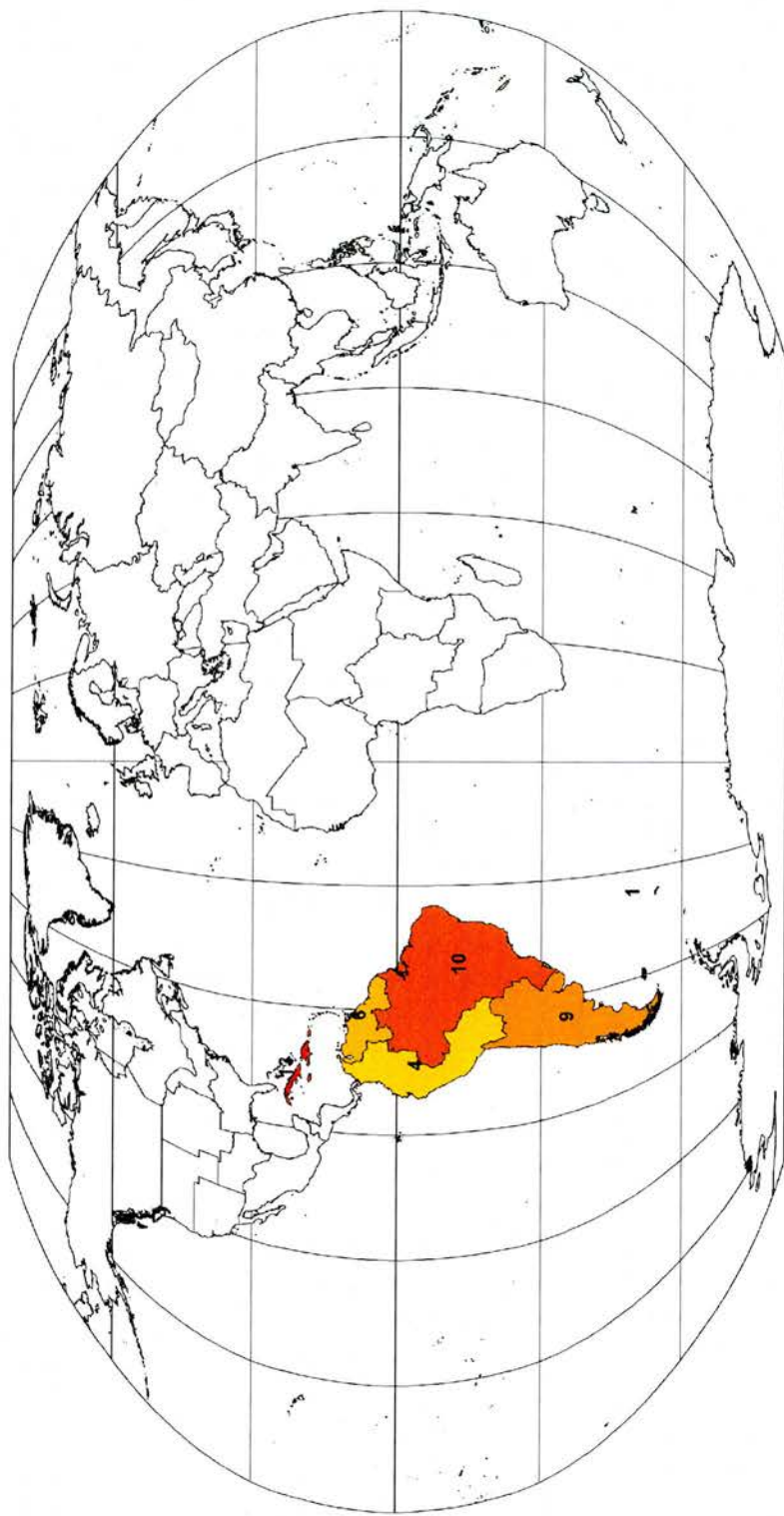
Element 172 **50 genera**

Central America extending south into Southern South America



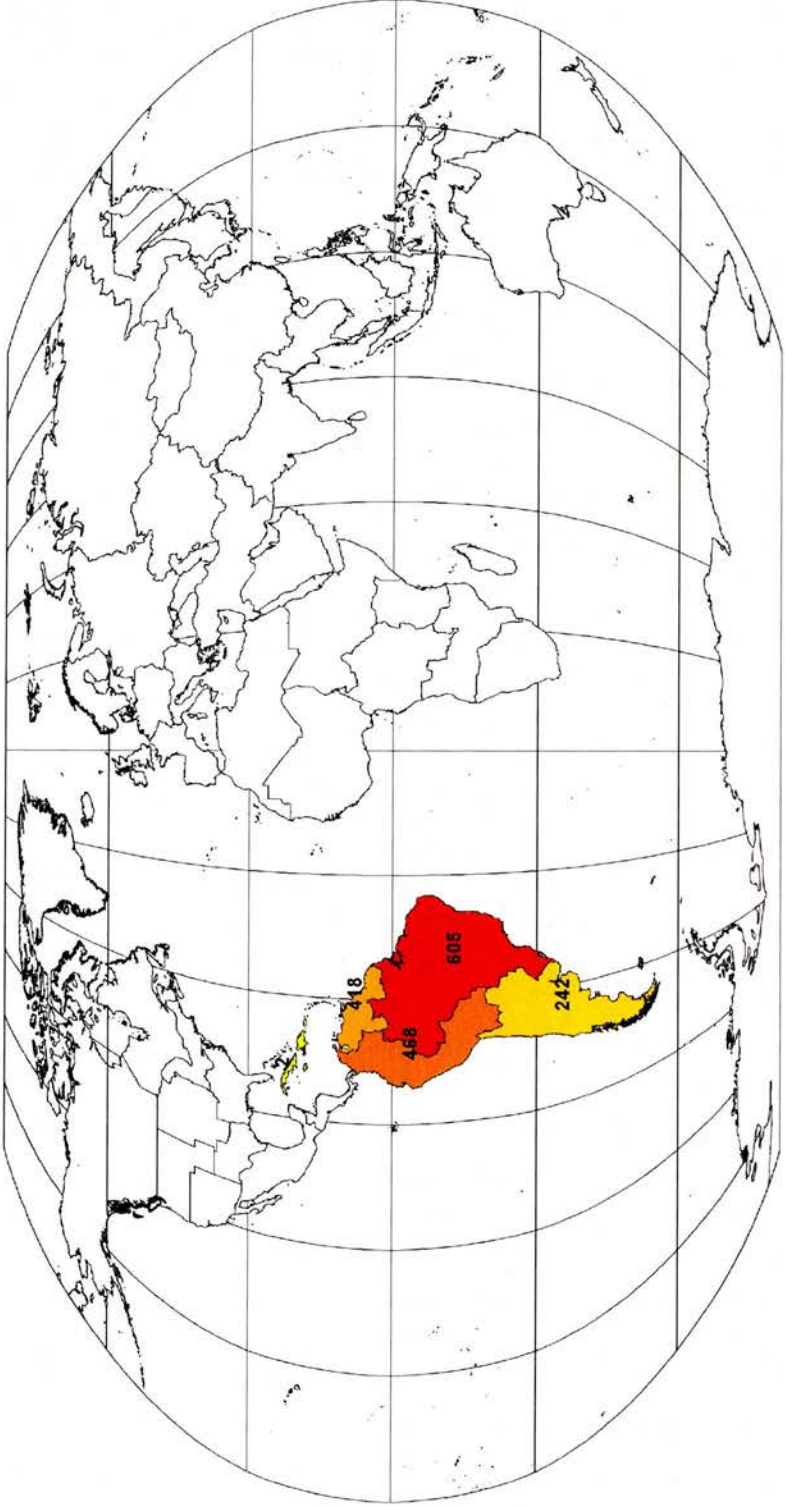
Element 173 **13 genera**

Caribbean to S. Brazil and Argentina, reaching the Subantarctic Islands

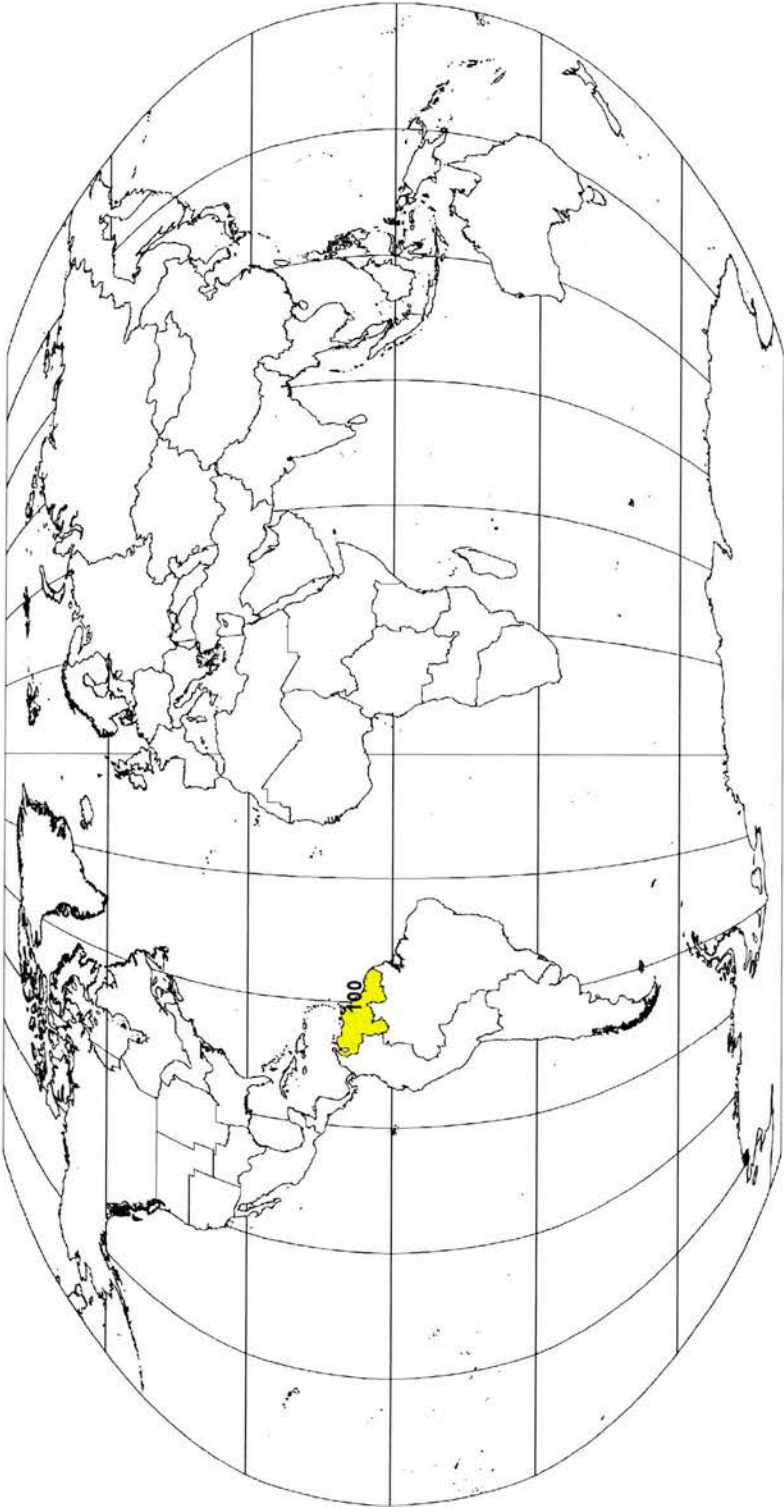


Element 174 **682 genera**

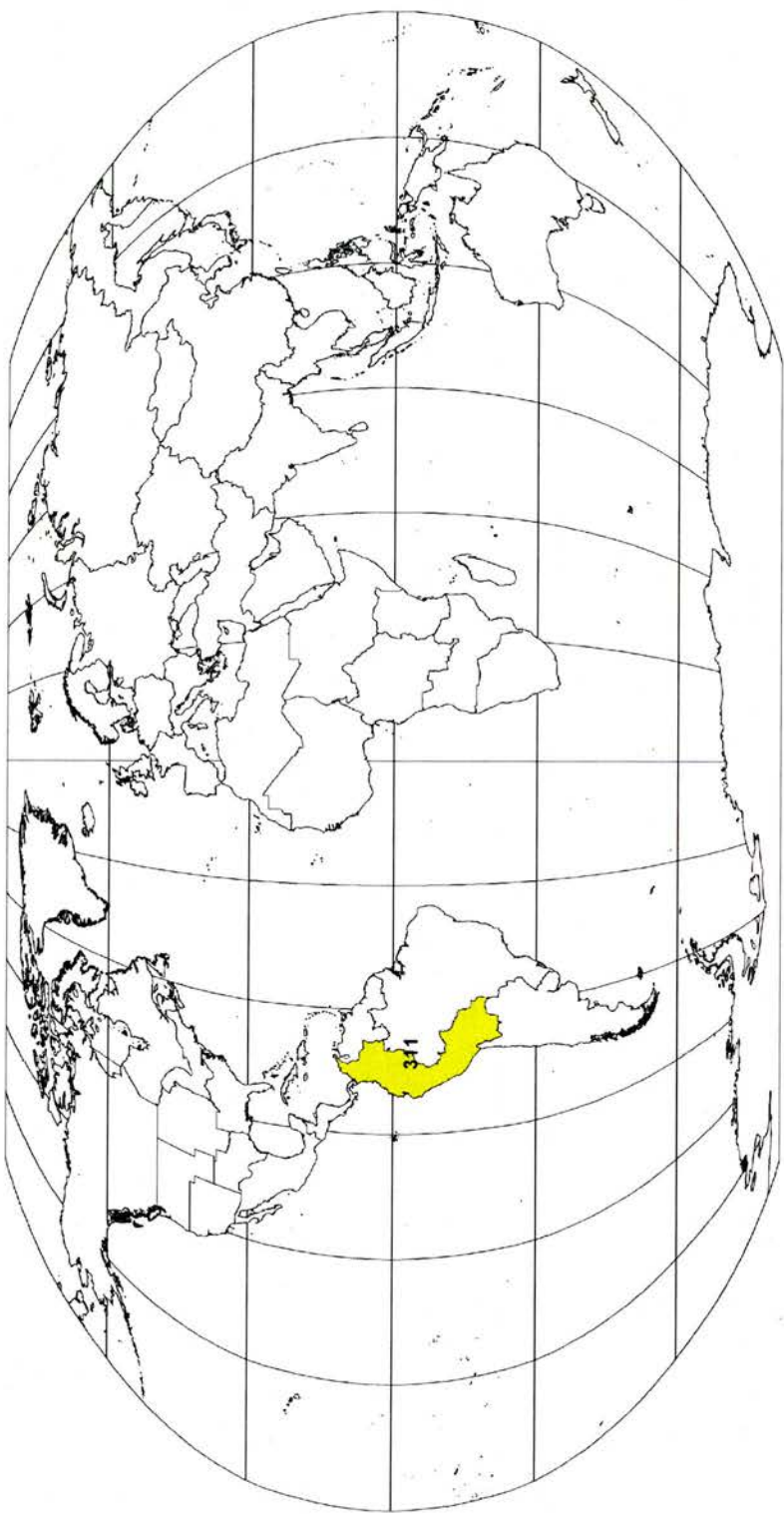
Tropical South America and northern Argentina, reaching the Caribbean



Element 175 **100 genera**
Endemic to Northern South America

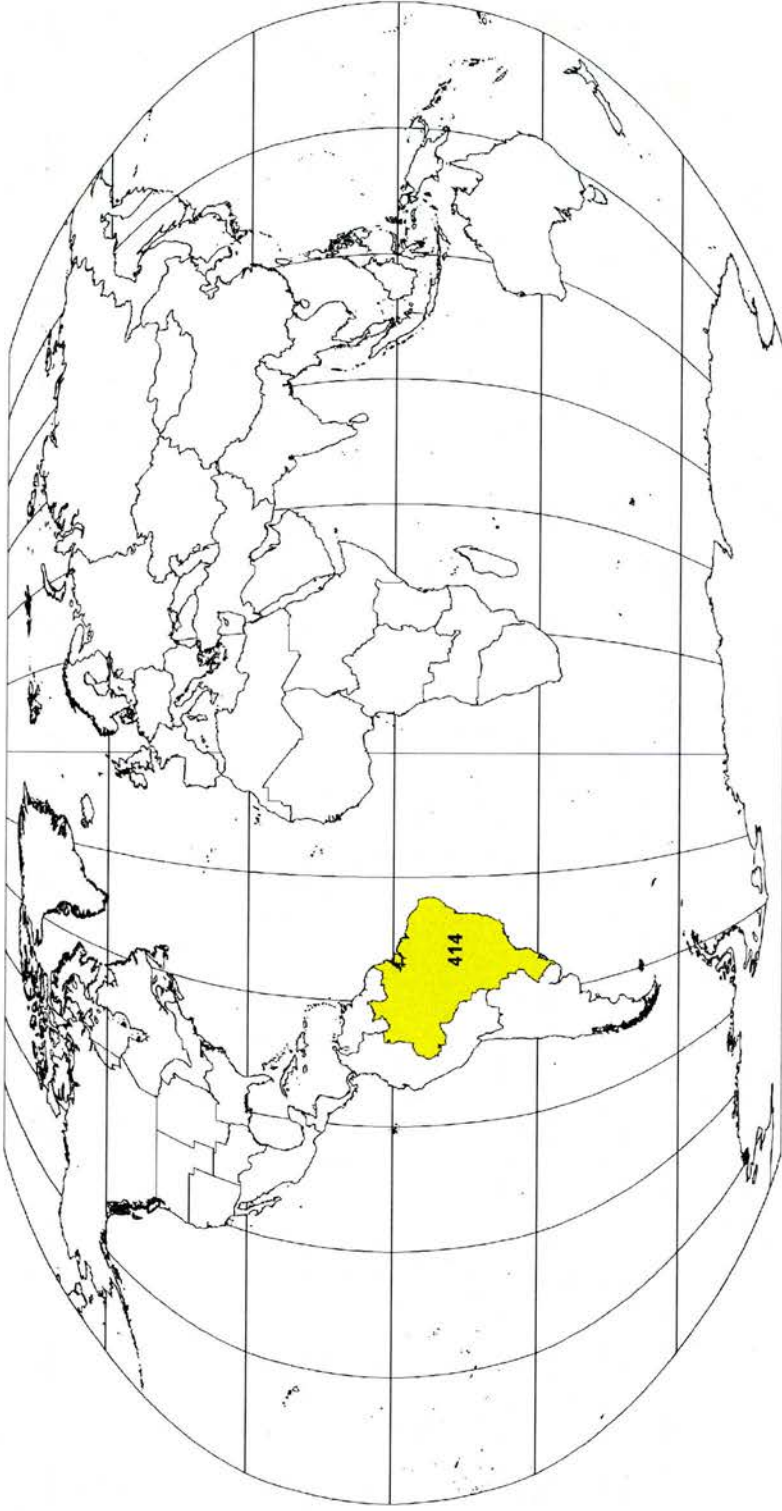


Element 176 **311 genera**
Endemic to Western South America



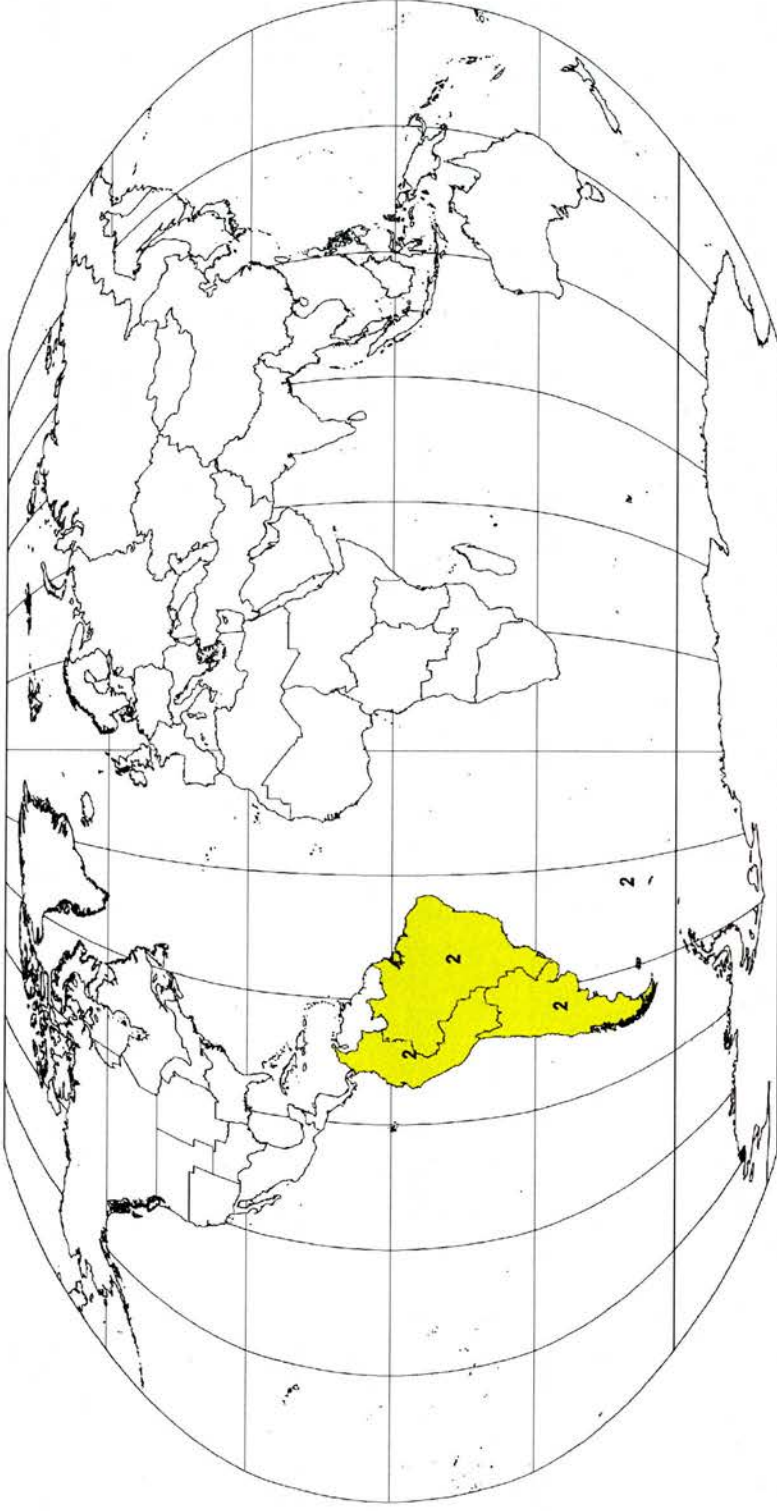
Element 177 **414 genera**

Endemic to Brazil



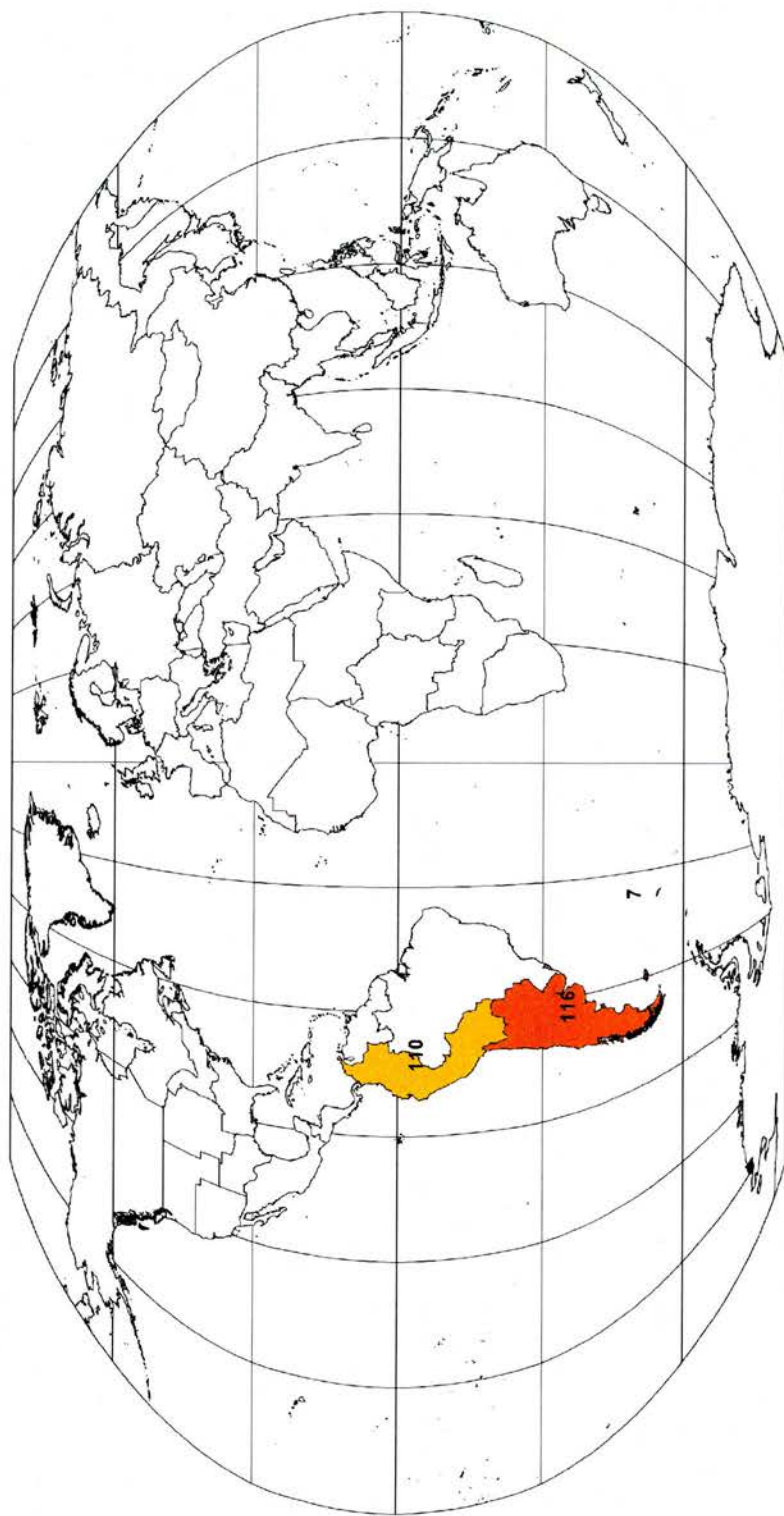
Element 178 **2 genera**

Andes, S. Brazil and southern South America extending to the Subantarctic Islands

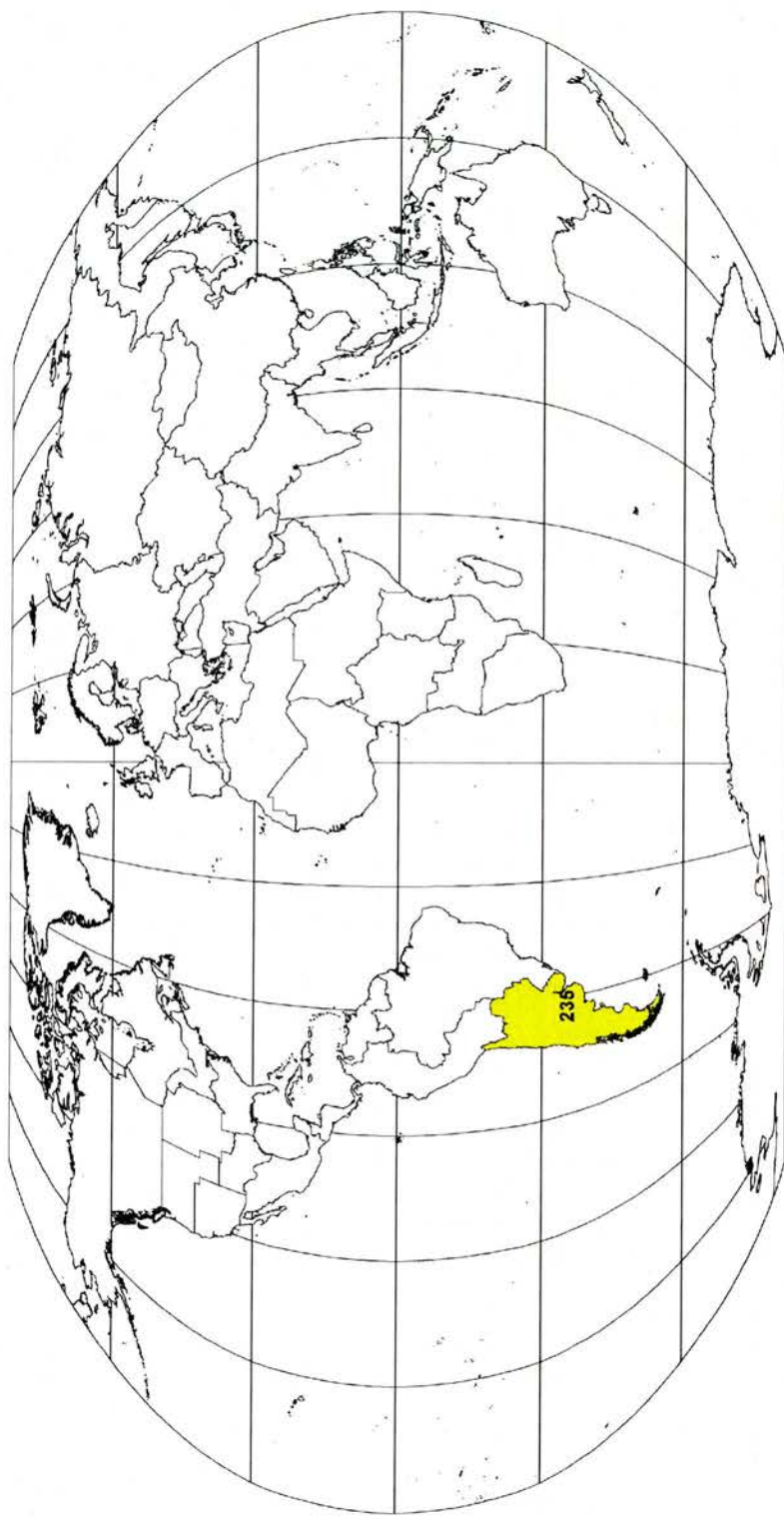


Element 179 **116 genera**

Western and Southern South America, extending to the Subantarctic Islands



Element 180 **235 genera**
Endemic to Southern South America



Element 181 **3 genera**
Endemic to Subantarctic Islands

