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Long-Term Trends in Ecological Systems:

A Basis for Understanding Responses to Global Change

Contents

Appendix 28. Stations and length of record for each plant and animal variable by site, as grouped by ecosystem type

Site code	Variable	Station	Start	End
Alpine and arctic				
ARC	Aboveground net primary production	Control ANPP plots	1982	2000
		Nitrogen-fertilized ANPP plots	1983	2000
	Chlorophyll a	Fertilized reach of Kuparuk River	1983	2004
		Reference reach of Kuparuk River	1983	2004
		Toolik Lake	1985	2004
	Plant biomass			
	Betula nana (dwarf birch)	Tussock Tundra 1981 Plots, control	1982	2000
	Eriophorum vaginatum (tussock cottongrass)		1982	2000
	Ledum palustre (marsh Labrador tea)		1982	2000
	Vaccinium vitis-idaea (lingonberry)		1982	2000
	B. nana	Tussock Tundra 1981 Plots, fertilized	1983	2000
	E. vaginatum		1983	2000
	L. palustre		1983	2000
	V. vitis-idaea		1983	2000
MCM	Primary production, measured as carbon	East Lake Bonney	1989	2007
		West Lake Bonney	1992	2007
NWT	Aboveground net primary production	Dry meadow plots at Saddle Location	1982	1997
		Moist meadow plots at Saddle Location	1982	1997
		Wet meadow plots at Saddle Location	1982	1997
Aridlands				
JRN	Aboveground net primary production	Creosote Study Sites	1990	2008
	Plant species richness		1989	2008
	Aboveground net primary production	Grassland Study Sites	1990	2008
	Plant species richness		1989	2008
	Aboveground net primary production	Mesquite Study Sites	1990	2008
	Plant species richness		1989	2008
	Aboveground net primary production	Playa Study Sites	1990	2008
	Plant species richness		1989	2008
	Aboveground net primary production	Tarbush Study Sites	1990	2008
	Plant species richness		1989	2008

Appendix 28. Stations and length of record for each plant and animal variable by site, as grouped by ecosystem type—*Continued*

Site code	Variable	Station	Start	End
	Animal abundance, Leporidae	Rabbit survey route in creosote vegetation zone	1996	2008
		Rabbit survey route in grassland vegetation zone	1996	2008
	Animal abundance, Rodentia	Rodent trapping web in creosote vegetation zone	1995	2007
		Rodent trapping web in grassland vegetation zone	1995	2007
SEV	Aboveground net primary production	Blue Grama Study Site	2002	2008
	Plant species richness		2002	2008
	Aboveground net primary production	Five-Points Grass Study Site	1999	2008
	Animal abundance, Rodentia		1989	2008
	Plant species richness		1999	2008
	Aboveground net primary production	Five-Points Larrea Study Site	1999	2008
	Animal abundance, Rodentia		1989	2008
	Plant species richness		1999	2008
SRE	Plant species richness	Burned treatment: pasture 21	1972	2006
		Control treatment: pastures 8 and 22	1972	2006
		Pastures that were grazed and burned: pastures 2N and 6A	1972	2006
		Pastures where the existing mesquite were killed and were grazed: pastures 3, 5N, 5S, 6B and 12B	1972	2006
		Pastures where the mesquite were killed and were burned: pasture 2S	1972	2006
WGE	Plant species richness	Grass and scattered shrub vegetation zone	1967	2005
		Grass vegetation zone	1967	2007
		Shrubs and sparse grass vegetation zone	1967	2007
		Shrubs with grass vegetation zone	1967	2005
Coastal				
CCE	Chlorophyll a	Ohman Region: subset of CalCOFI stations inshore and nearshore in the Southern California Bight region; CalCOFI lines 80-93, stations from shore offshore to station 70	1984	2005
	Primary production (carbon)		1984	2005
FCE	Animal species richness, Osteichthyes	Shark Slough	1996	2005
		Taylor Slough	1996	2005
	Biomass, periphyton	Shark River Slough sites 1, 2, and 3, Epiphyton substrate	2001	2007

Appendix 28. Stations and length of record for each plant and animal variable by site, as grouped by ecosystem type—*Continued*

Site code	Variable	Station	Start	End
	Net primary production (carbon)		2001	2007
	Biomass, periphyton	Shark River Slough sites 1, 2, and 3, Mat substrate	2002	2007
	Net primary production (carbon)		2002	2007
	Biomass, periphyton	Shark River Slough sites 1, 2, and 3, Periphyton substrate	2002	2007
	Net primary production (carbon)		2002	2007
GCE	Animal abundance, Orthoptera	Study Site 1, Eulonia, GA	2000	2008
		Study Site 3, North Sapelo, Sapelo Island, GA	2000	2008
		Study Site 6, Dean Creek, Sapelo Island, GA	2000	2008
	Plant biomass	High Marsh site	2000	2007
		Zone 1, Creek Bank	2000	2007
MCR	Animal abundance, fish	MRB Lagoon research site	2000	2008
	Animal species richness, fish	North Shore region (7 research sites)	2000	2008
	Chlorophyll a	SeaWiFS data for Moorea Coral Reef Vicinity, area for chlorophyll and SST data	1998	2008
PAL	Animal abundance, *Pygoscelis adeliae*	Palmer Station	1975	2008
	Animal abundance, *P. antarcticus*		1976	2008
	Animal abundance, *P. papua*		1994	2008
	Primary production (carbon)		1991	2006
	Chlorophyll a	Palmer Station B	1991	2006
PIE	Aboveground net primary production	*Spartina alterniflora*-dominated salt marsh at Goat Island, North Inlet, Georgetown, SC	1985	2005
	Plant biomass		1984	2005
	Aboveground net primary production	*S. alterniflora*-dominated salt marsh at Law's Point, Rowley River, Plum Island Ecosystem, MA	1999	2005
	Plant biomass		1999	2005
	Aboveground net primary production	*S. patens*-dominated salt marsh at Law's Point, Rowley River, Plum Island Ecosystem, MA	2001	2005
	Plant biomass		2001	2005
SBC	Biomass, *Macrocystis pyrifera* (Kelp)	Arroyo Burro Reef, Santa Barbara Channel	2002	2008
		Arroyo Quemado Reef, Santa Barbara Channel	2002	2008
		Mohawk Reef, Santa Barbara Channel	2002	2008

Appendix 28. Stations and length of record for each plant and animal variable by site, as grouped by ecosystem type—*Continued*

Site code	Variable	Station	Start	End
VCR	Animal abundance, Muridae	Hog Island Rodent Trapping Transect 1	1989	2004
		Hog Island Rodent Trapping Transect 4	1989	2004
		Hog Island Rodent Trapping Transect 5	1989	2004
	Plant biomass	Randomly selected, destructively sampled, non-treated plots		
		at Frank Day Well Location R2, Hog Island	1993	2006
		at Frank Day Well Location R3, Hog Island	1993	2006
		at Frank Day Well Location R4, Hog Island	1993	2006
Eastern forests				
BEN	Diameter at breast height of trees	Mixed hardwood plots	1975	2000
		Yellow Poplar plots	1961	2001
CRO	Production of seeds, pine	Unknown	1980	2004
	Production volume, pine	Clearcut logging stands	1948	1996
		Diameter limit logging stands	1948	1996
		Heavy seedtree logging stands	1948	1996
		Selection logging stands	1948	1996
HAR	Diameter at breast height, *Pinus palustris* (longleaf pine)	North plantation	1960	2000
	Height, *P. palustris*		1960	2000
	Diameter at breast height, *P. palustris*	South plantation	1960	2000
	Height, *P. palustris*		1960	2000
HBR	Aboveground net primary production	Unknown	1987	1996
	Animal abundance, Aves	10-hectare bird count plot	1969	2004
	Animal species richness, Aves		1969	2004
	Animal abundance, Lepidoptera	on *Acer saccharum*	1986	1997
		on *Fagus grandifolia*	1986	1997
	Diameter at breast height of trees	Vegetation zone 1 at watershed 6	1965	2002
	Plant biomass		1965	2002
	Diameter at breast height of trees	Vegetation zones 2 and 3 at watershed 6	1965	2002
	Plant biomass		1965	2002
	Diameter at breast height of trees	Vegetation zone 4 at watershed 6	1965	2002
	Plant biomass		1965	2002

Appendix 28. Stations and length of record for each plant and animal variable by site, as grouped by ecosystem type—*Continued*

Site code	Variable	Station	Start	End
	Diameter at breast height of trees	Vegetation zone 5 at watershed 6	1965	2002
	Plant biomass		1965	2002
HFR	Aboveground net primary production of trees	Little Prospect Hill	2002	2006
	Diameter at breast height of trees	Lyford Blocks within the Prospect Hill Tract	1969	2001
LUQ	Animal abundance, Aves	El Verde	1989	2008
	Animal abundance, Caridea	El Verde Study Area, Pool 0, Quebrada Prieta	1988	2008
		Pool 15 in Quebrada Prieta (upstream pool)	1988	2008
		Pool 8 in Quebrada Prieta	1988	2008
	Animal abundance, *Eleutherodactylus coqui*	El Verde New Plot	1987	1997
		El Verde Old Plot	1987	1997
	Animal abundance, Gastropoda	Luquillo Forest Dynamics Plot at El Verde	1991	2007
NTL	Animal abundance, Orconectes	Big Muskellunge Lake	1981	2008
		Lake Mendota	1981	2008
		Sparkling Lake	1981	2008
	Animal abundance, fish		1981	2008
	Animal species richness, fish		1981	2008
	Animal abundance, Orconectes	Trout Lake	1981	2008
	Animal abundance, fish		1981	2008
	Animal species richness, fish		1981	2008
	Plant biomass	Trout Lake	1983	2008
	Plant species richness		1983	2008
	Animal abundance, fish	Crystal Lake	1981	2008
	Animal species richness, fish		1981	2008
	Plant species richness	Site 31, Channel Mouth Island	1983	2008
		Site 50, Southwest Bay of South Trout Lake	1983	2008
		Site 56, Mouth of Mann Creek	1983	2008
		Site 7, Rocky Reef Bay	1983	2008
	Primary production, hypsometrically weighted	Crystal Lake, epilimnion	1987	2007
		Sparkling Lake, epilimnion	1987	2007
		Trout Lake, epilimnion	1987	2007

Appendix 28. Stations and length of record for each plant and animal variable by site, as grouped by ecosystem type—*Continued*

Site code	Variable	Station	Start	End
Temperate grasslands and savannas				
CDR	Aboveground net primary production	Unknown	1982	1998
	Animal abundance, Orthoptera	Cedar Creek	1989	2004
	Animal species richness, Orthoptera		1989	2004
	Plant biomass	Old Fields 4, 24, 28, 41	1988	2003
	Plant species richness		1988	2006
	Plant biomass	Old Fields 5, 35, 45, 72	1988	2003
	Plant species richness		1988	2006
	Plant biomass	Old Fields 26, 53, 70, 77	1988	2003
	Plant species richness		1988	2006
FTK	Aboveground net primary production	Lysimeter 1	1993	2004
		Lysimeter 8	1993	2004
KBS	Aboveground net primary production	Treatment 7, native successional treatment, abandoned after spring plowing in 1989	1991	2008
	Plant species richness		1991	2008
	Animal abundance, Neoptera		1989	2008
	Aboveground net primary production	Treatment 8, never plowed, 200 meters (m) south of the others, that serves as an historical control for soil organic matter studies	1991	2008
	Plant species richness		1991	2008
	Aboveground net primary production	Treatment SF, old field successional community, never tilled	1993	2008
	Plant species richness		1993	2008
	Animal abundance, Neoptera	Treatment 1, standard levels of chemical inputs, conventional chisel plowed tillage	1989	2008
		Treatment 2, standard levels of chemical inputs, no tillage	1989	2008
		Treatment 3, organic-based low chemical input (banded herbicide,starter N), winter leguminous crop, annual tillage and post-planting cultivation	1989	2008
		Treatment 4, certified organic, no chemical inputs, annual tillage, rotary-hoed to control weeds	1989	2008
		Treatment 5, Poplar trees (fallow 2008), planted on a 10-year rotation cycle	1989	2008

Appendix 28. Stations and length of record for each plant and animal variable by site, as grouped by ecosystem type—*Continued*

Site code	Variable	Station	Start	End
KBS	Animal abundance, Neoptera	Treatment 6, Continuous alfalfa (wheat 2008)	1989	2008
KNZ	Aboveground net primary production	Watershed 020b, burned every 20 years, on deep Tully soils	1984	2005
		Watershed 020b, burned every 20 years, on shallow Florence soils	1984	2005
	Animal abundance, Mammalia	Watershed 001d	1981	1997
	Animal abundance, Orthoptera		1982	2004
	Animal species richness, Orthoptera		1982	2004
	Animal abundance, Mammalia	Watershed 004b	1981	1997
	Animal abundance, Orthoptera		1982	2004
	Animal species richness, Orthoptera		1982	2004
	Animal abundance, Orthoptera	Watershed 020b	1996	2004
	Animal species richness, Orthoptera		1996	2004
SGS	Aboveground net primary production	ESA Control 1	1983	2007
		Owl Creek, coarse texture soil	1991	2007
		Sec 25, fine texture soil	1991	2007
	Animal abundance, Aves	USGS Bird Breeding Survey area 17901, Rockport, CO	1995	2008
	Animal species richness, Aves		1994	2008
	Animal abundance, Aves	USGS Breeding Bird Survey Route 17305, Nunn, CO	1995	2008
	Animal species richness, Aves		1995	2008
SPR	Plant biomass, forbs	Watershed 1	1984	2005
	Plant biomass, grass		1984	2005
Urban				
CAP	Animal abundance, Araneae (spiders)	Agricultural study sites	1998	2004
	Animal abundance, Orthoptera		1998	2003
	Animal abundance, Araneae (spiders)	Desert study sites	1998	2004
	Animal abundance, Orthoptera		1998	2004
	Animal abundance, Araneae (spiders)	Urban study sites	1998	2004
	Animal abundance, Orthoptera		1998	2004

Appendix 28. Stations and length of record for each plant and animal variable by site, as grouped by ecosystem type—*Continued*

Site code	Variable	Station	Start	End
Western forests				
AND	Aboveground net primary production, tree boles	Reference Stand 2	1988	2005
	Plant biomass, tree boles		1988	2005
	Aboveground net primary production, tree boles	Reference Stand 29	1983	2001
	Plant biomass, tree boles		1988	2005
	Animal abundance, *Oncorhynchus clarkii*	Clearcut section of Mack Creek	1987	2007
		Old growth section of Mack Creek	1987	2007
	Plant species richness	Watershed 1	1962	2008
		Watershed 3	1962	2008
BNZ	Aboveground net primary production	Unknown	1991	1998
CHE	Diameter at breast height	HSGY Study Plots		
	Picea sitchensis (Sitka spruce)		1935	2003
	Pseudotsuga menziesii (Douglas fir)		1935	2003
	Tsuga heterophylla (Western hemlock)		1935	2003