Data Visualization

Rachael E. Blake

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Invertebrates: Percent Cover Data

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## [[1]]
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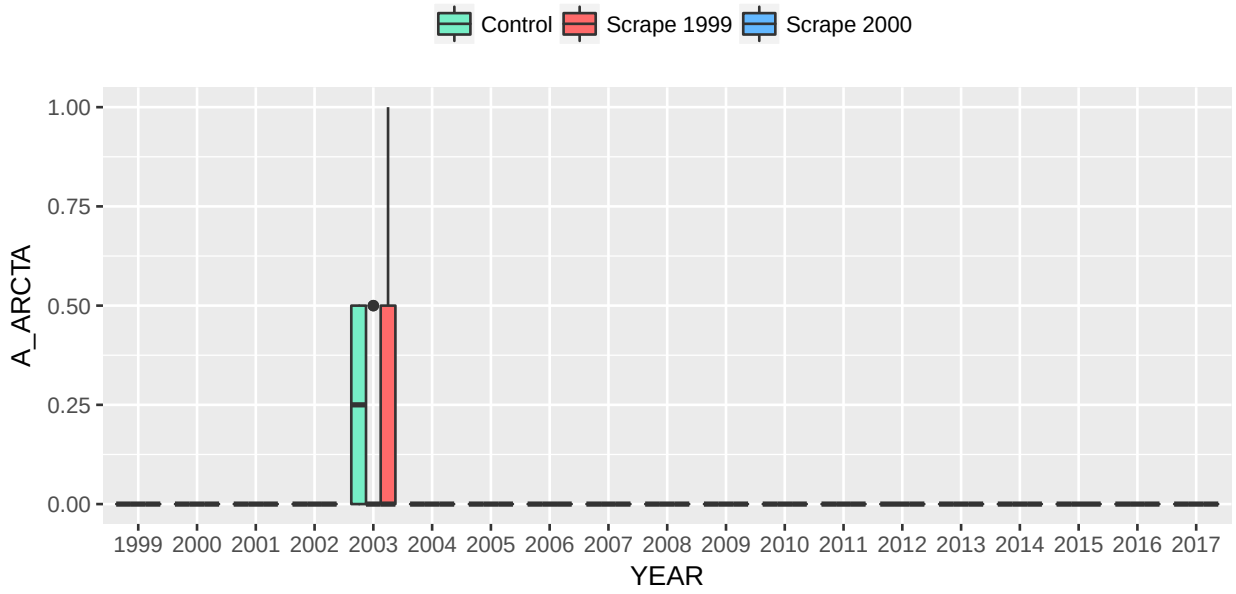


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##
## [[2]]
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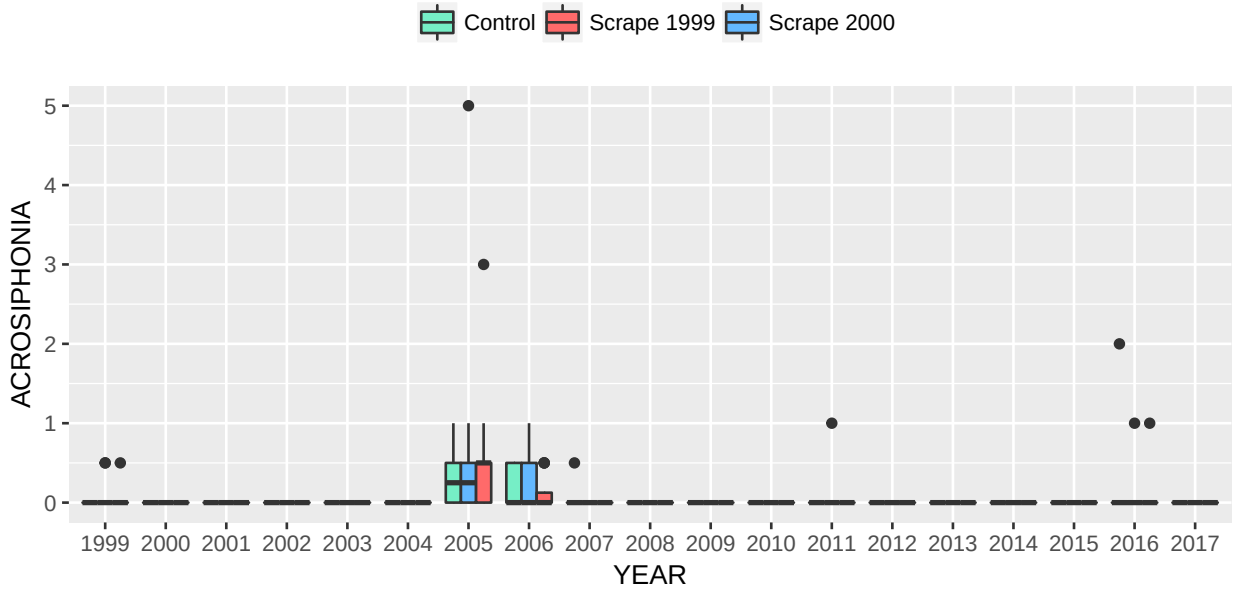

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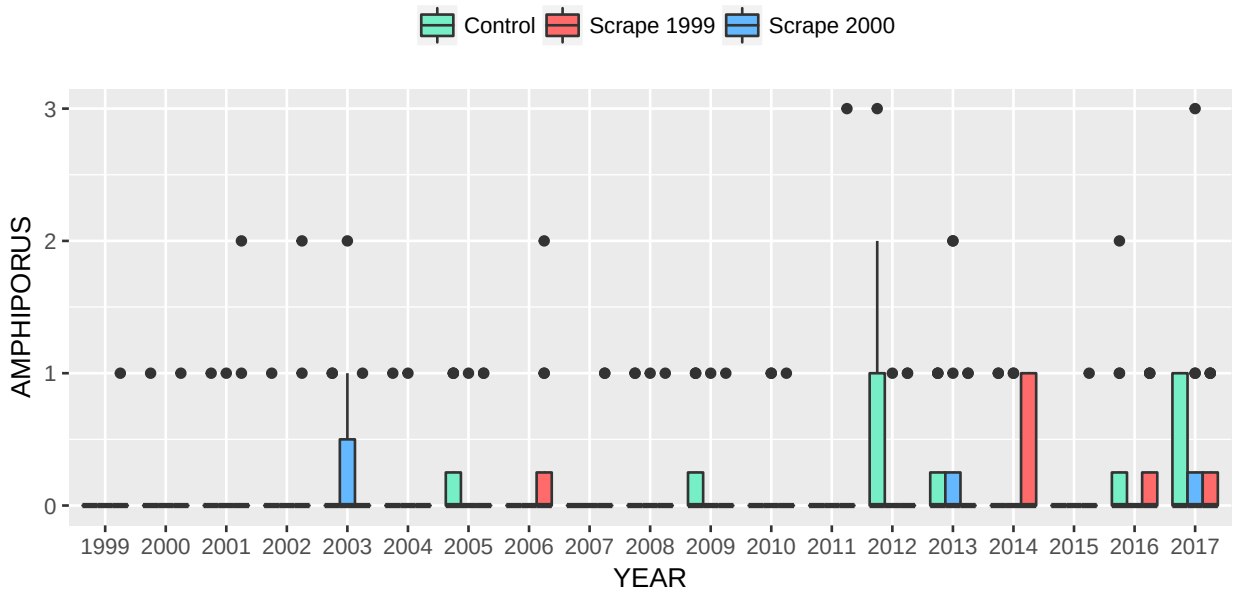
[[3]]


Control
Scrape 1999
Scrape 2000
AMPHIPORUS
0
1
2
3
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
YEAR

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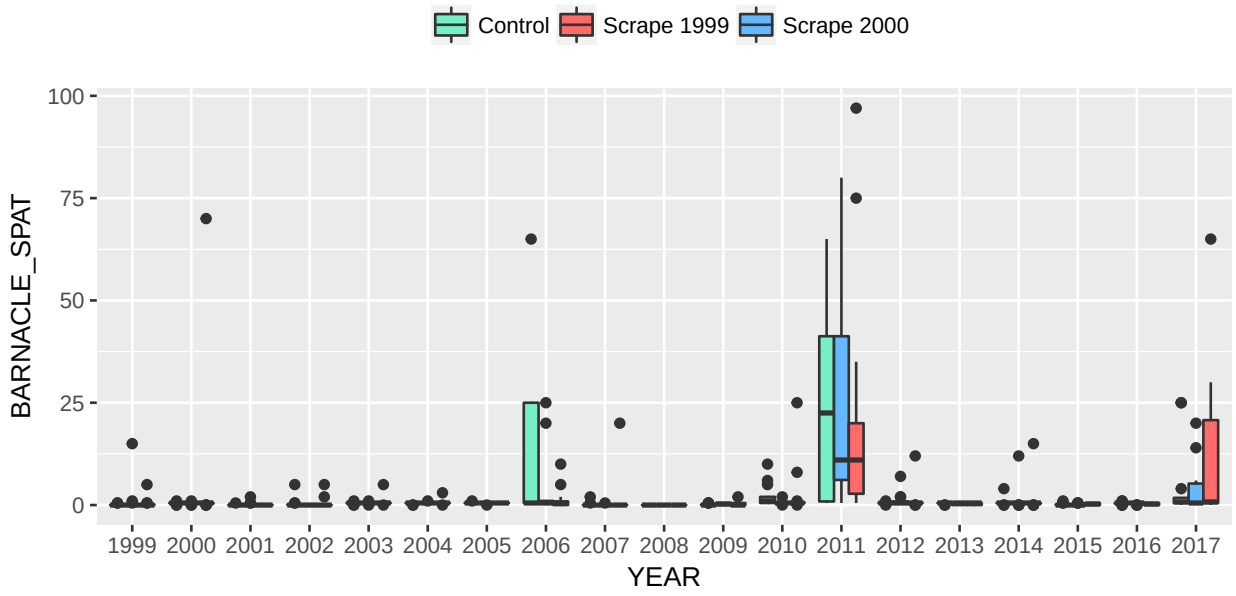
[[4]]


Control
Scrape 1999
Scrape 2000
BARNACLE_SPAT
0
25
50
75
100
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
YEAR

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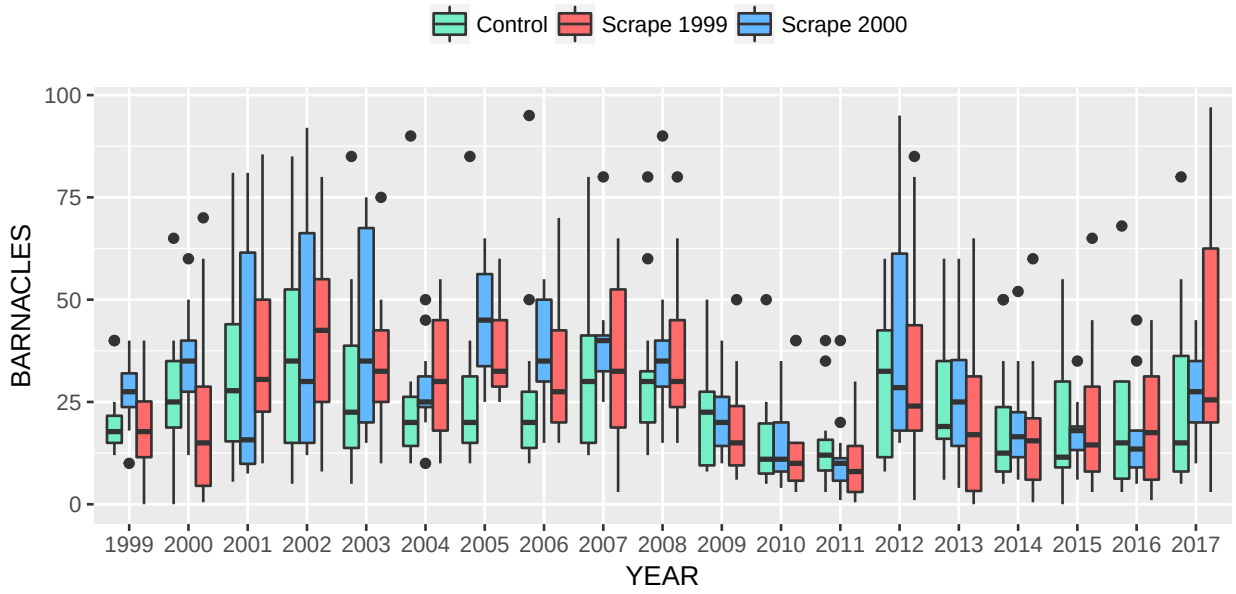
[[5]]


Control
Scrape 1999
Scrape 2000
BARNACLES
100
75
50
25
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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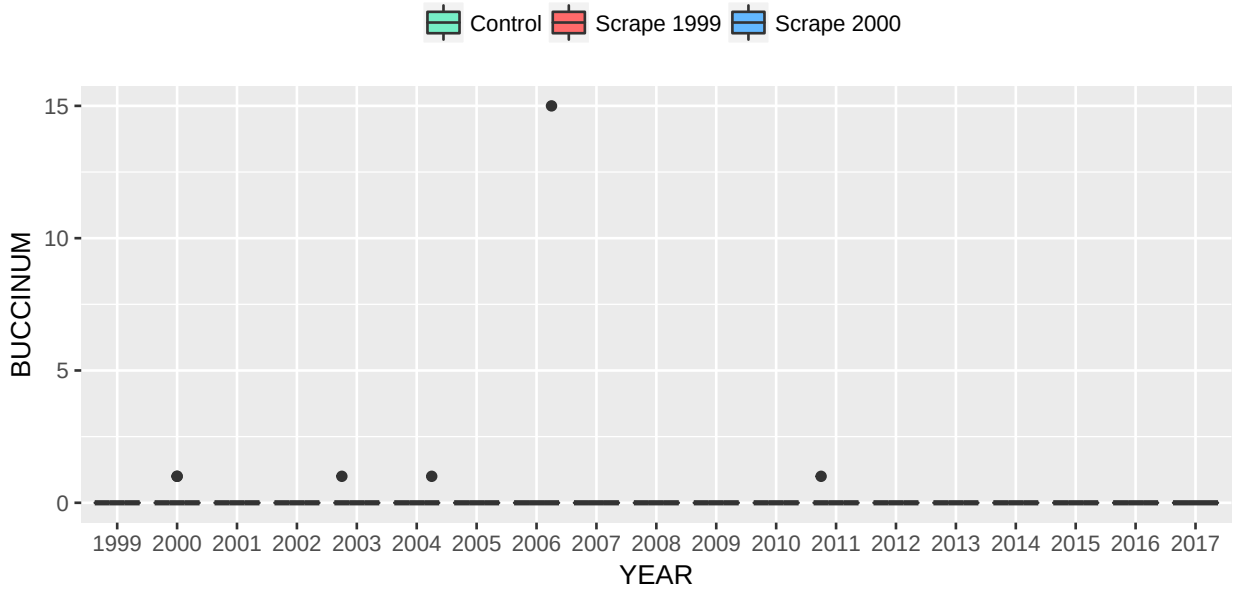
##
## [[6]]
```


Control
Scrape 1999
Scrape 2000
BUCCINUM
15
10
5
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[7]]
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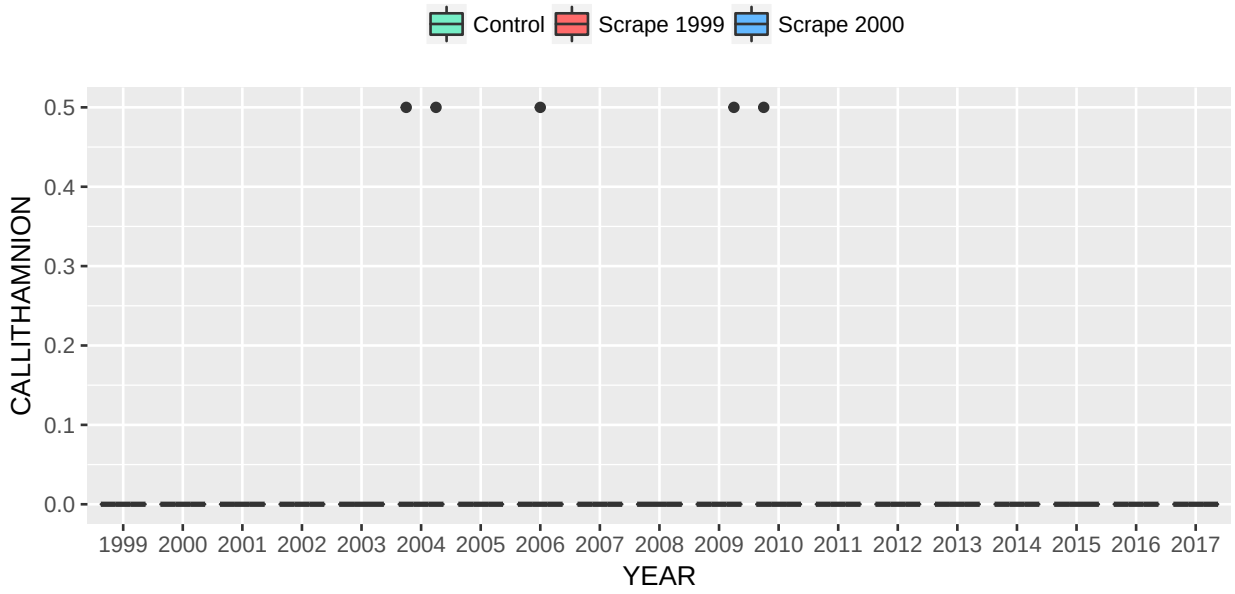
Control
Scrape 1999
Scrape 2000
CALLITHAMNION
0.5
0.4
0.3
0.2
0.1
0.0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[8]]
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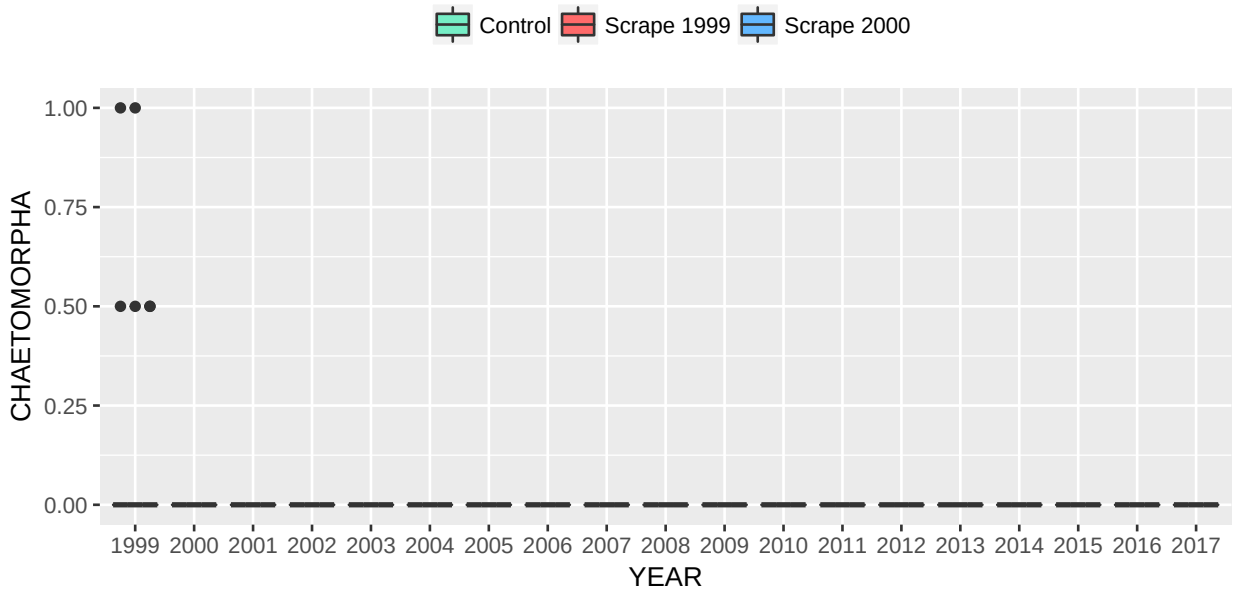
Control
Scrape 1999
Scrape 2000
CHAETOMORPHA
1.00
0.75
0.50
0.25
0.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[9]]
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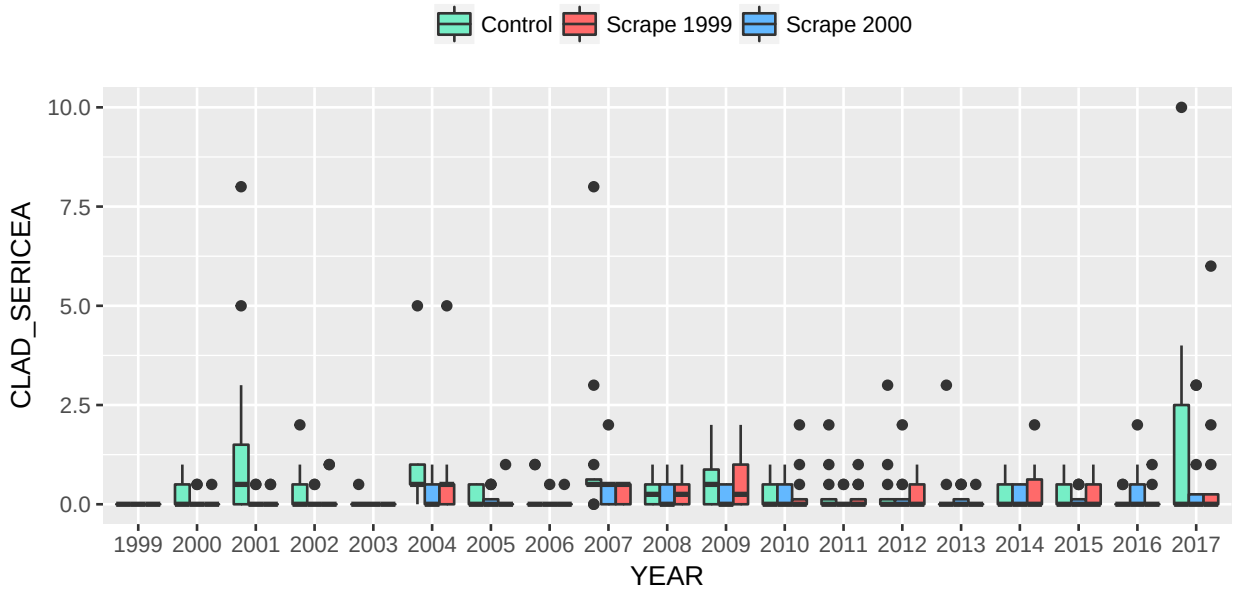
Control
Scrape 1999
Scrape 2000
CLAD_SERICEA
10.0
7.5
5.0
2.5
0.0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[10]]
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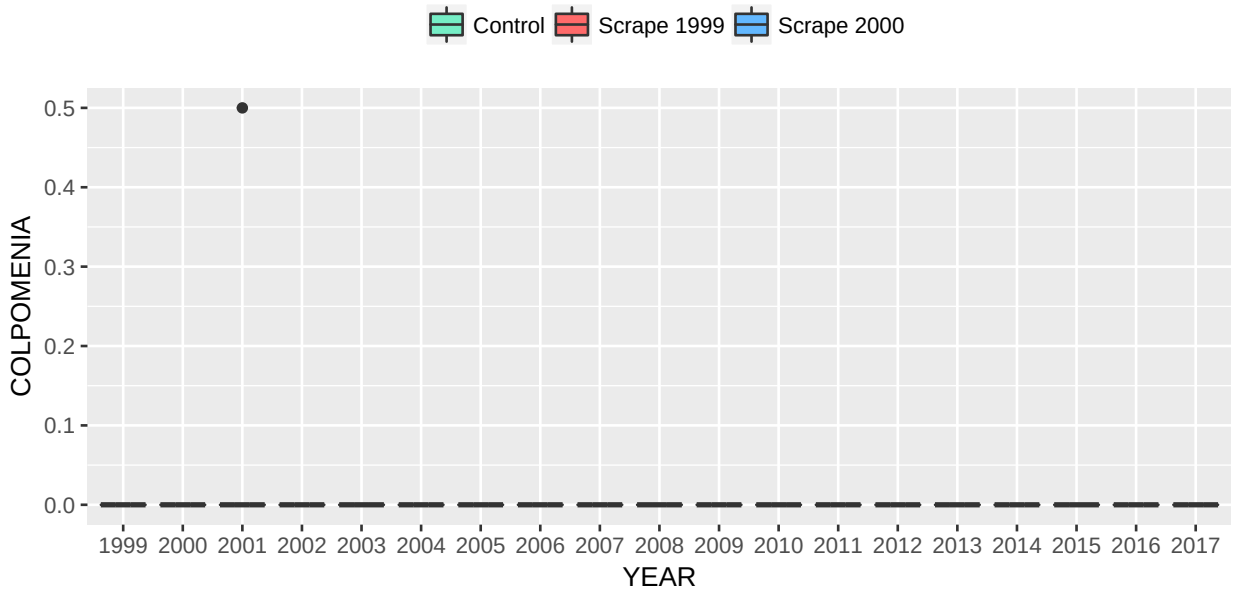
Control
Scrape 1999
Scrape 2000
COLPOMENIA
0.5
0.4
0.3
0.2
0.1
0.0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[11]]
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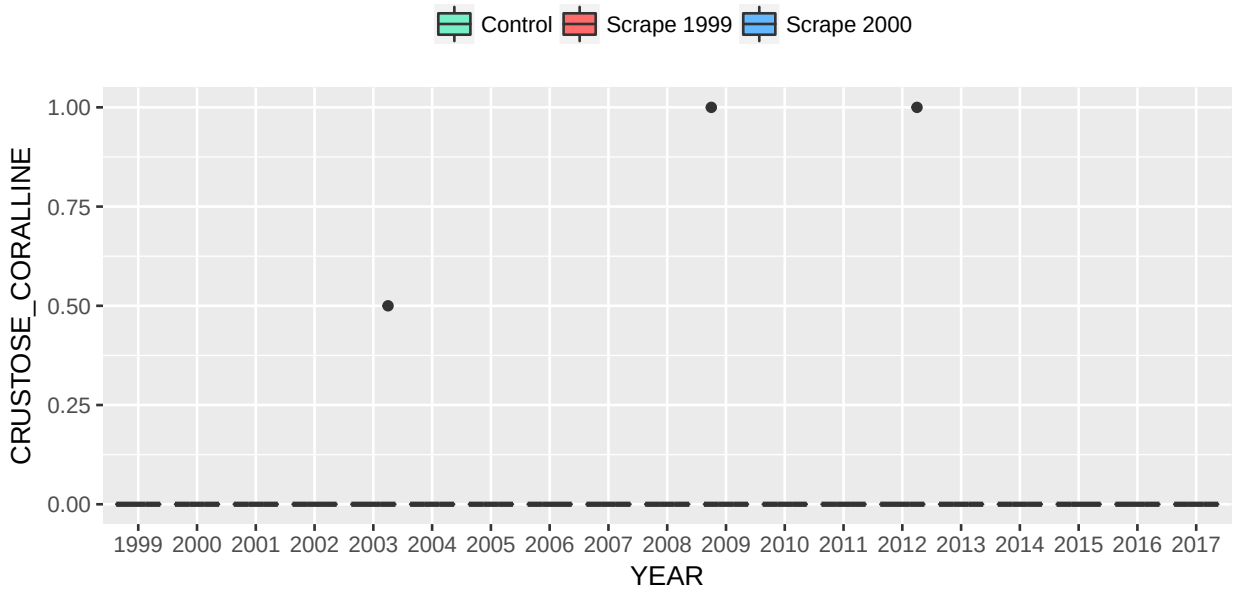
Control
Scrape 1999
Scrape 2000
CRUSTOSE_CORALLINE
1.00
0.75
0.50
0.25
0.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[12]]
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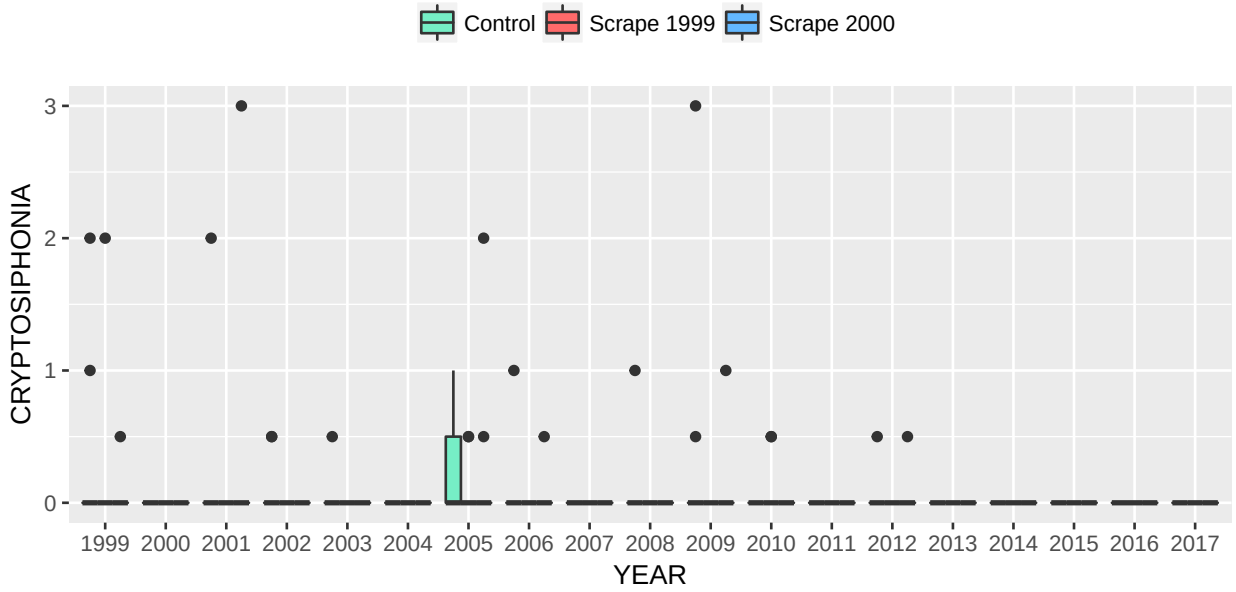
Control
Scrape 1999
Scrape 2000
CRYPTOSIPHONIA
3
2
1
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[13]]
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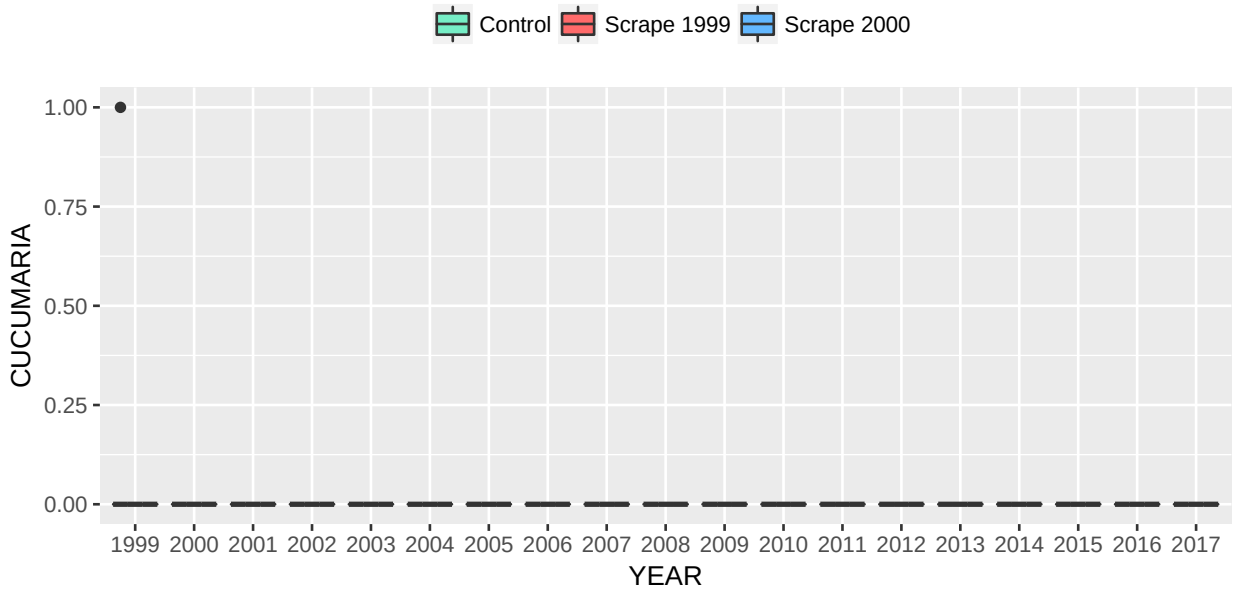
Control
Scrape 1999
Scrape 2000
CUCUMARIA
1.00
0.75
0.50
0.25
0.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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## [[14]]
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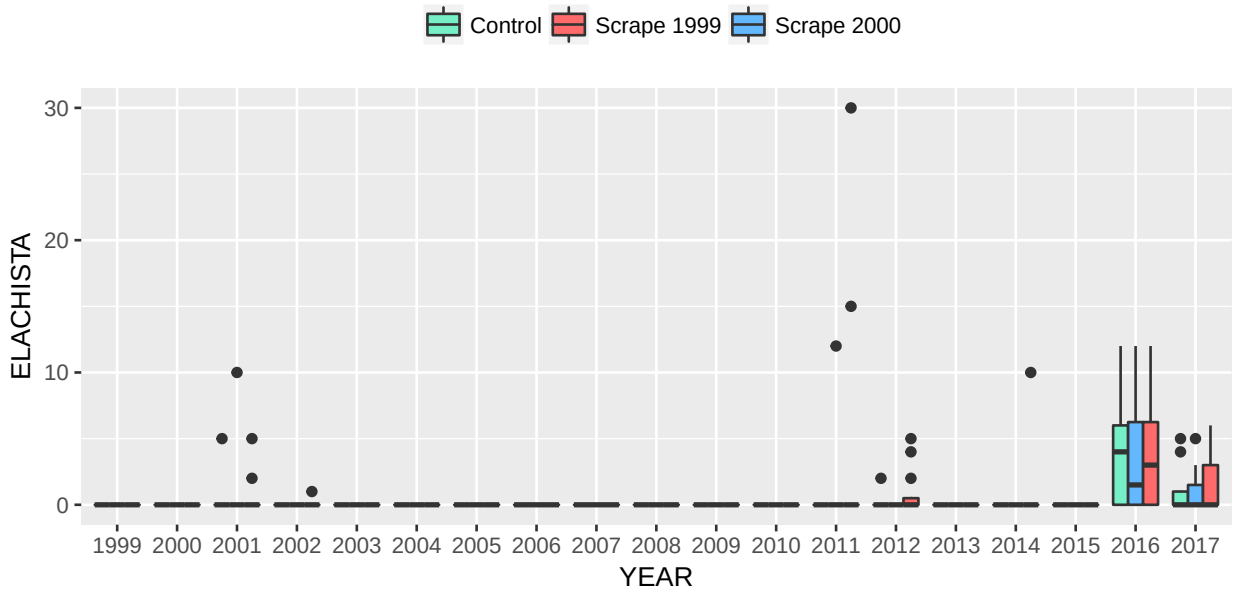
Control
Scrape 1999
Scrape 2000
ELACHISTA
30
20
10
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[15]]
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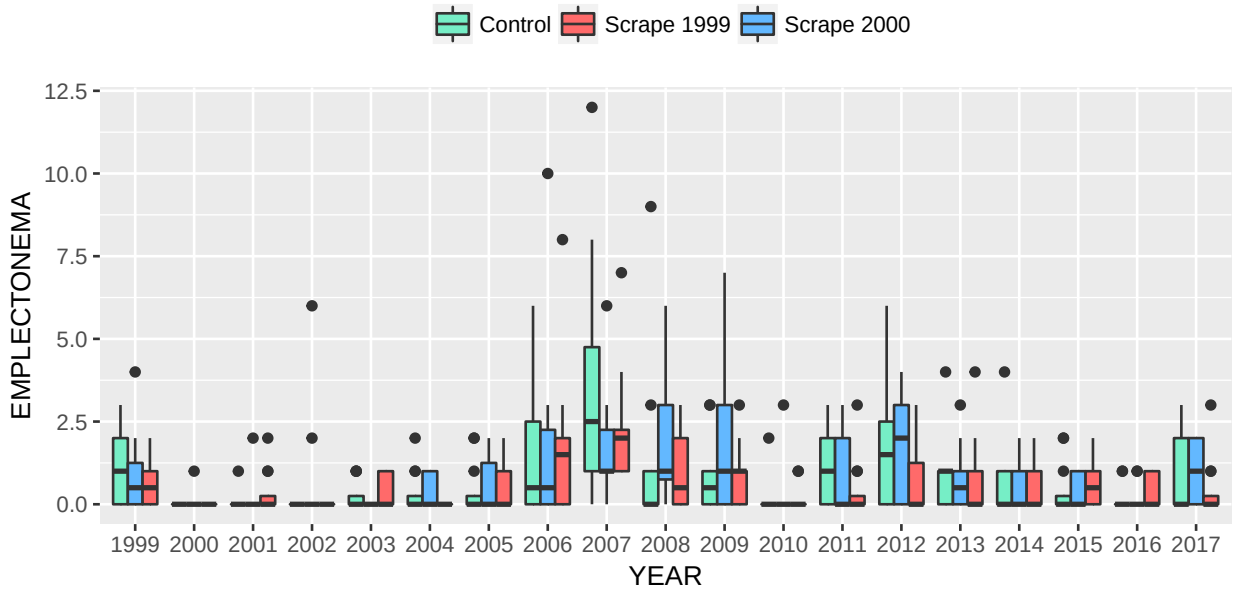
Control
Scrape 1999
Scrape 2000
EMPLECTONEMA
12.5
10.0
7.5
5.0
2.5
0.0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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## [[16]]
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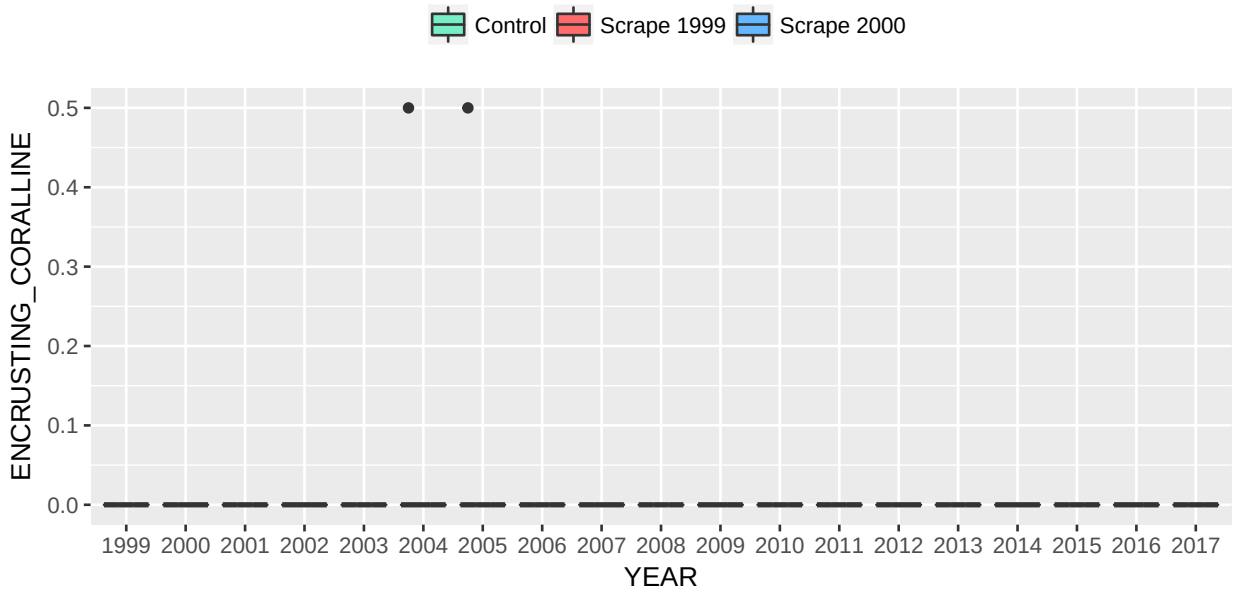
Control
Scrape 1999
Scrape 2000
ENCRUSTING_CORALLINE
0.5
0.4
0.3
0.2
0.1
0.0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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## [[17]]
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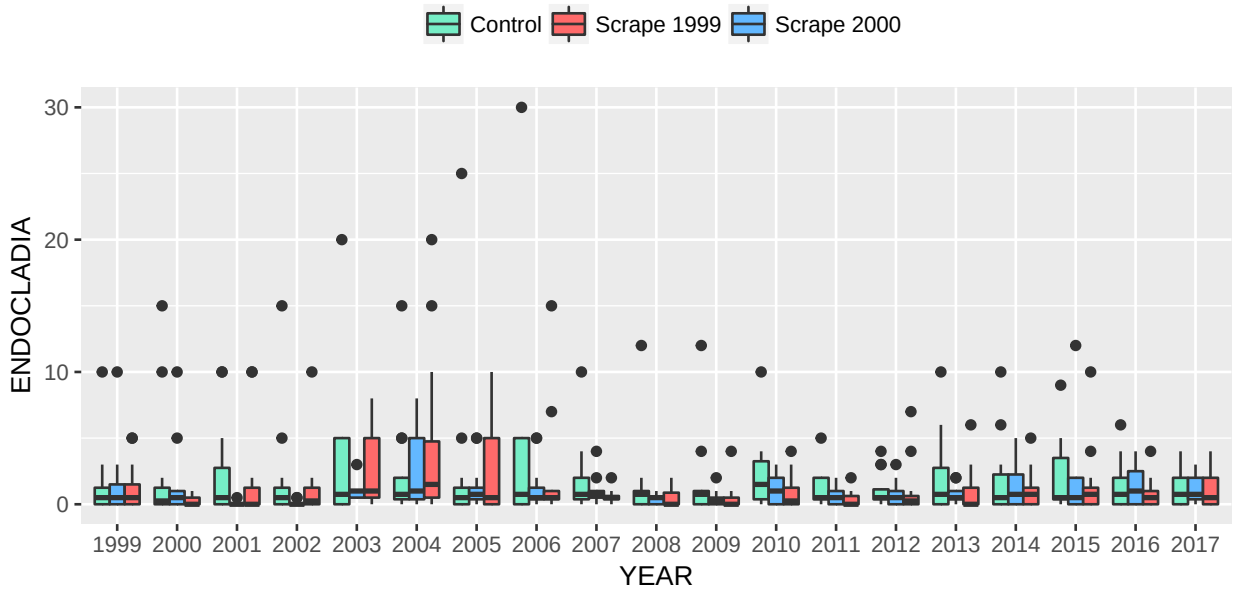
Control
Scrape 1999
Scrape 2000
ENDOCLADIA
30
20
10
0
1999
2000
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YEAR

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## [[18]]
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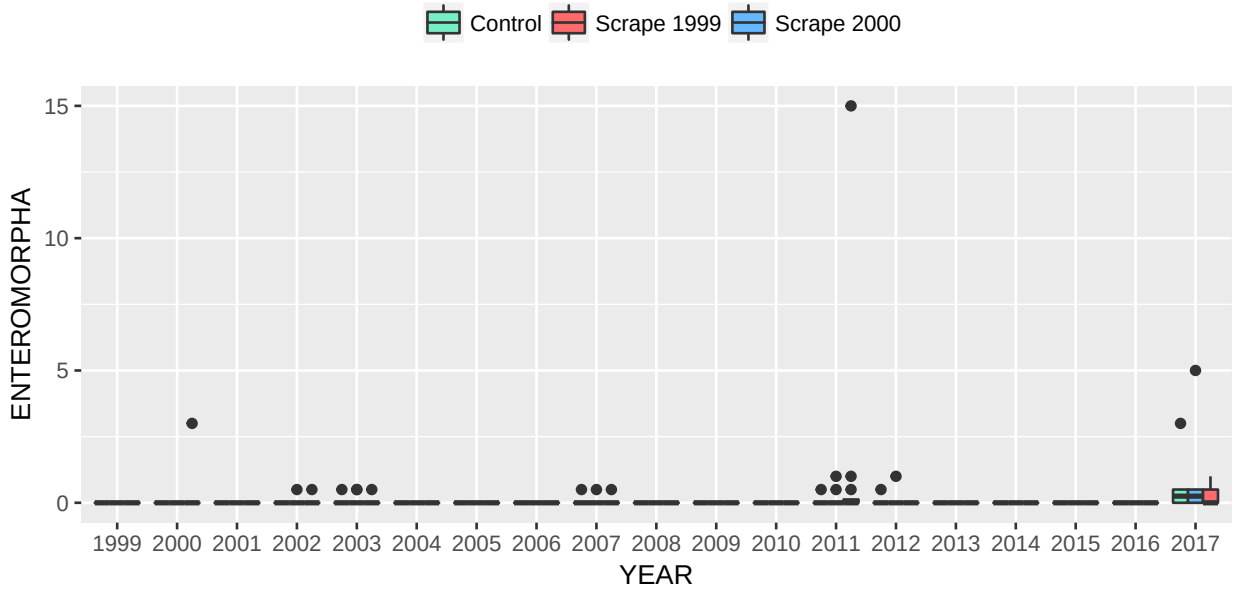
Control
Scrape 1999
Scrape 2000
ENTEROMORPHA
15
10
5
0
1999
2000
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YEAR

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## [[19]]
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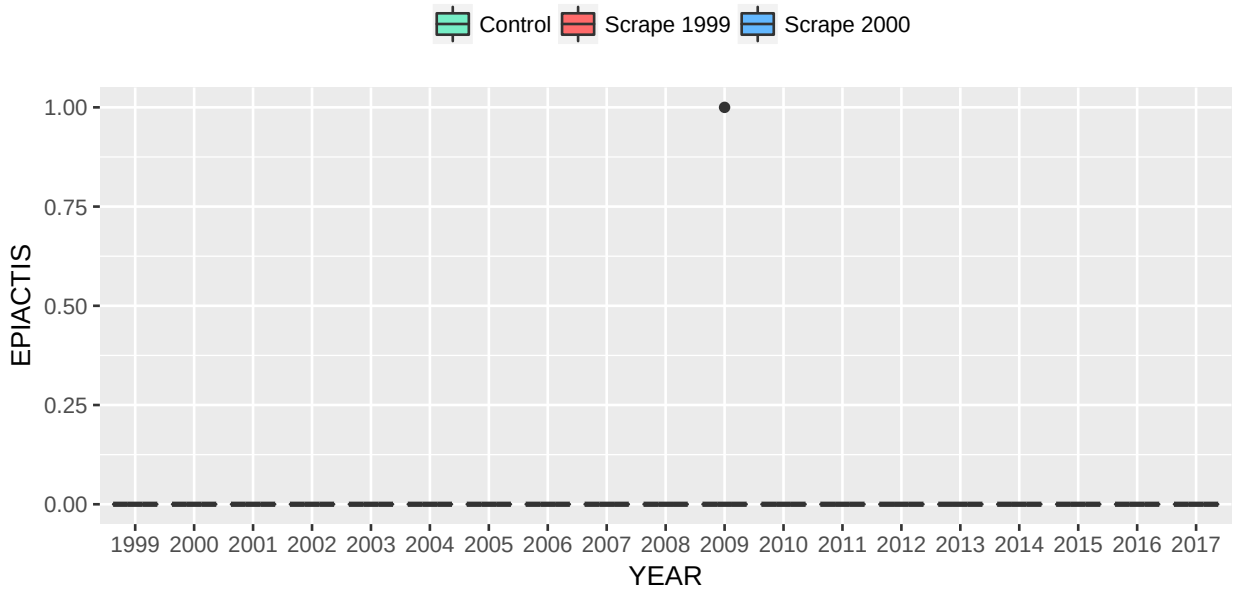
Control
Scrape 1999
Scrape 2000
EPIACTIS
1.00
0.75
0.50
0.25
0.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[20]]
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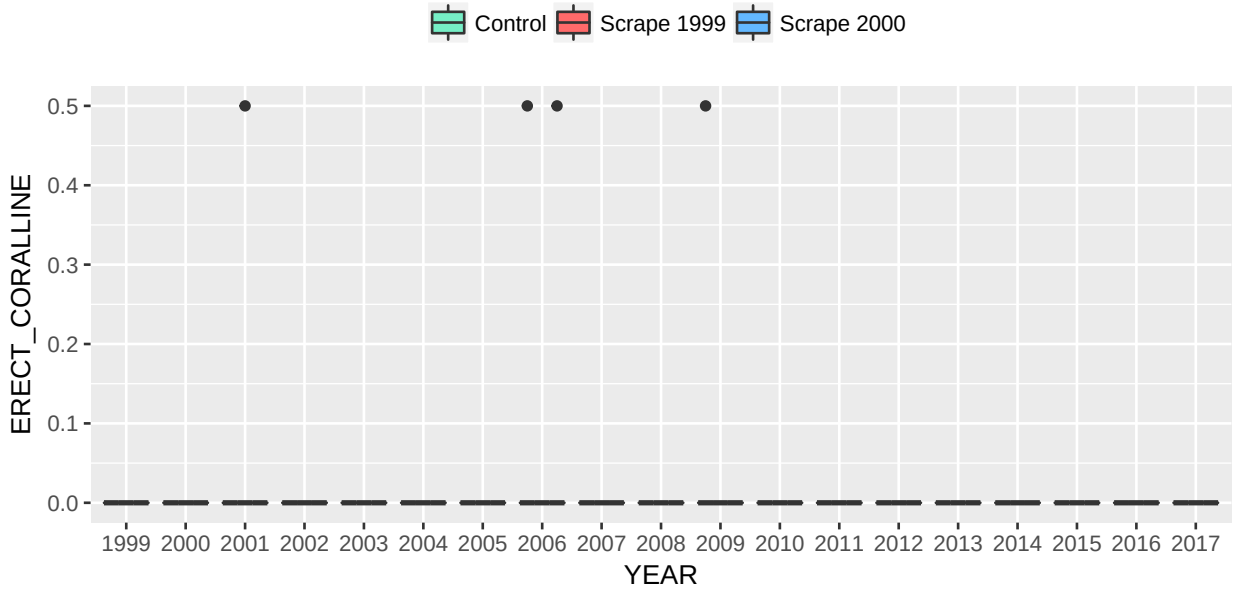
Control
Scrape 1999
Scrape 2000
ERECT_CORALLINE
0.5
0.4
0.3
0.2
0.1
0.0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[21]]
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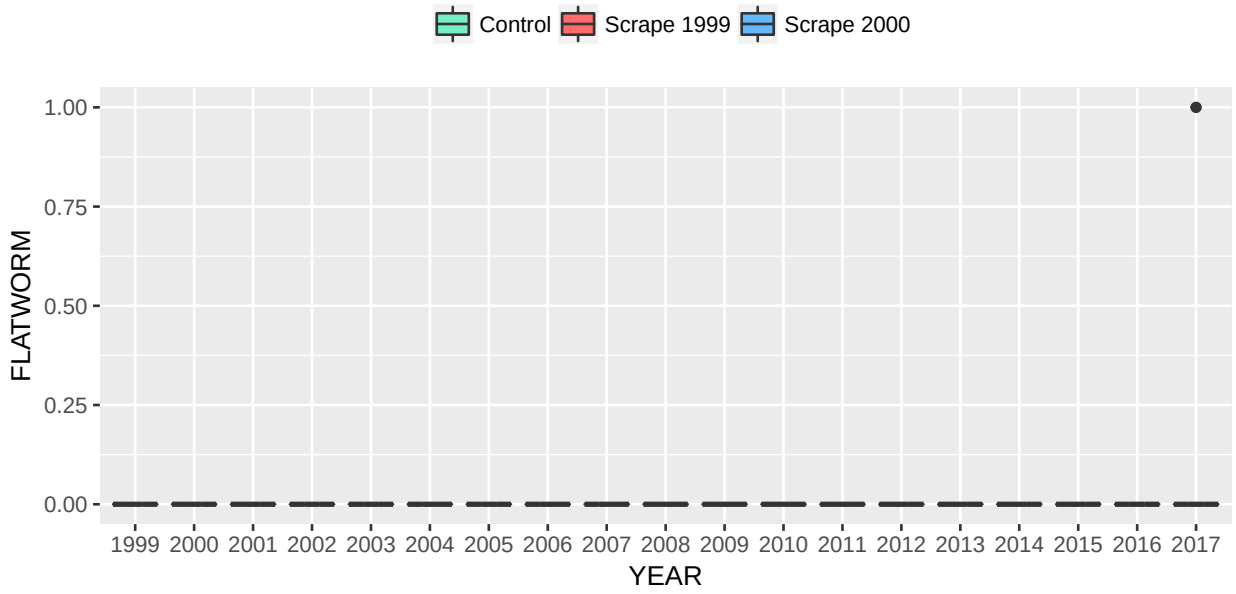
Control
Scrape 1999
Scrape 2000
FLATWORM
1.00
0.75
0.50
0.25
0.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[22]]
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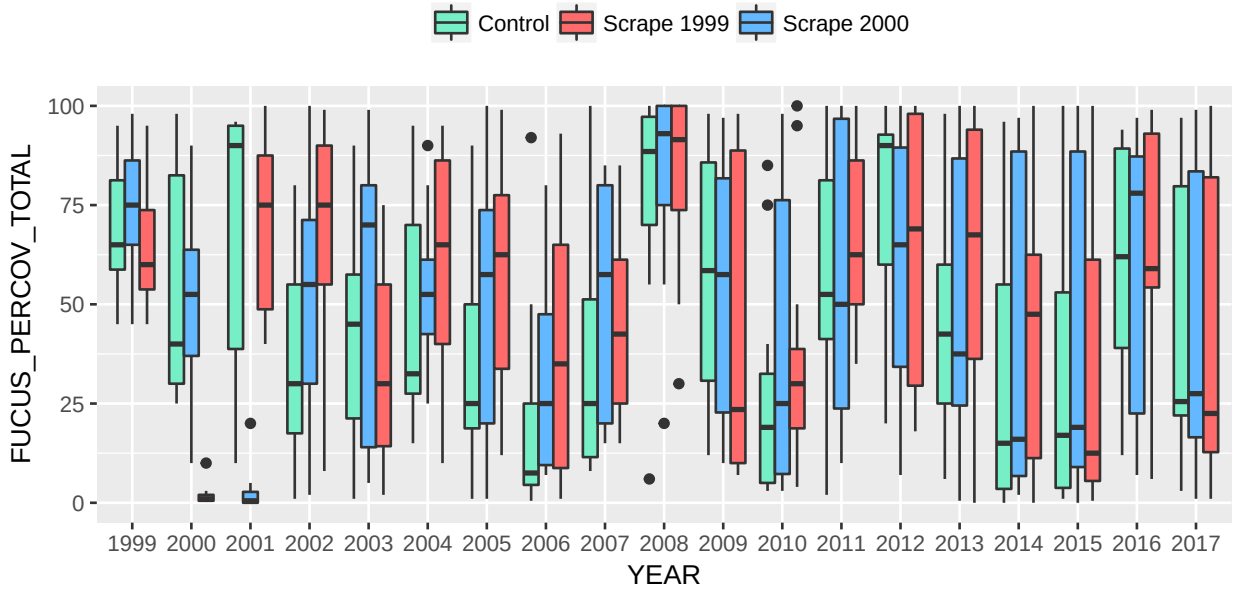
Control
Scrape 1999
Scrape 2000
FUCUS_PERCOV_TOTAL
100
75
50
25
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[23]]
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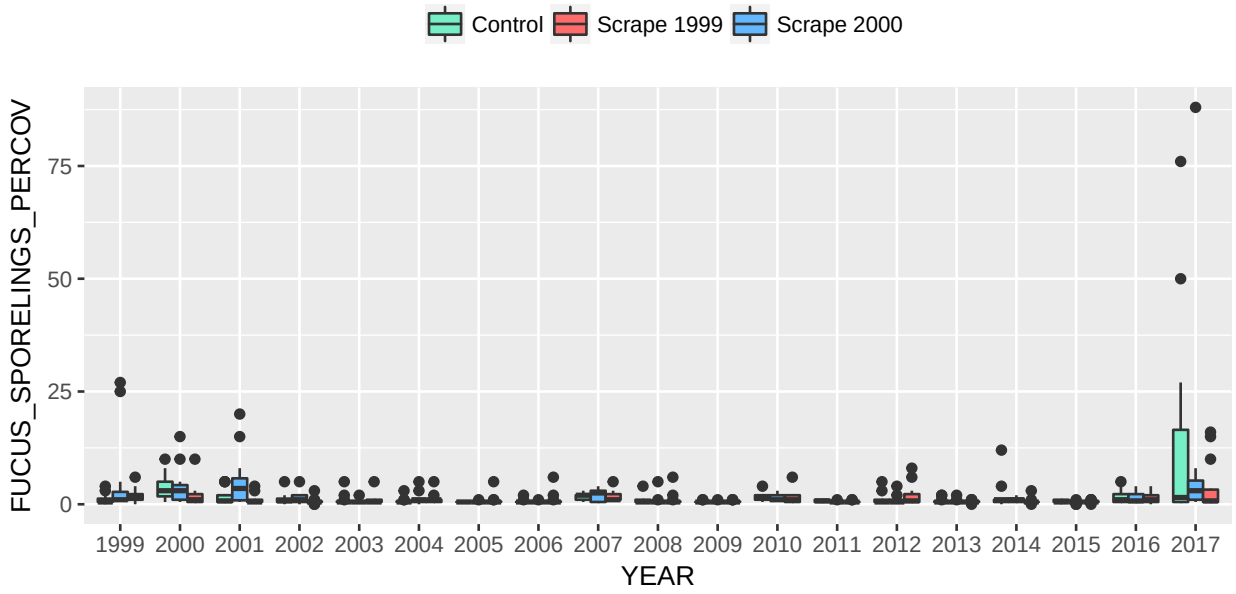
Control
Scrape 1999
Scrape 2000
FUCUS_SPORELINGS_PERCOV
0
25
50
75
1999
2000
2001
2002
2003
2004
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2006
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2008
2009
2010
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2012
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2014
2015
2016
2017
YEAR

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##
## [[24]]
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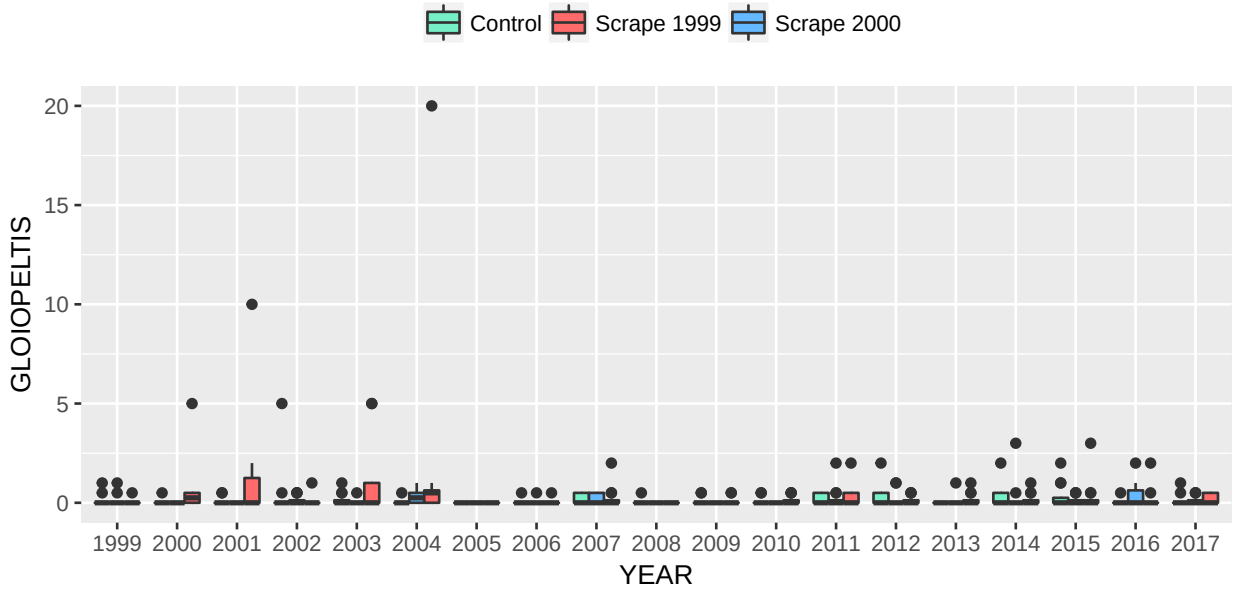
Control
Scrape 1999
Scrape 2000
GLOIOPELTIS
0
5
10
15
20
1999
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2016
2017
YEAR

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##
## [[25]]
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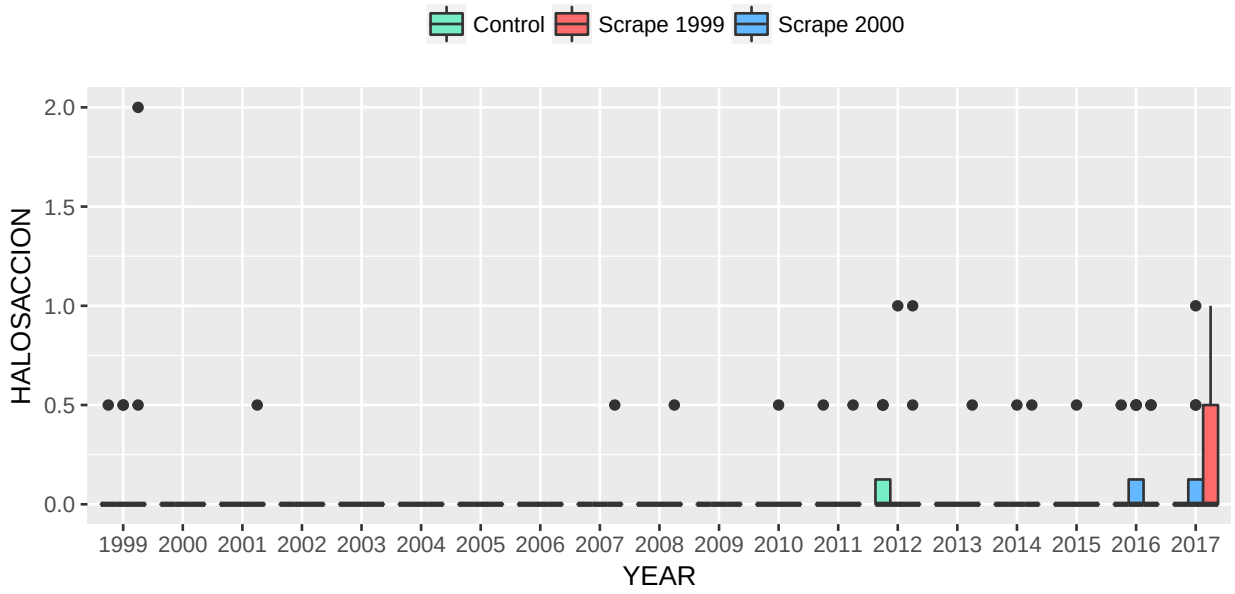
Control
Scrape 1999
Scrape 2000
HALOSACCION
2.0
1.5
1.0
0.5
0.0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[26]]
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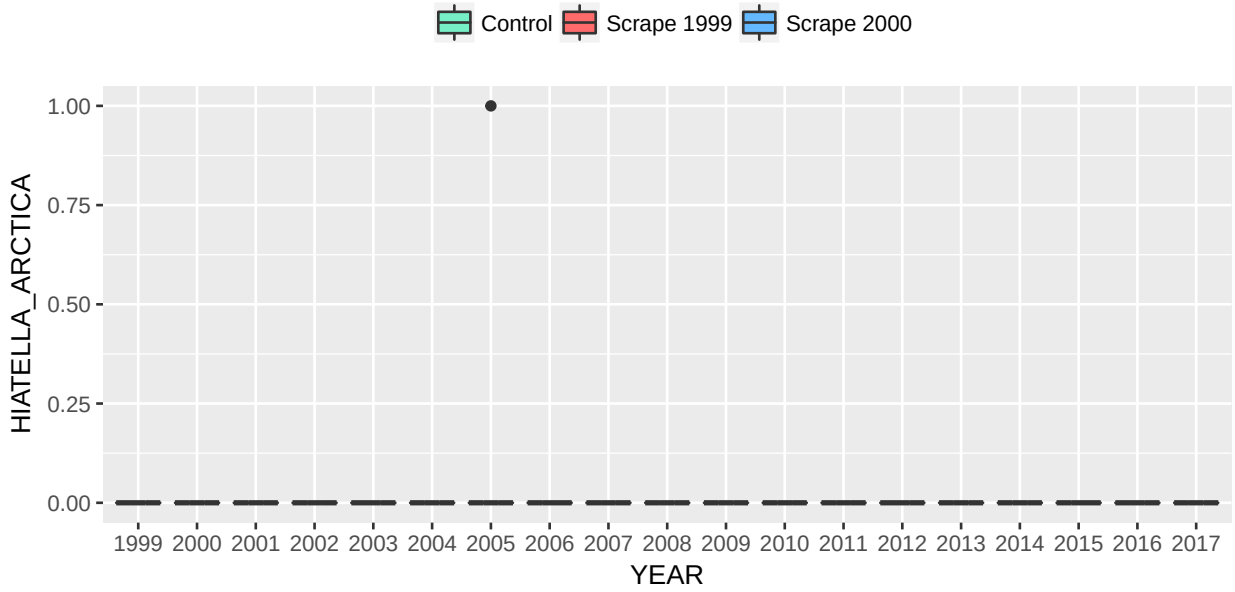
Control
Scrape 1999
Scrape 2000
HIATELLA_ARCTICA
1.00
0.75
0.50
0.25
0.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[27]]
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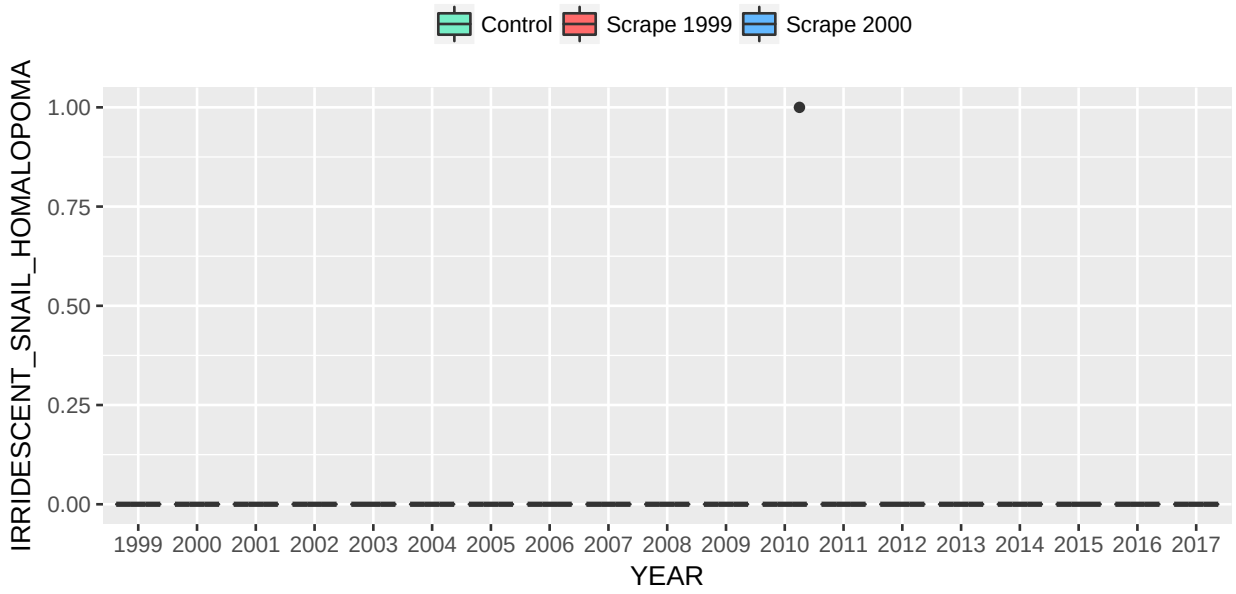
Control
Scrape 1999
Scrape 2000
IRRIDESCENT_SNAIL_HOMALOPOMA
1.00
0.75
0.50
0.25
0.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[28]]
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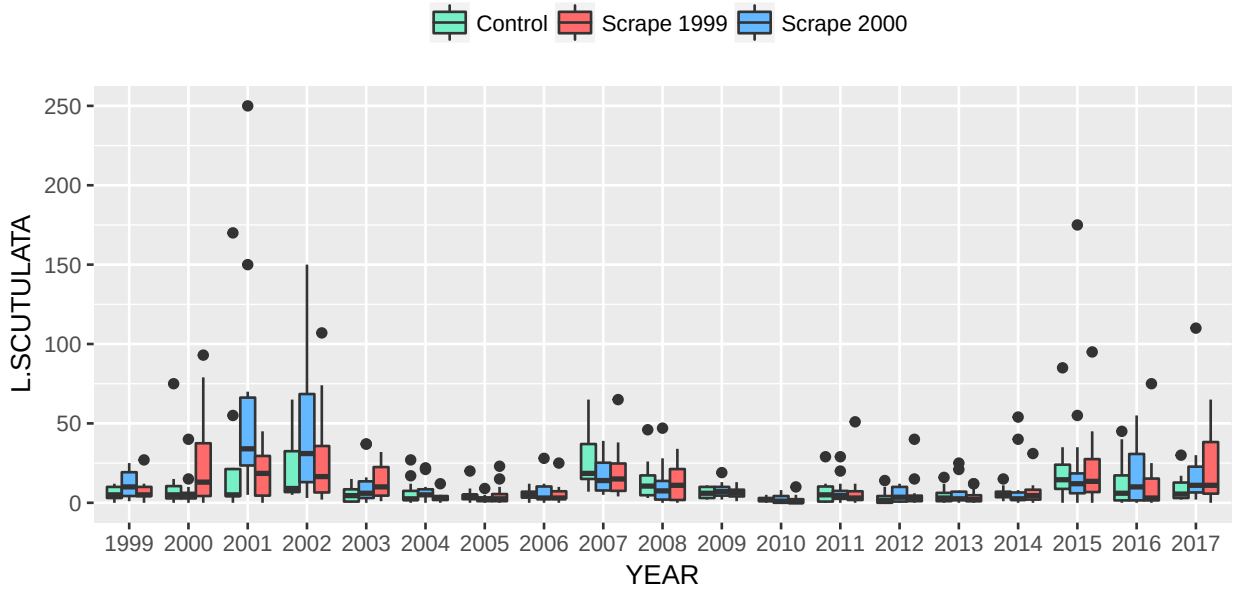
Control
Scrape 1999
Scrape 2000
L.SCUTULATA
250
200
150
100
50
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[29]]
```

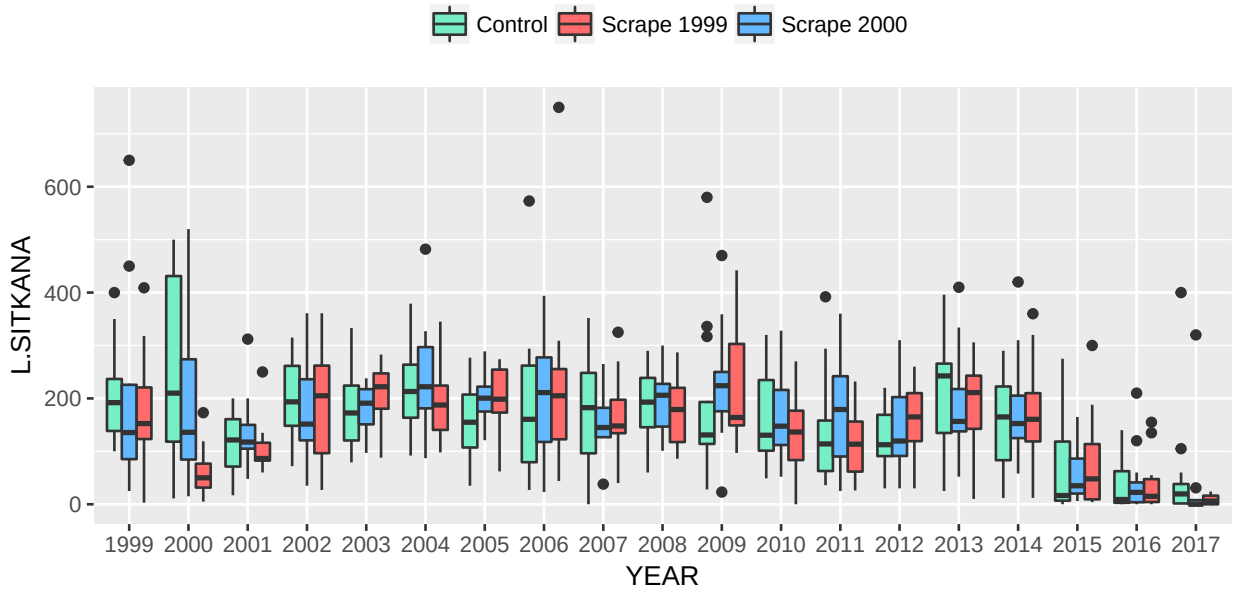
Control
Scrape 1999
Scrape 2000
L.SITKANA
600
400
200
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[30]]
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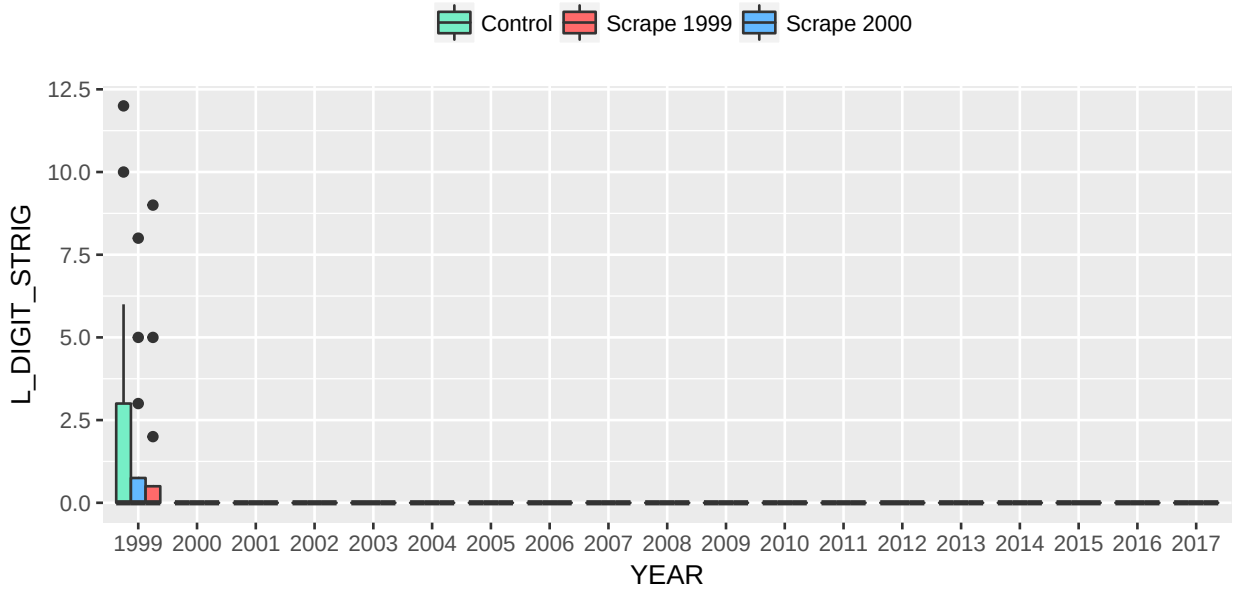
Control
Scrape 1999
Scrape 2000
L_DIGIT_STRIG
12.5
10.0
7.5
5.0
2.5
0.0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[31]]
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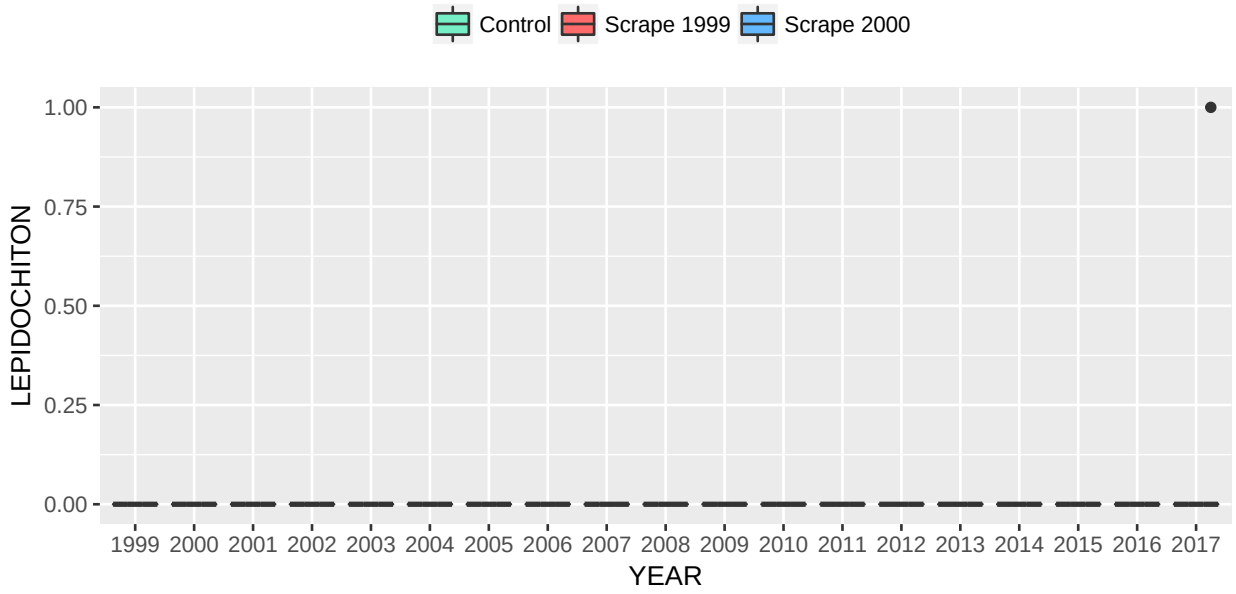
Control
Scrape 1999
Scrape 2000
LEPIDOCHITON
1.00
0.75
0.50
0.25
0.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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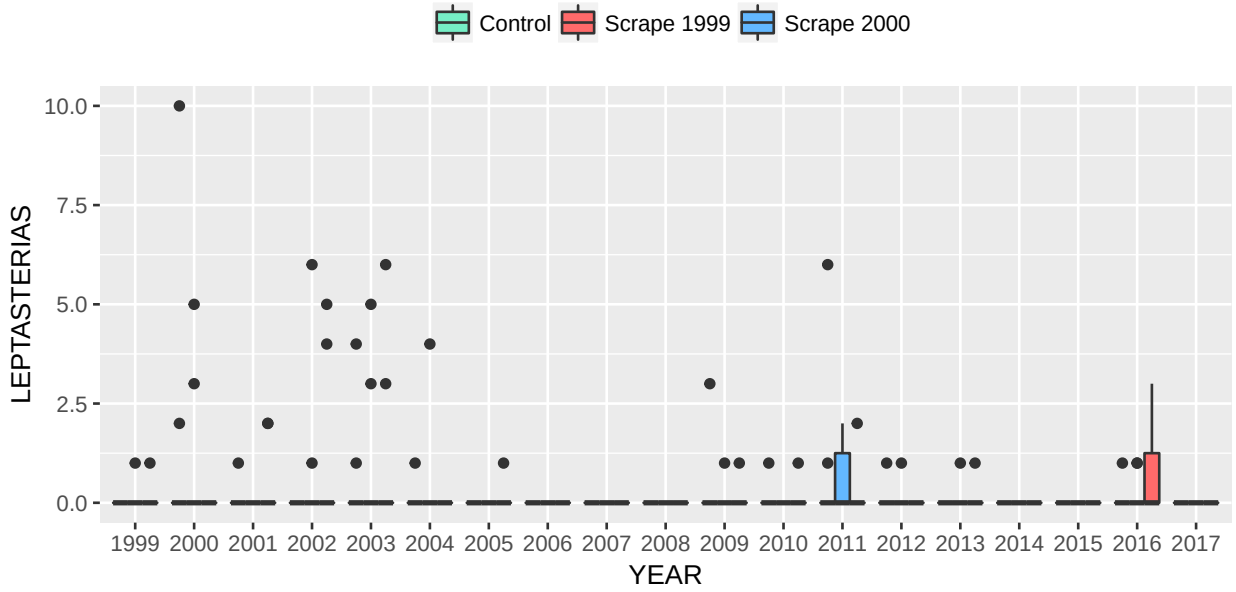
##
## [[32]]
```


Control
Scrape 1999
Scrape 2000
LEPTASTERIAS
10.0
7.5
5.0
2.5
0.0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

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##
## [[33]]
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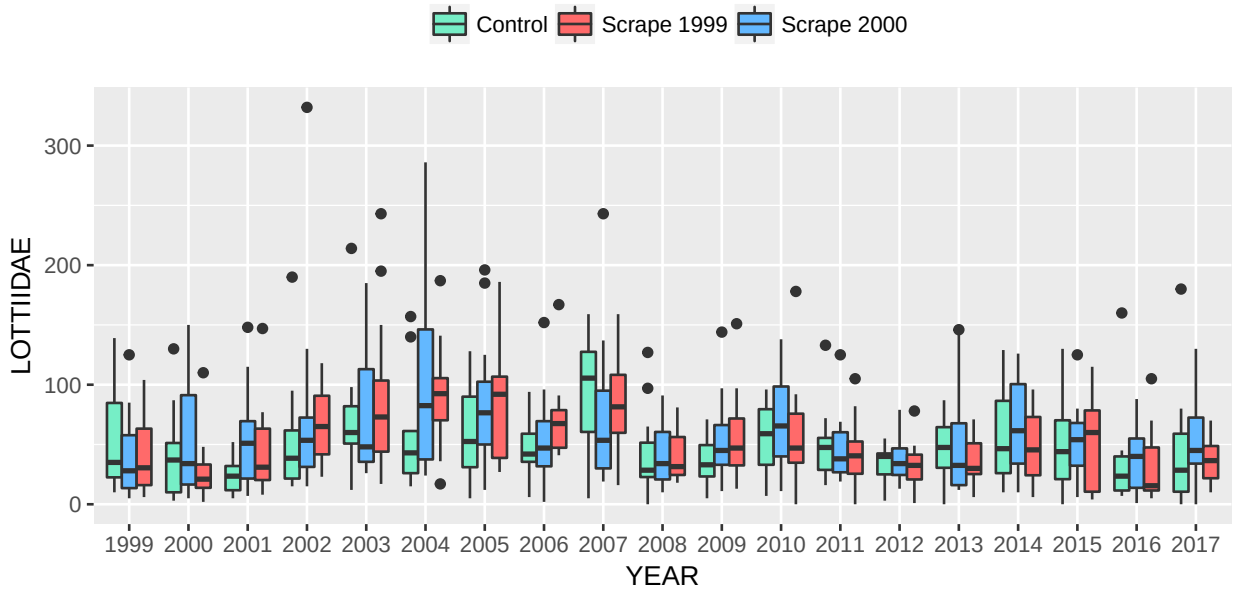
Control
Scrape 1999
Scrape 2000
LOTTIIDAE
300
200
100
0
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
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2016
2017
YEAR

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##
## [[34]]
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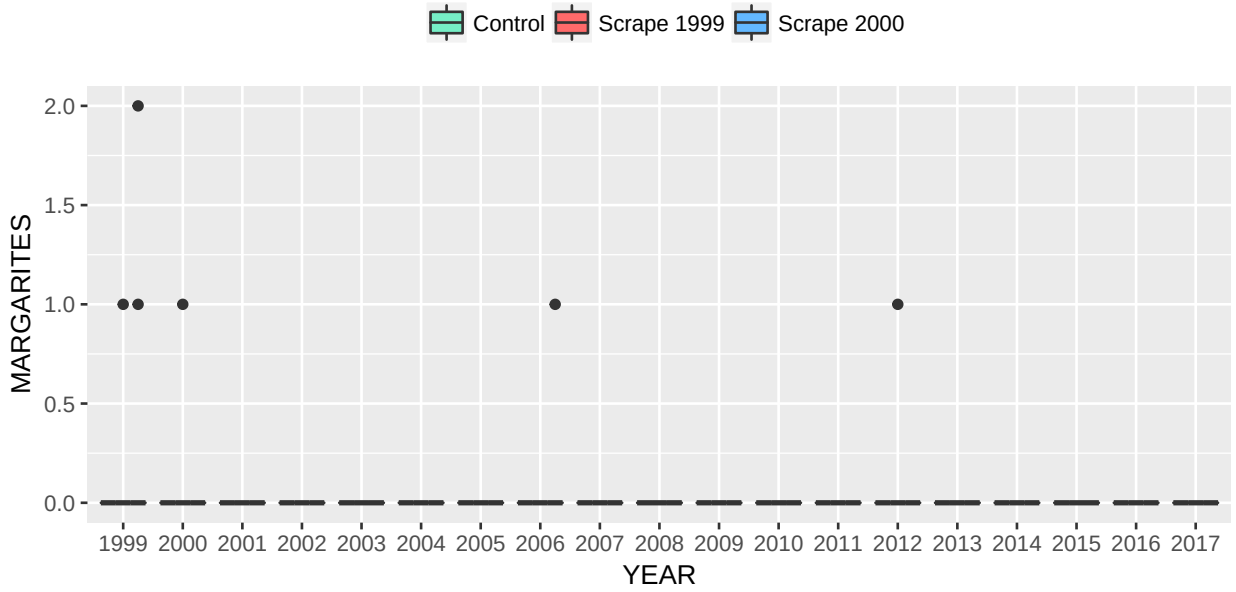
Control
Scrape 1999
Scrape 2000
MARGARITES
2.0
1.5
1.0
0.5
0.0
1999
2000
2001
2002
2003
2004
2005
2006
2007
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2017
YEAR

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##
## [[35]]
```

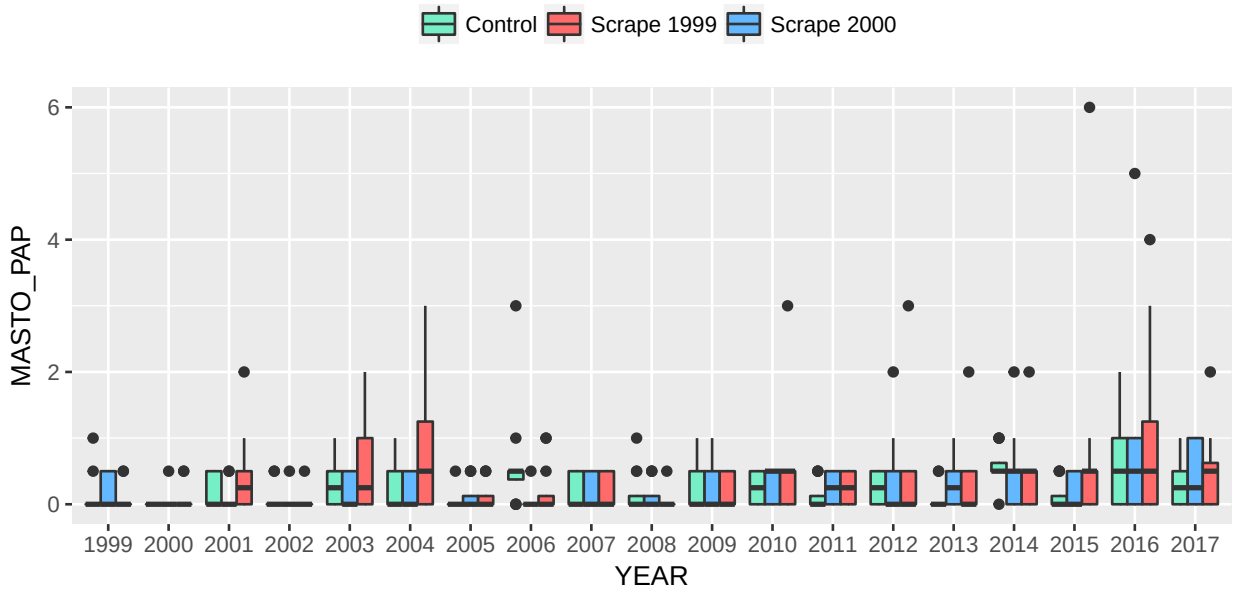
Control
Scrape 1999
Scrape 2000
MASTO_PAP
0
2
4
6
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
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YEAR

```
##
## [[36]]
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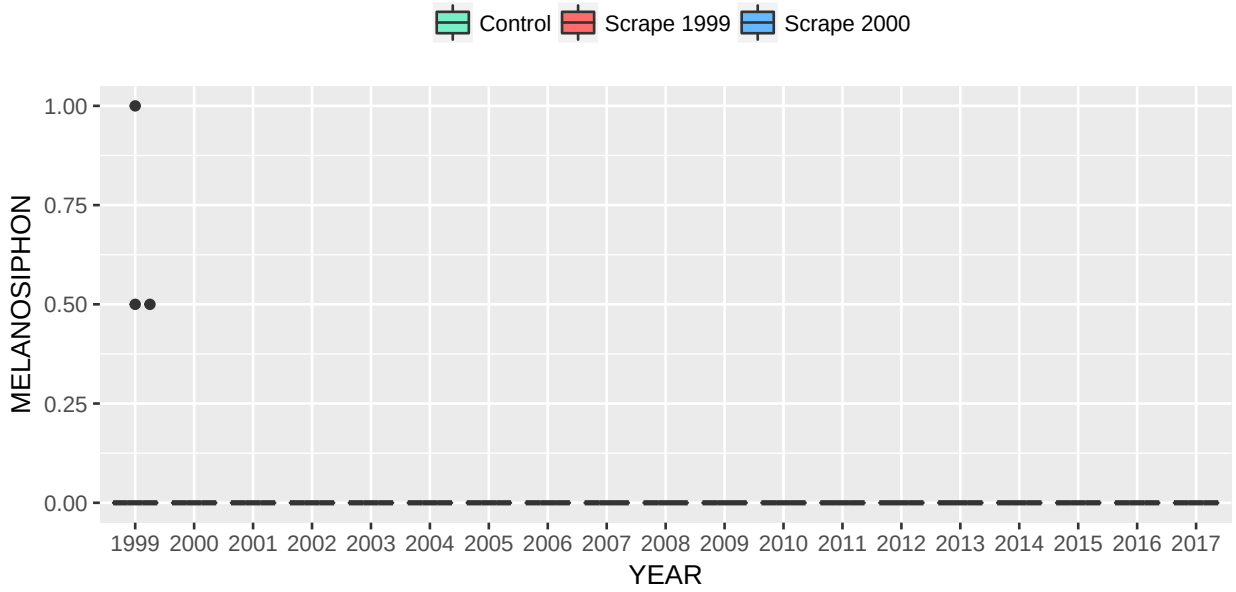
Control
Scrape 1999
Scrape 2000
MELANOSIPHON
0.00
0.25
0.50
0.75
1.00
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
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2017
YEAR

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##
## [[37]]
```
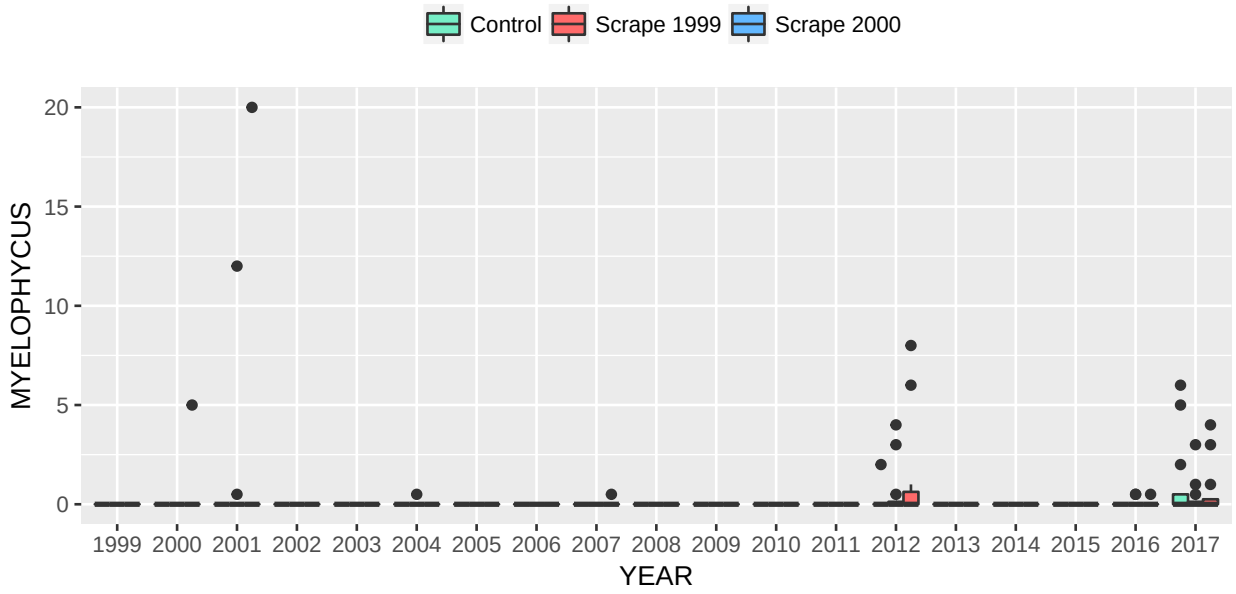
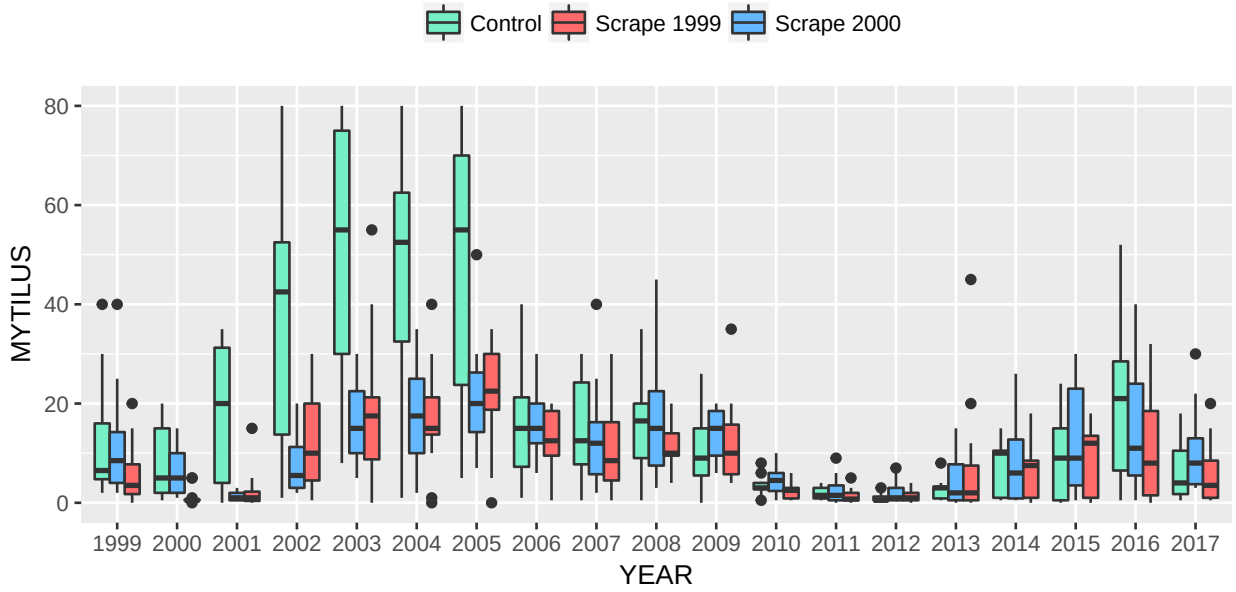
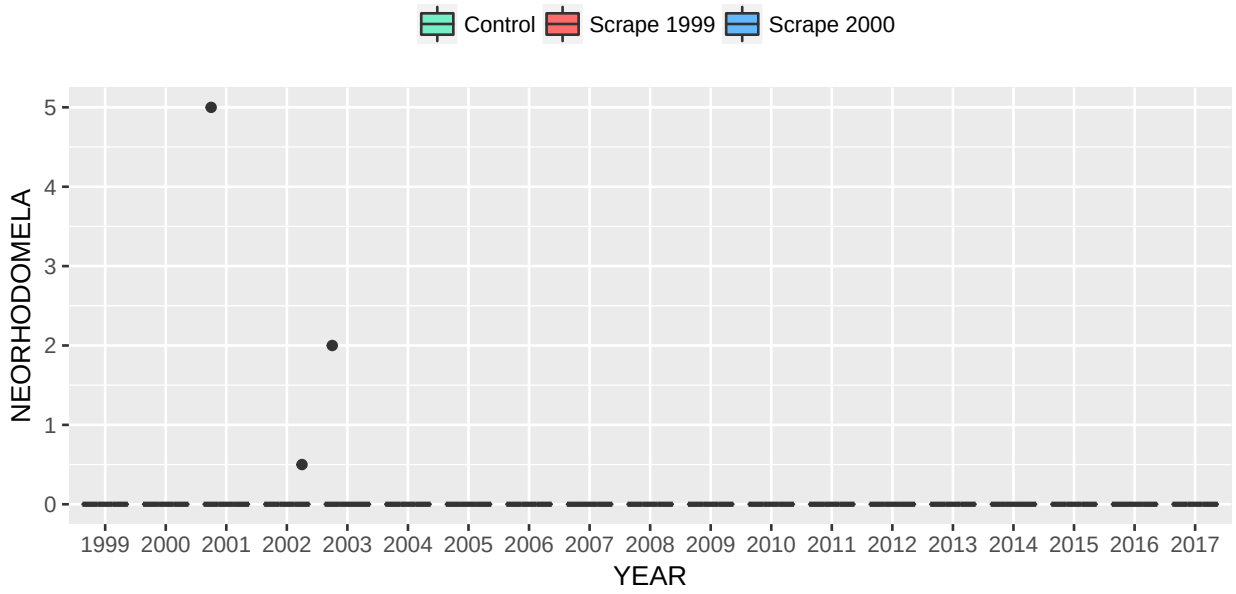


Control
Scrape 1999
Scrape 2000
MYELOPHYCUS
20
15
10
5
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

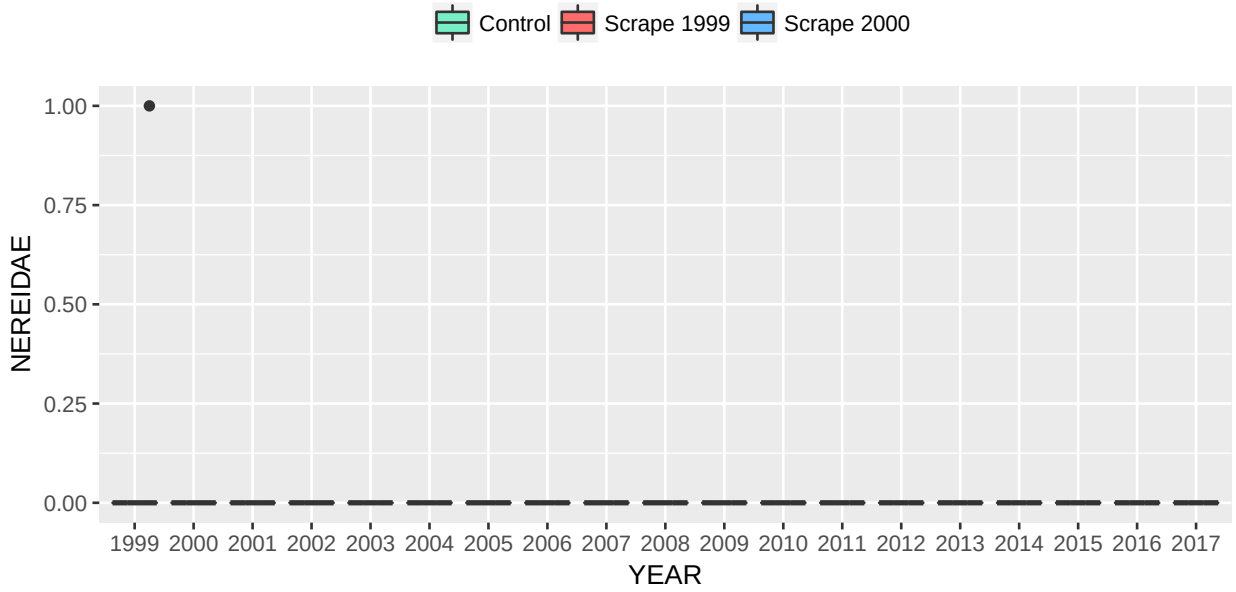
##
[[38]]


Control
Scrape 1999
Scrape 2000
MYTILUS
80
60
40
20
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

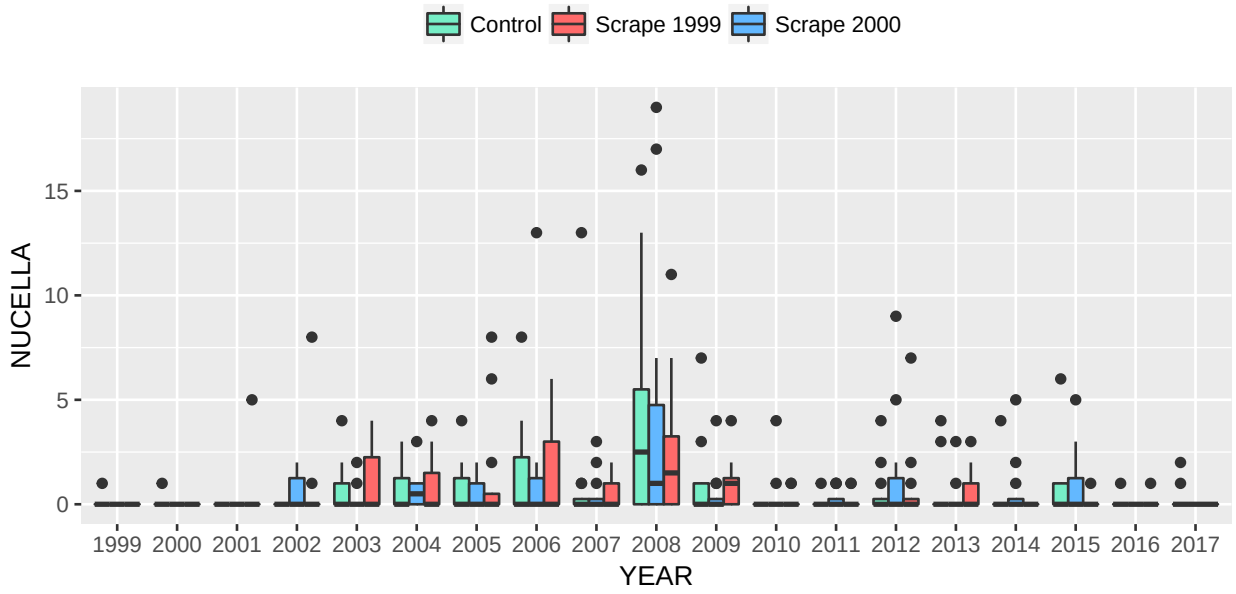
##
[[39]]


Control
Scrape 1999
Scrape 2000
NEORHODOMELA
0
1
2
3
4
5
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

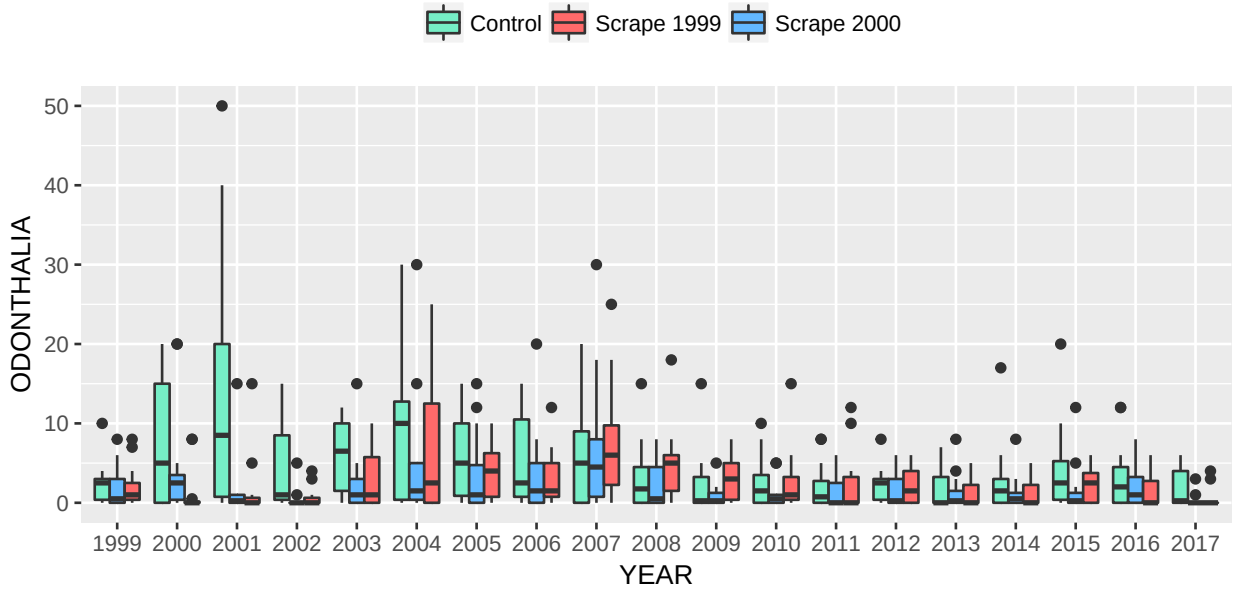
```
##
## [[40]]
```


Control
Scrape 1999
Scrape 2000
NEREIDAE
0.00
0.25
0.50
0.75
1.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

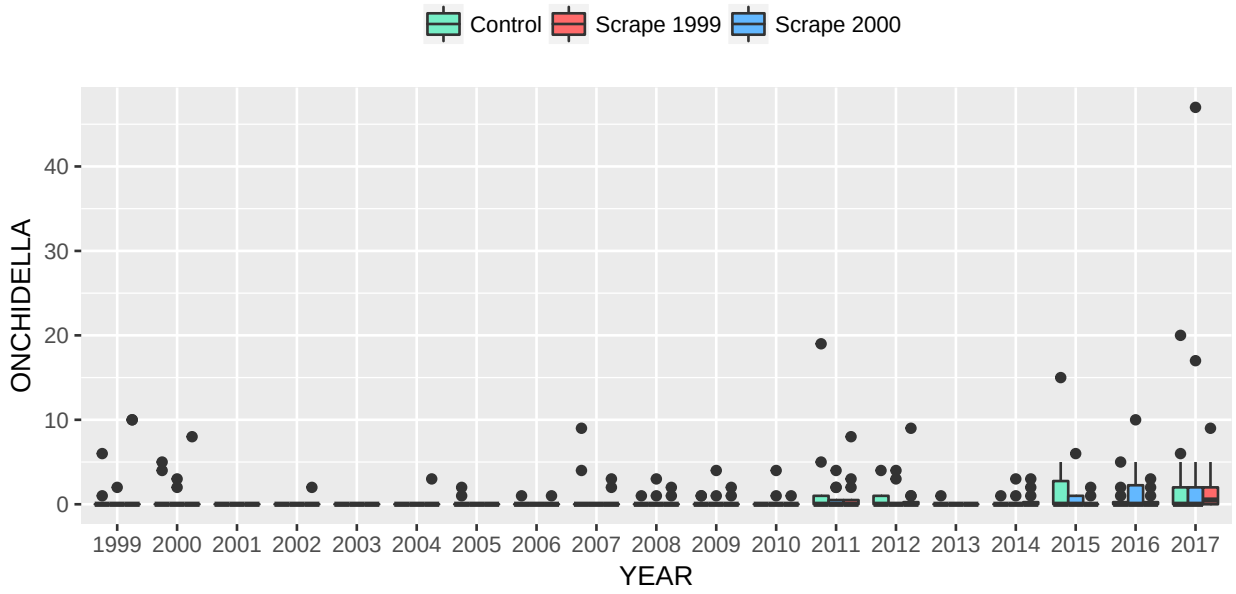
```
##
## [[41]]
```


Control
Scrape 1999
Scrape 2000
NUCELLA
0
5
10
15
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
YEAR

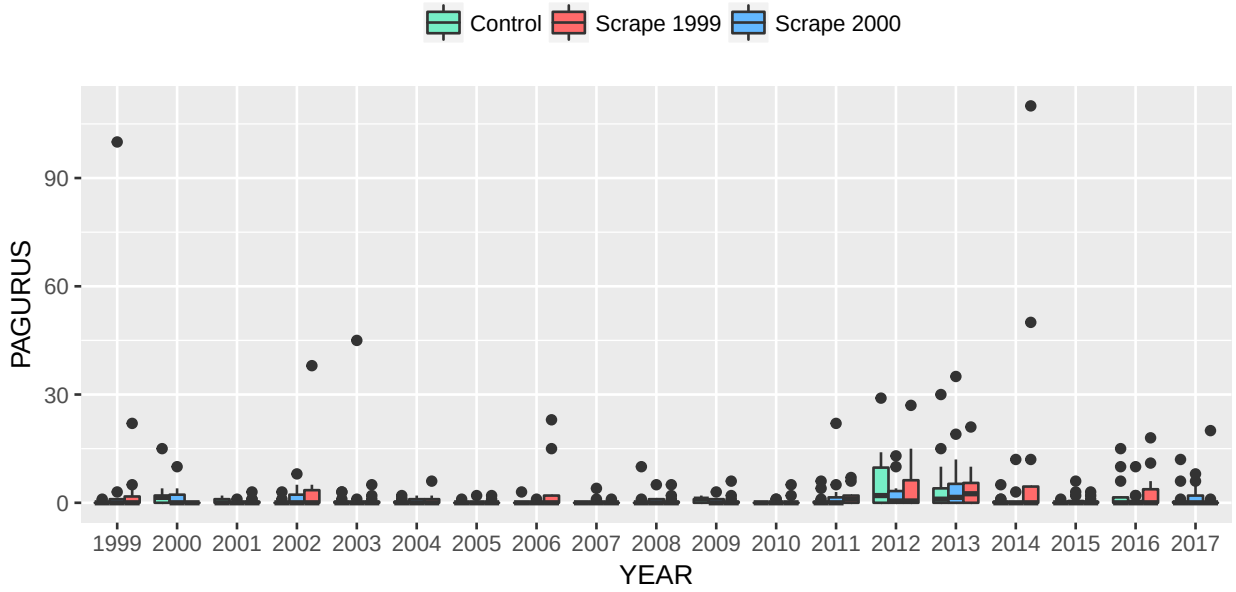
```
##
## [[42]]
```


Control
Scrape 1999
Scrape 2000
ODONTHALIA
0
10
20
30
40
50
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
YEAR

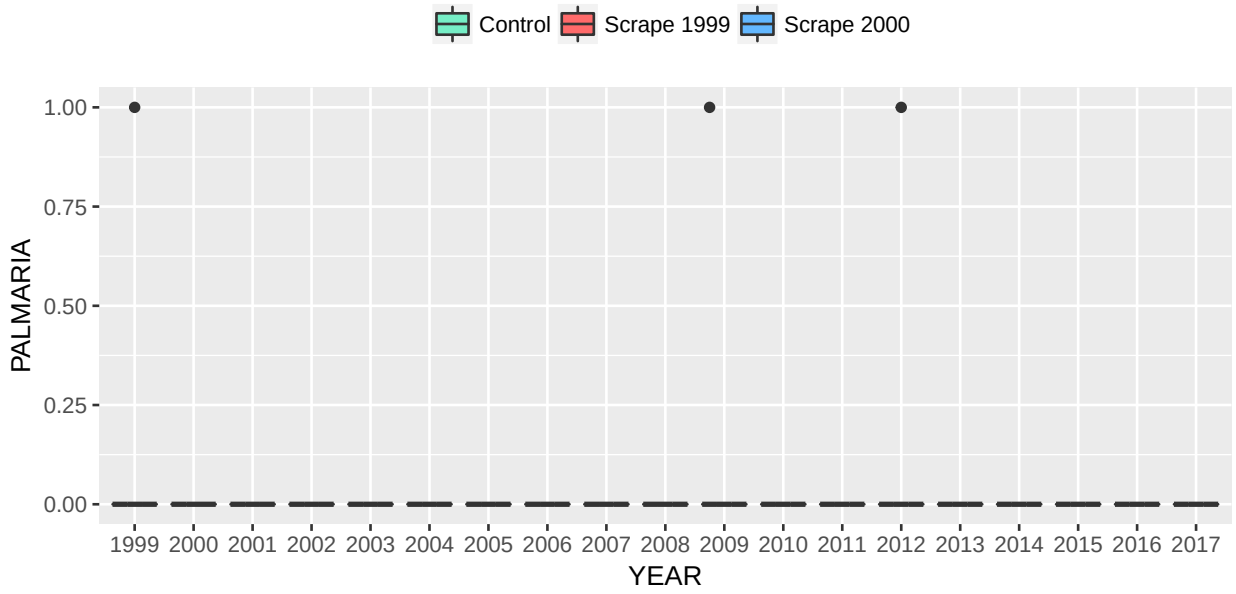
```
##
## [[43]]
```


Control
Scrape 1999
Scrape 2000
ONCHIDELLA
0
10
20
30
40
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
YEAR

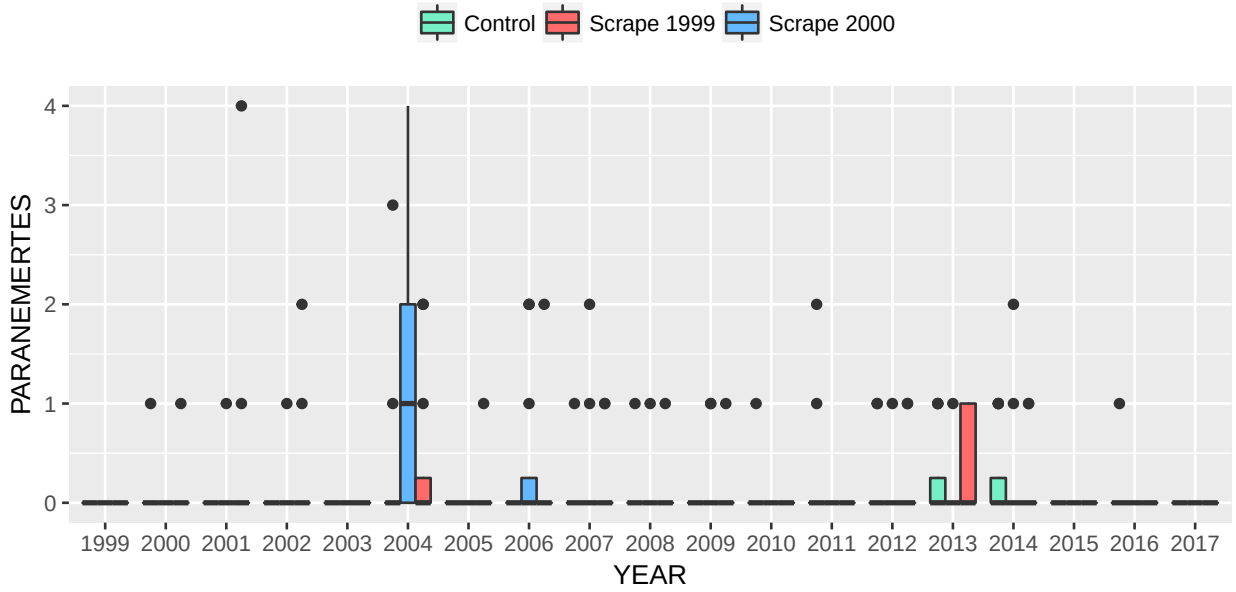
```
##
## [[44]]
```


Control
Scrape 1999
Scrape 2000
PAGURUS
0
30
60
90
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
YEAR

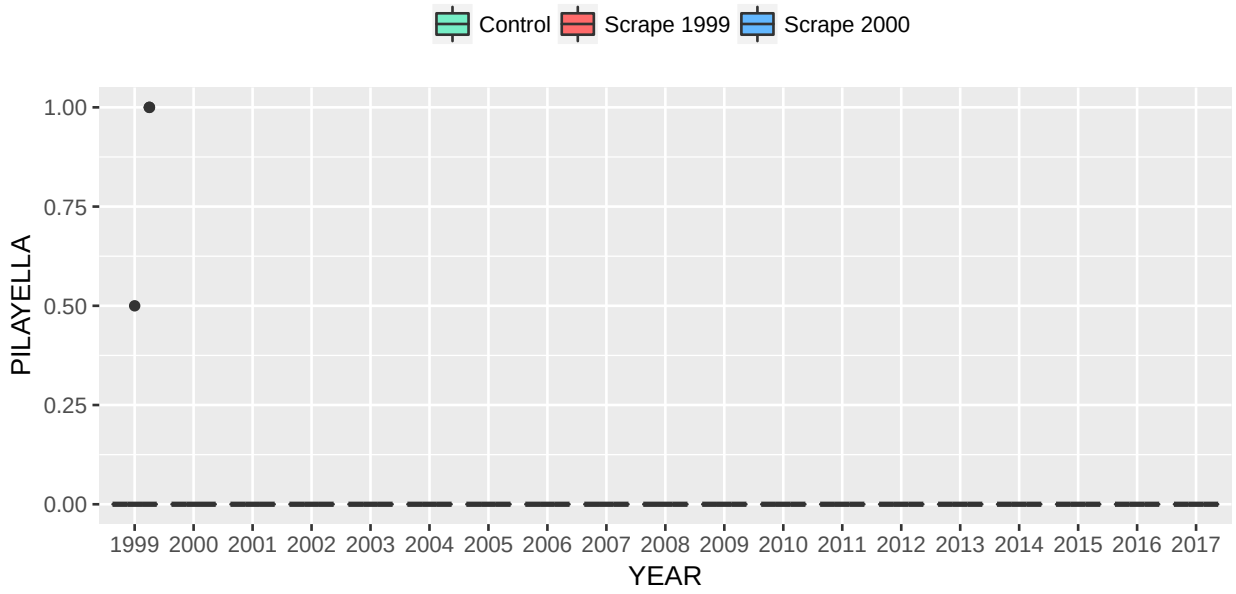
```
##
## [[45]]
```


Control
Scrape 1999
Scrape 2000
PALMARIA
1.00
0.75
0.50
0.25
0.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

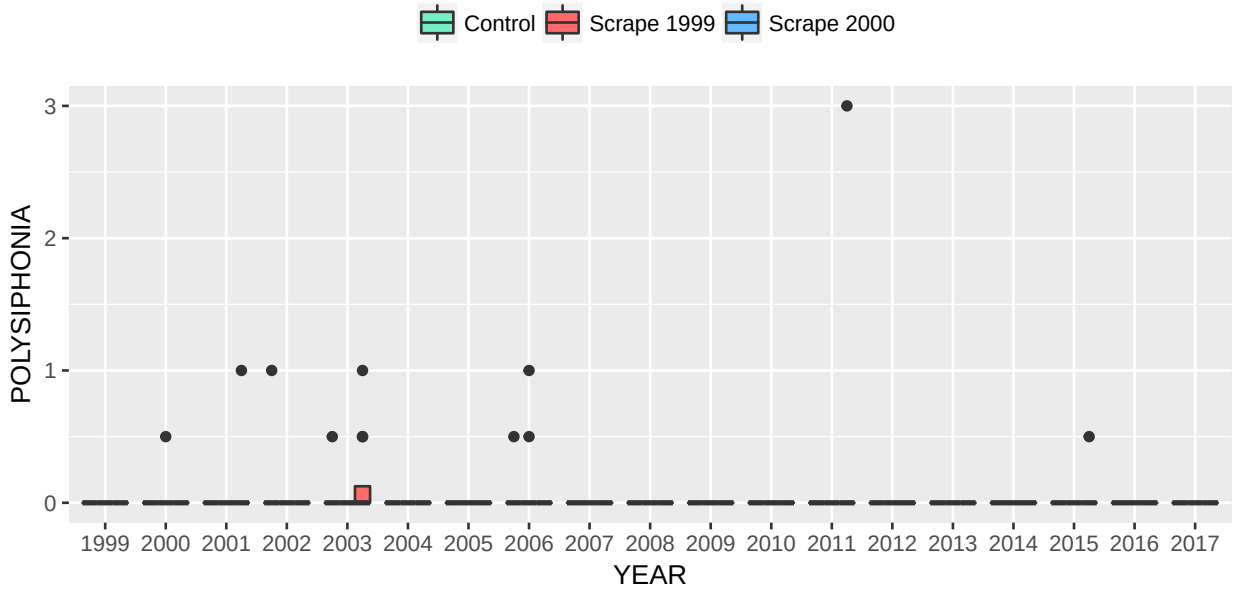
```
##
## [[46]]
```


Control
Scrape 1999
Scrape 2000
PARANEMERTES
4
3
2
1
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

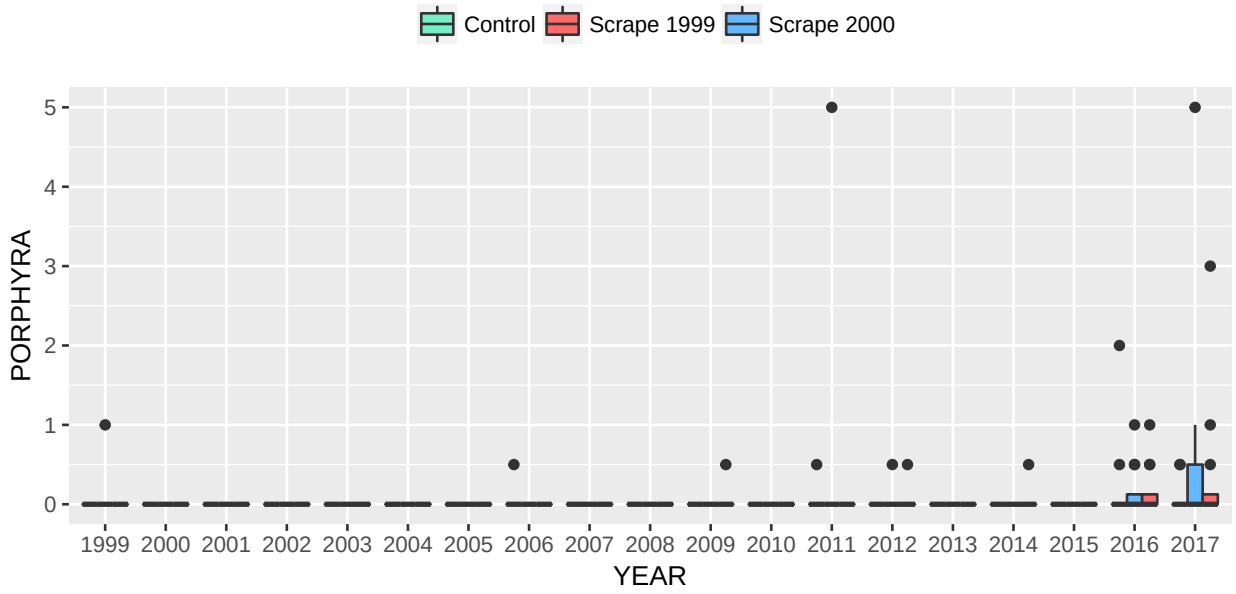
```
##
## [[47]]
```


Control
Scrape 1999
Scrape 2000
PILAYELLA
1.00
0.75
0.50
0.25
0.00
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

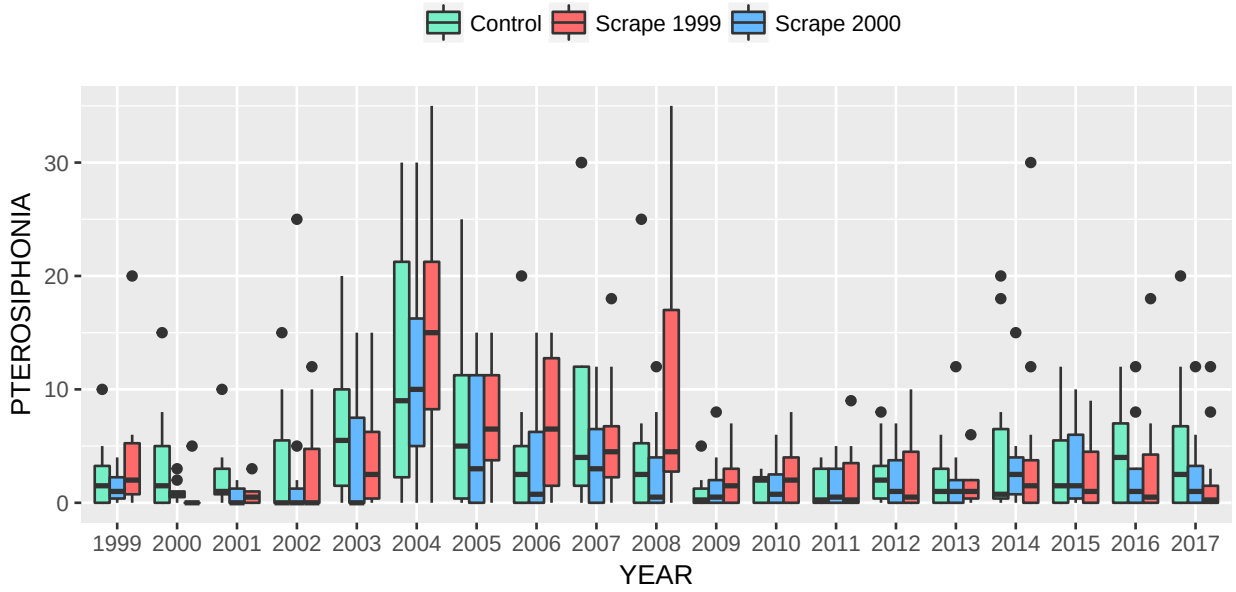
```
##
## [[48]]
```


Control
Scrape 1999
Scrape 2000
POLYSIPHONIA
3
2
1
0
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

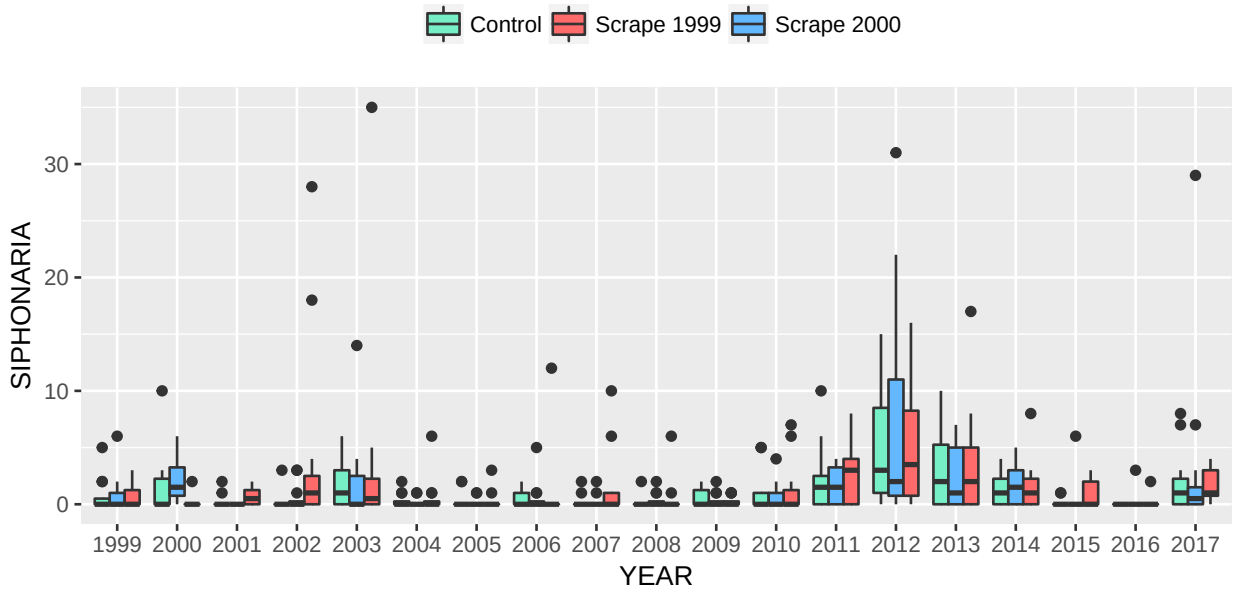
```
##
## [[49]]
```


Control
Scrape 1999
Scrape 2000
PORPHYRA
0
1
2
3
4
5
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

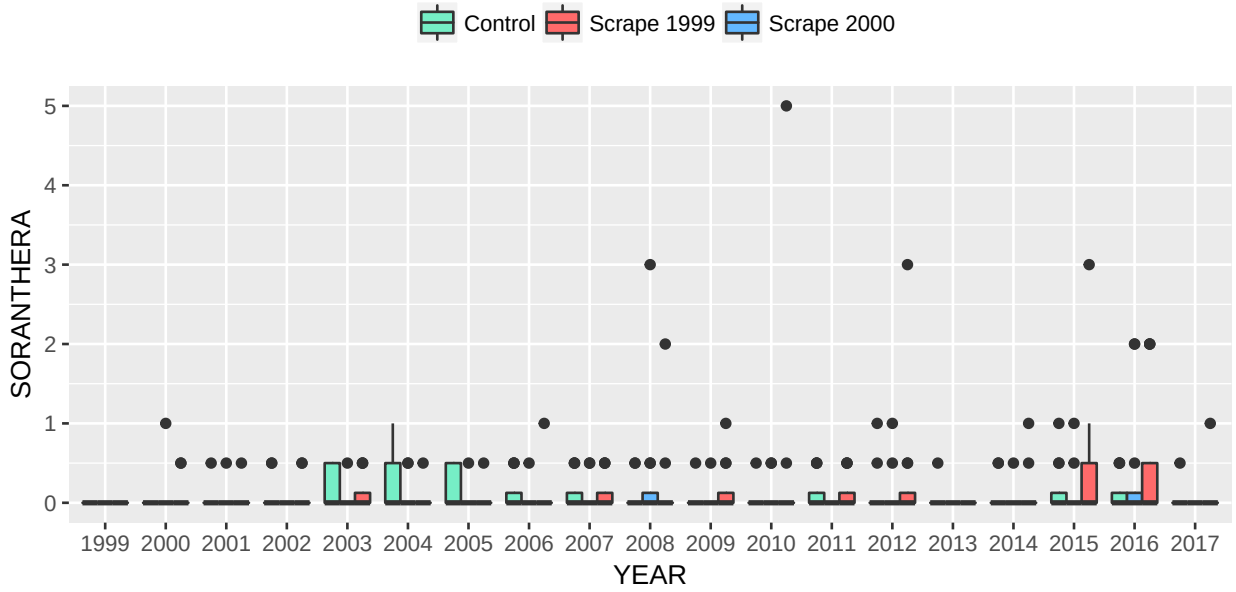
```
##
## [[50]]
```


Control
Scrape 1999
Scrape 2000
PTEROSIPHONIA
0
10
20
30
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
YEAR

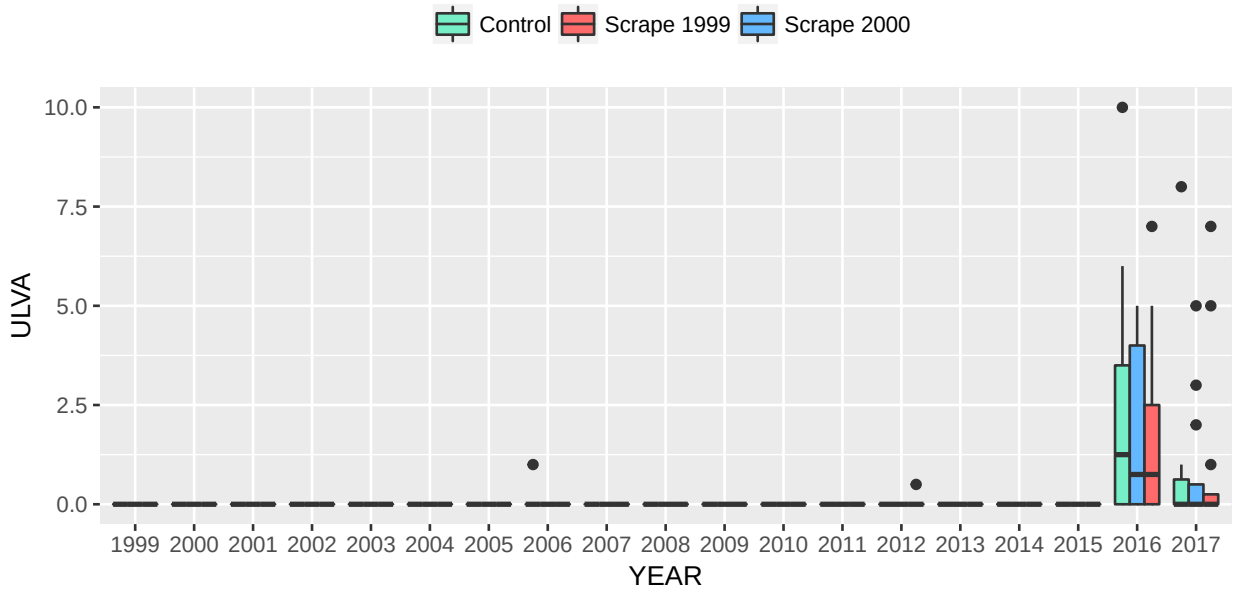
```
##
## [[51]]
```


Control
Scrape 1999
Scrape 2000
SIPHONARIA
0
10
20
30
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
YEAR

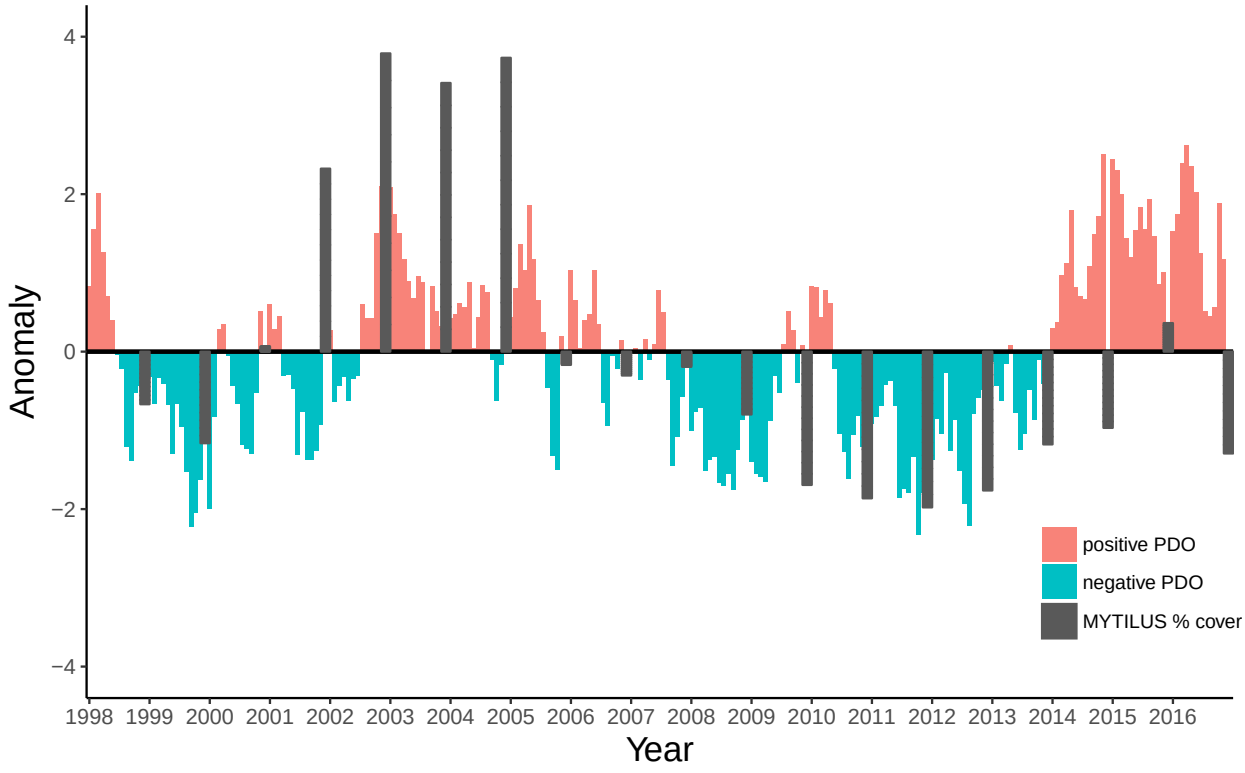
```
##
## [[52]]
```

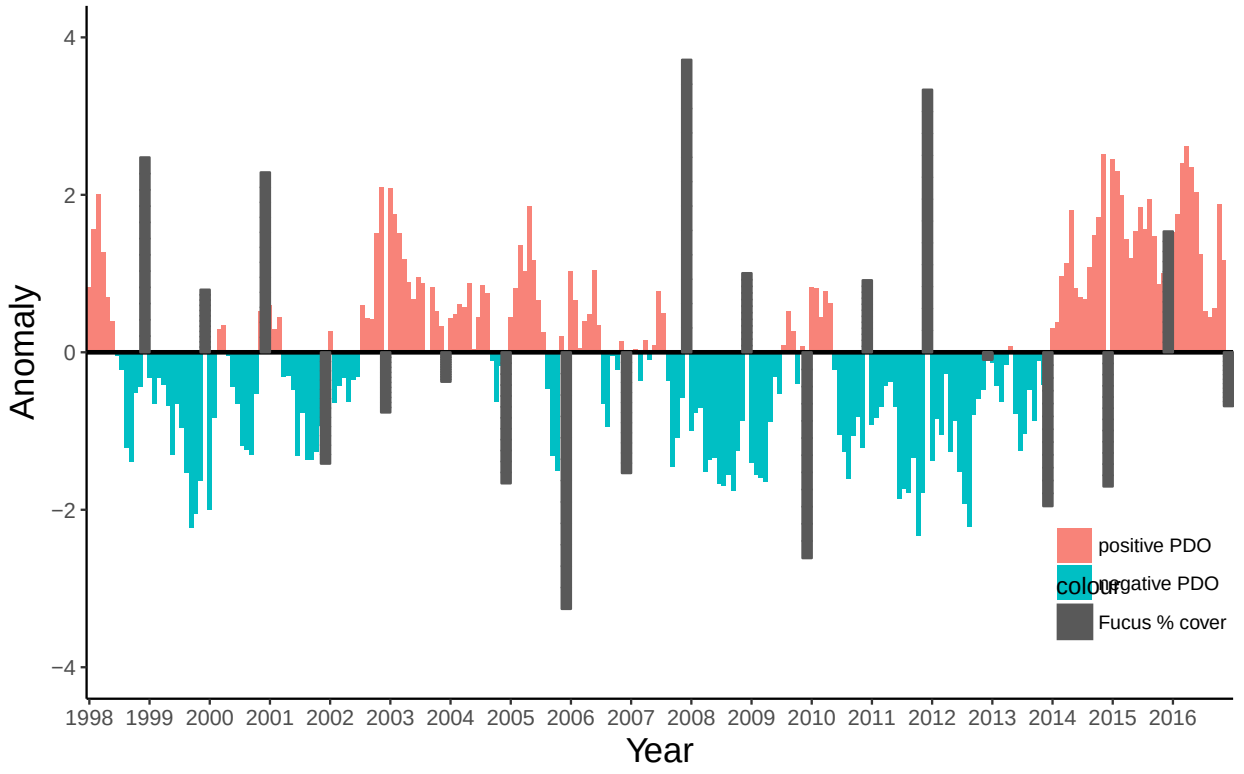

Control
Scrape 1999
Scrape 2000
SORANTHERA
0
1
2
3
4
5
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
YEAR

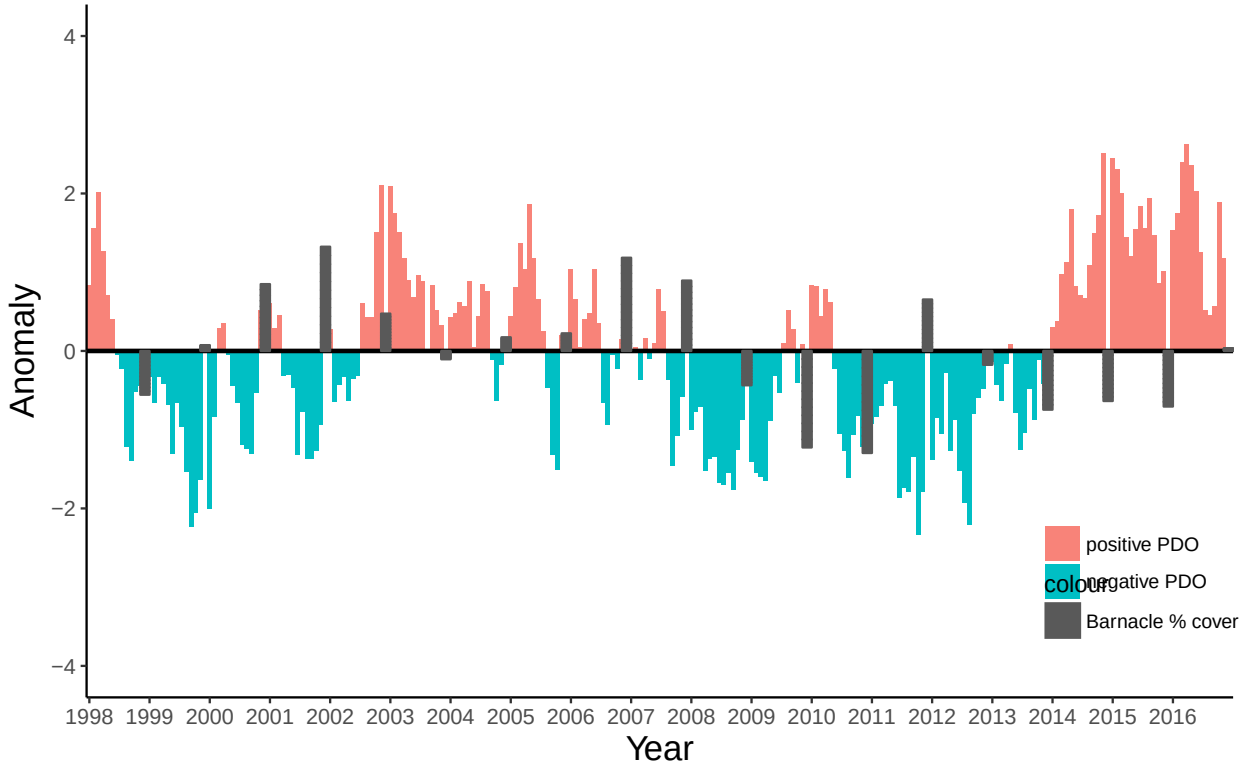
```
##
## [[53]]
```

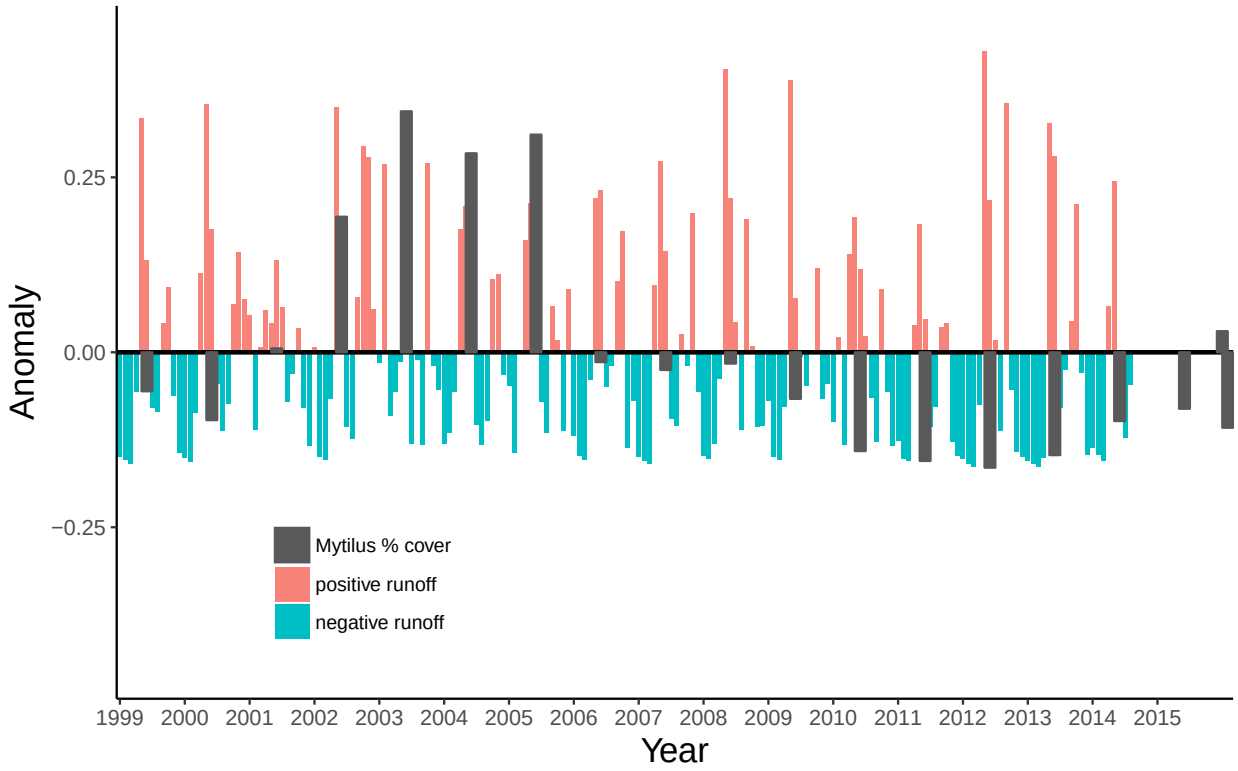


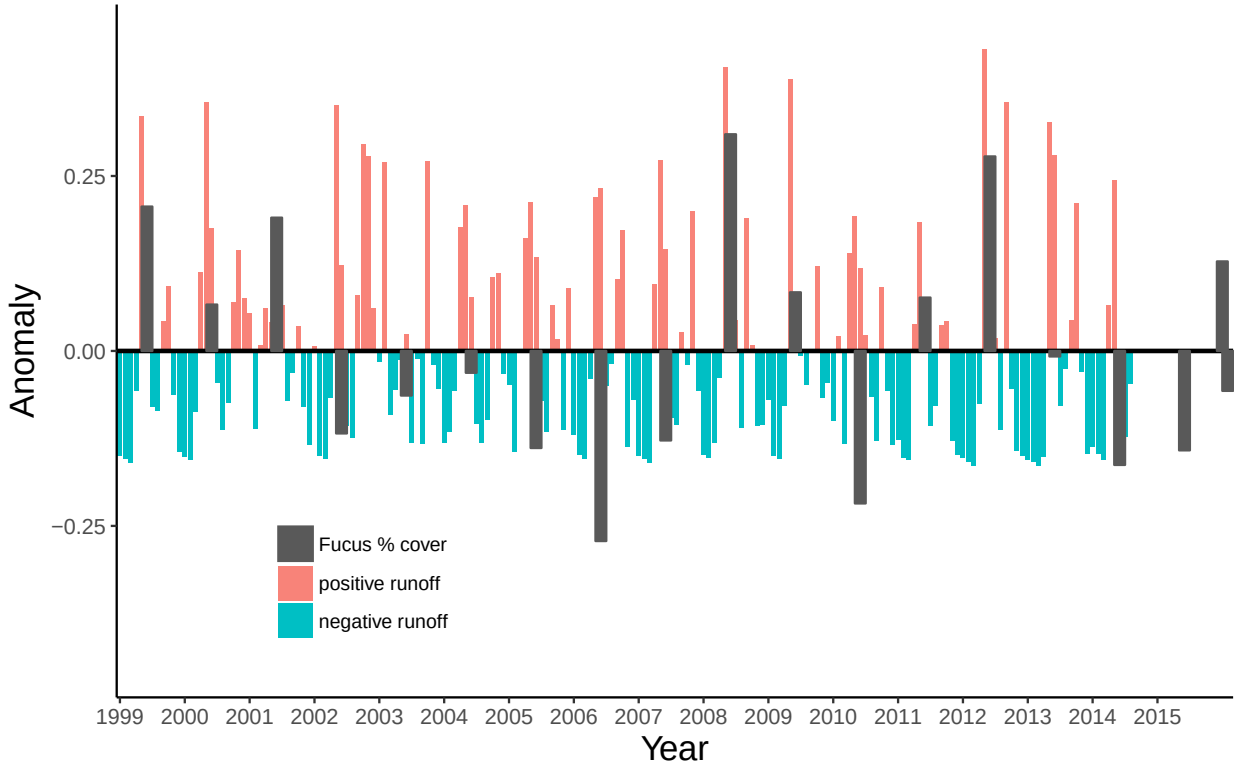

```
## Warning: Removed 1 rows containing missing values (geom_col).
```

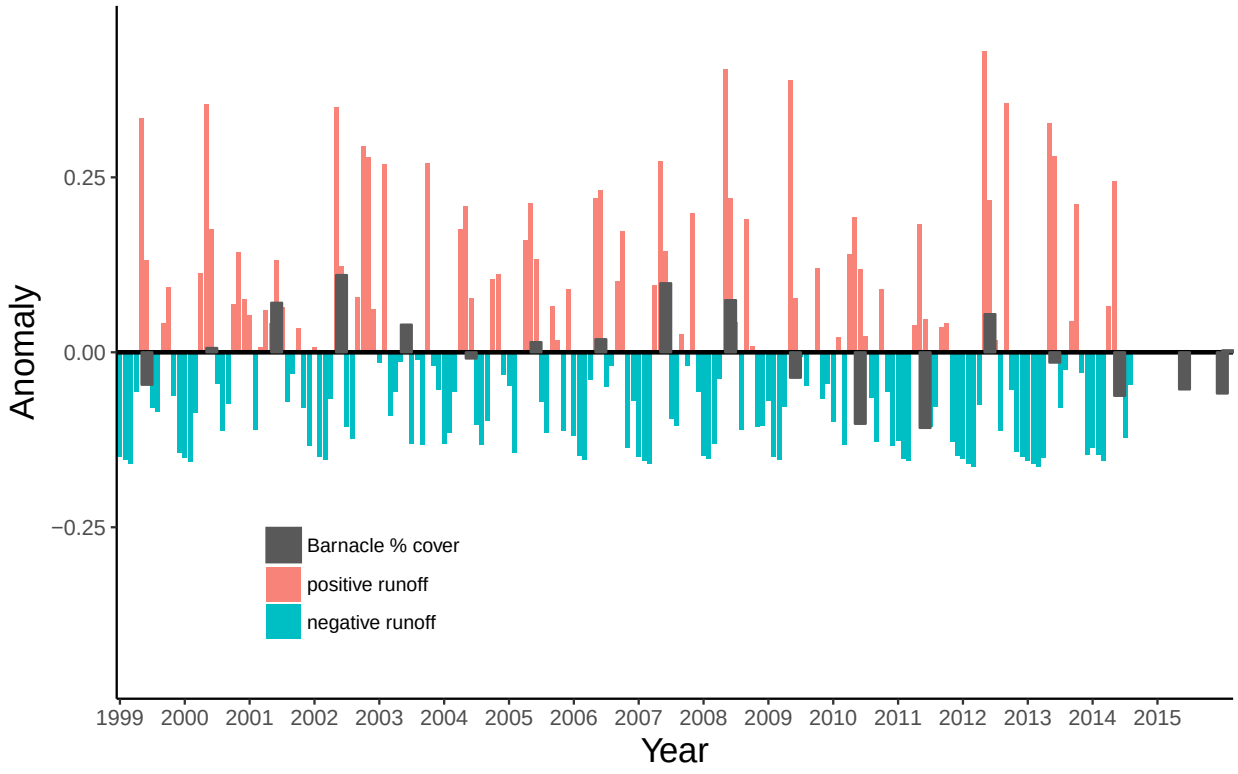



Anomaly
4
2
0
−2
−4
1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016
Year
colour
positive PDO
negative PDO
Fucus % cover

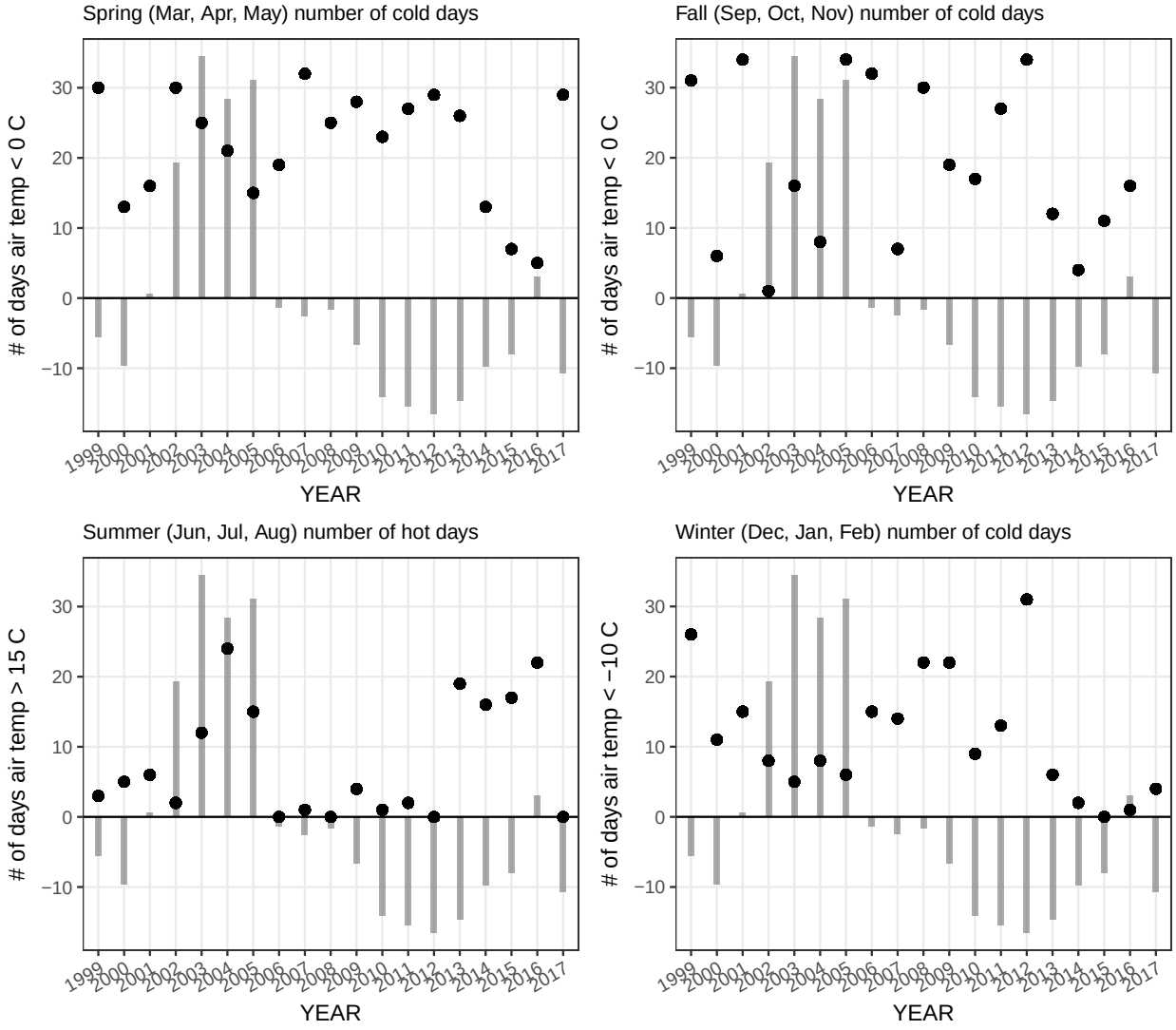

Anomaly
4
2
0
−2
−4
1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016
Year
colour
positive PDO
negative PDO
Barnacle % cover


Anomaly
0.25
0.00
−0.25
Mytilus % cover
positive runoff
negative runoff
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015
Year

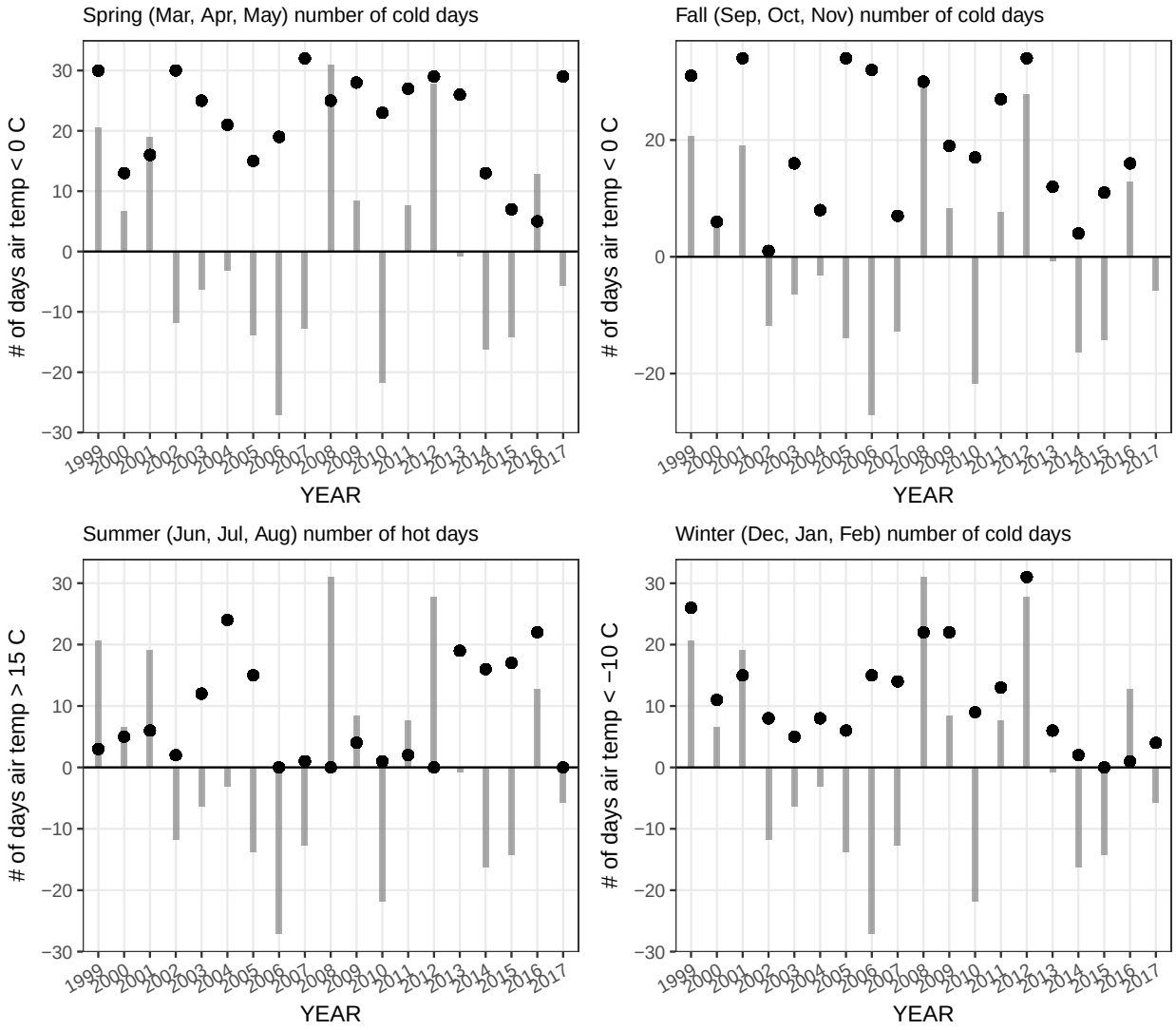

Anomaly
0.25
0.00
−0.25
Fucus % cover
positive runoff
negative runoff
1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015
Year


0.25
0.00
−0.25
Anomaly
Barnacle % cover
positive runoff
negative runoff
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
Year

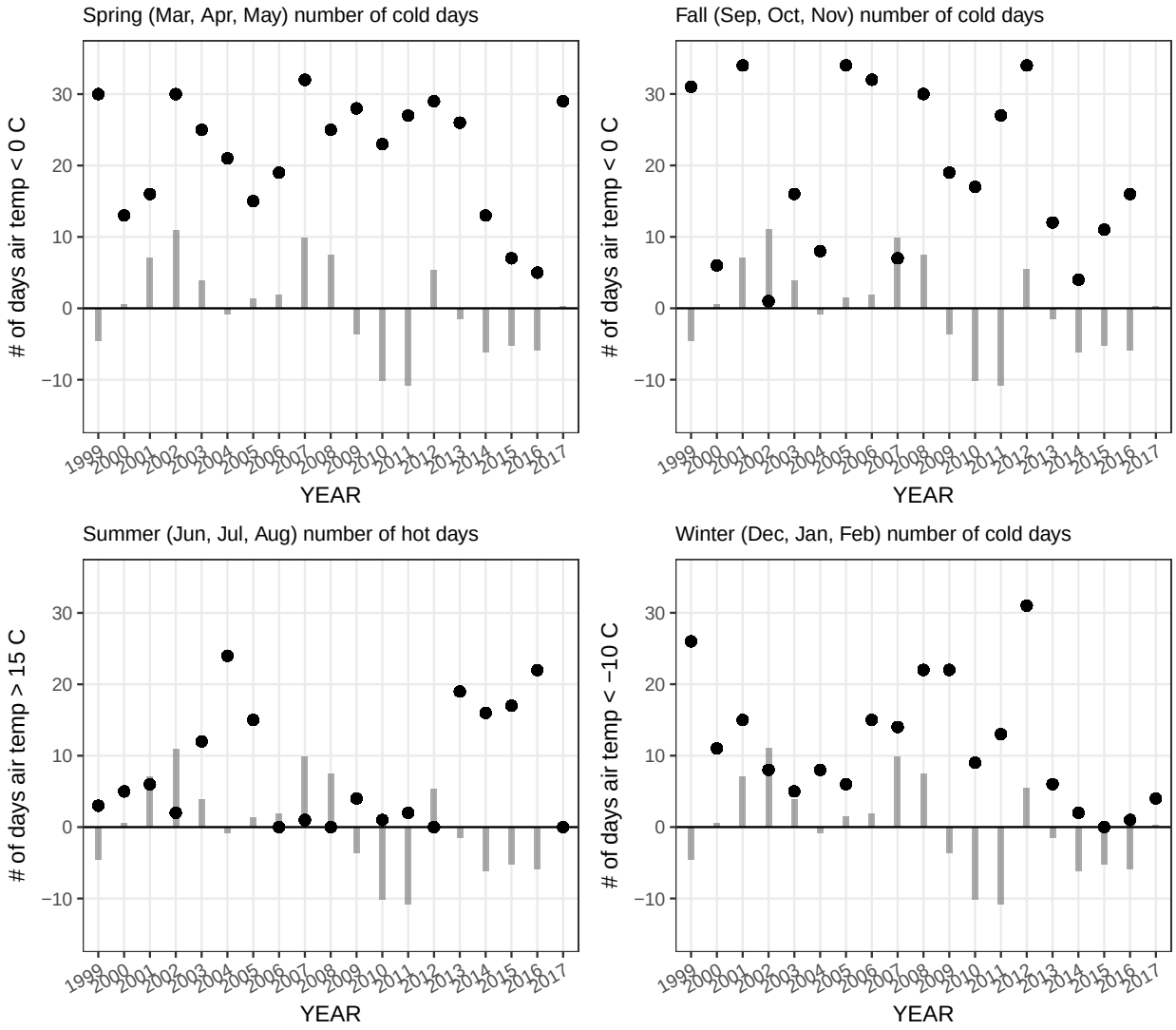
Mytilus

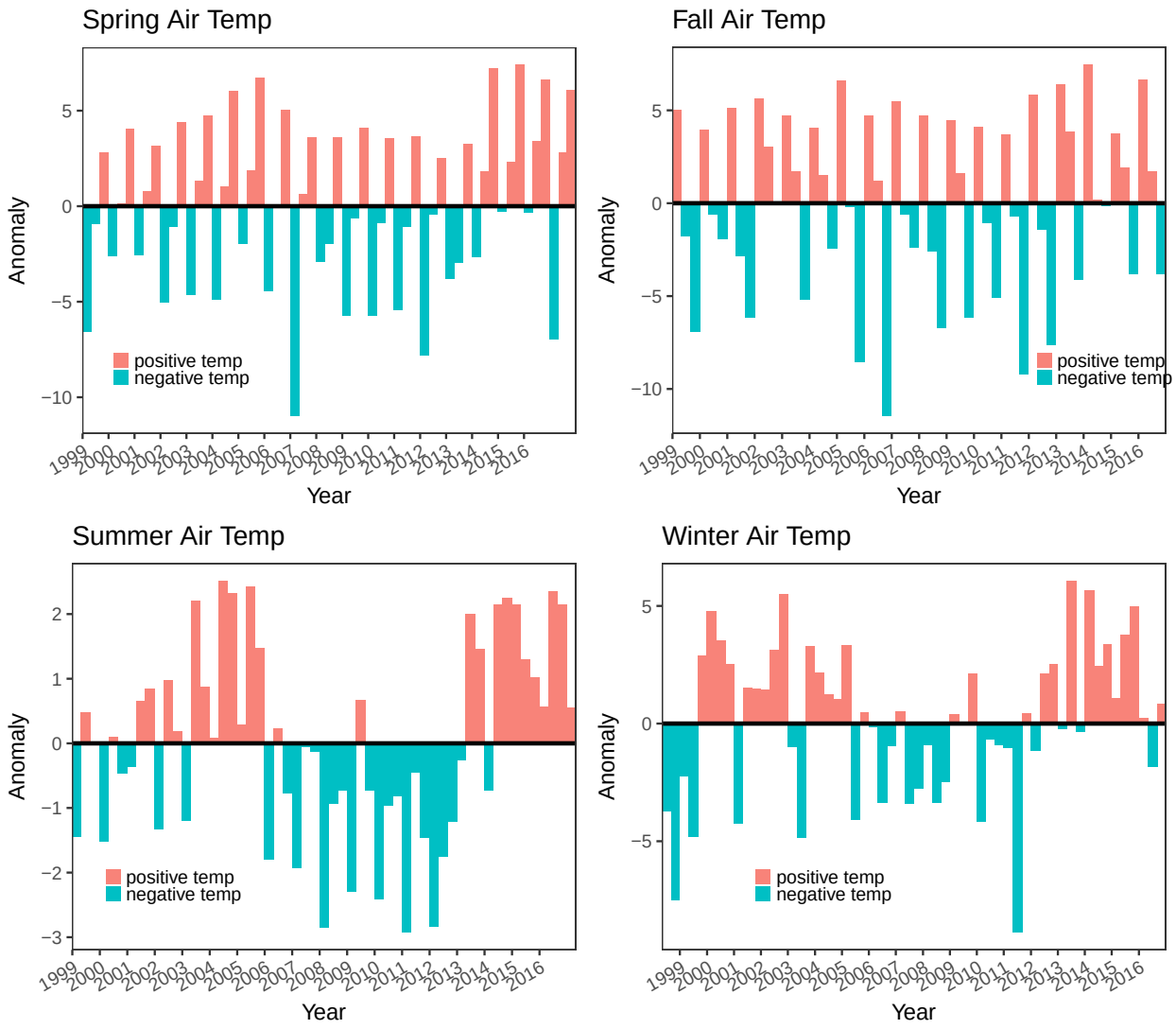

Spring (Mar, Apr, May) number of cold days
# of days air temp < 0 C
YEAR
Fall (Sep, Oct, Nov) number of cold days
# of days air temp < 0 C
YEAR
Summer (Jun, Jul, Aug) number of hot days
# of days air temp > 15 C
YEAR
Winter (Dec, Jan, Feb) number of cold days
# of days air temp < −10 C
YEAR

Fucus

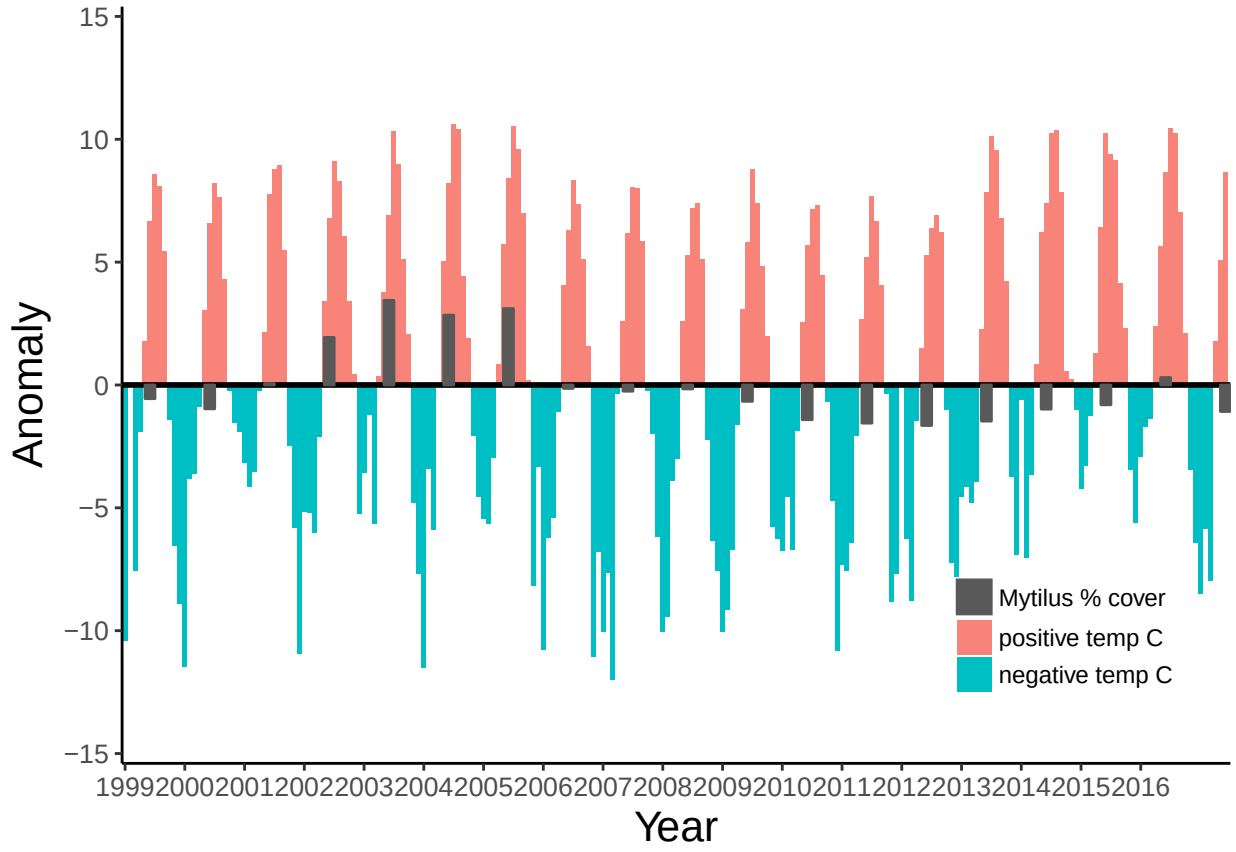

Spring (Mar, Apr, May) number of cold days
# of days air temp < 0 C
YEAR
Fall (Sep, Oct, Nov) number of cold days
# of days air temp < 0 C
YEAR
Summer (Jun, Jul, Aug) number of hot days
# of days air temp > 15 C
YEAR
Winter (Dec, Jan, Feb) number of cold days
# of days air temp < −10 C
YEAR

Barnacles

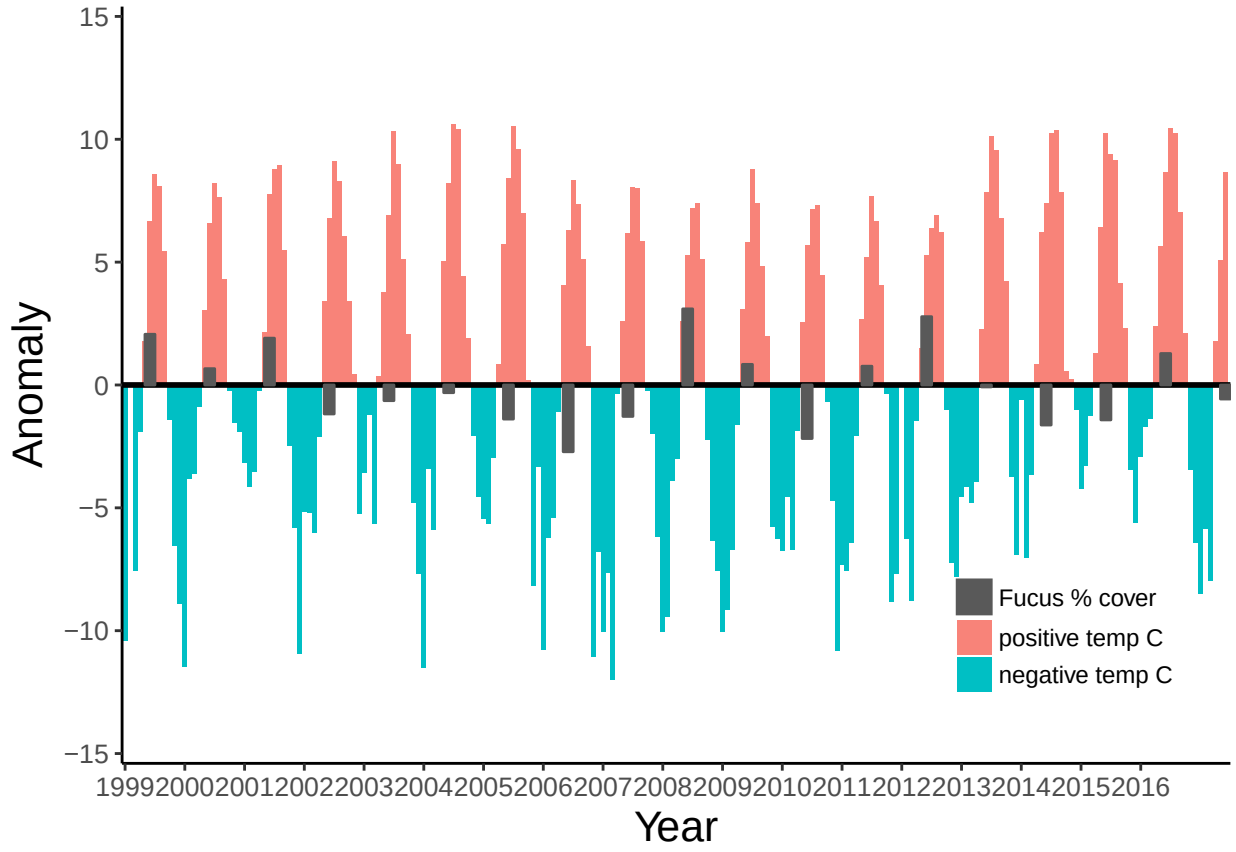

Spring (Mar, Apr, May) number of cold days
# of days air temp < 0 C
YEAR
Fall (Sep, Oct, Nov) number of cold days
# of days air temp < 0 C
YEAR
Summer (Jun, Jul, Aug) number of hot days
# of days air temp > 15 C
YEAR
Winter (Dec, Jan, Feb) number of cold days
# of days air temp < −10 C
YEAR



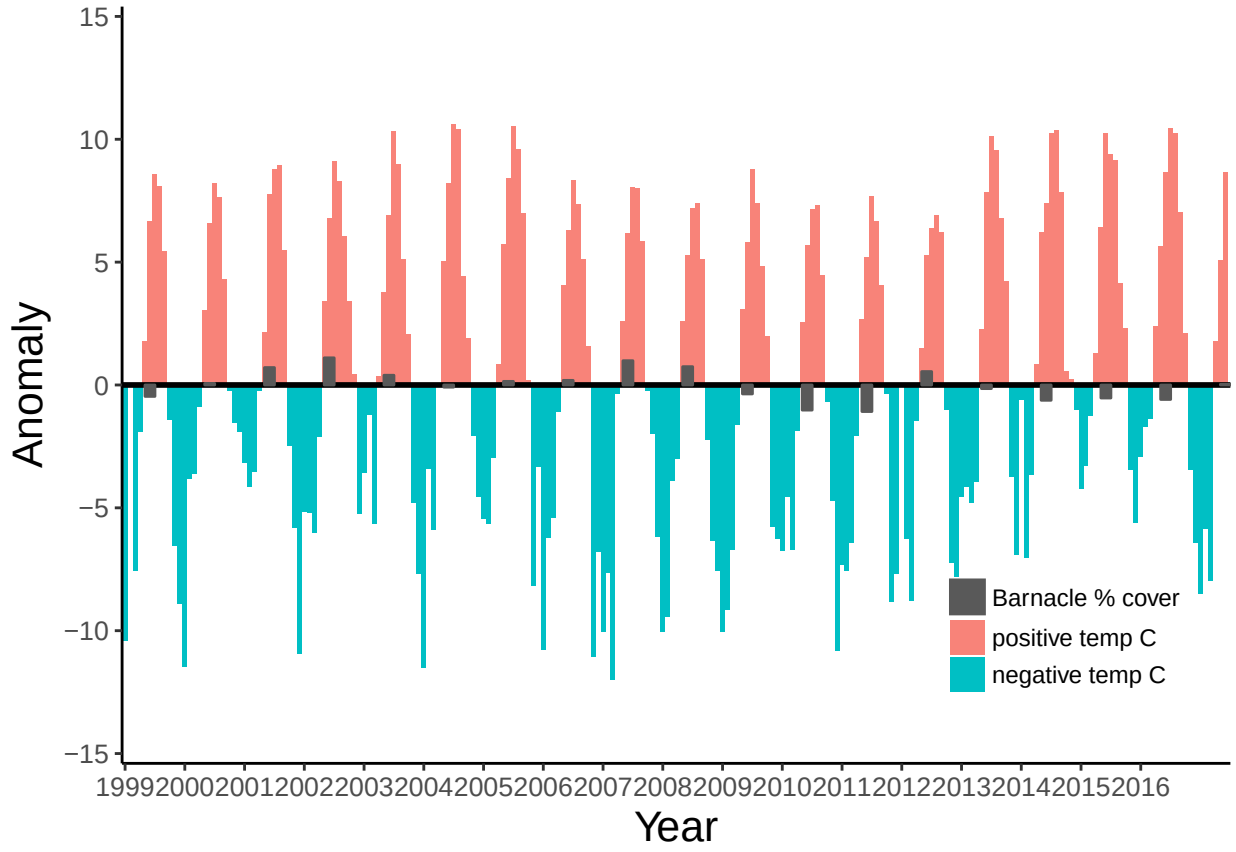

```
## Warning: Removed 2 rows containing missing values (position_stack).
```




```
## Warning: Removed 2 rows containing missing values (position_stack).
```

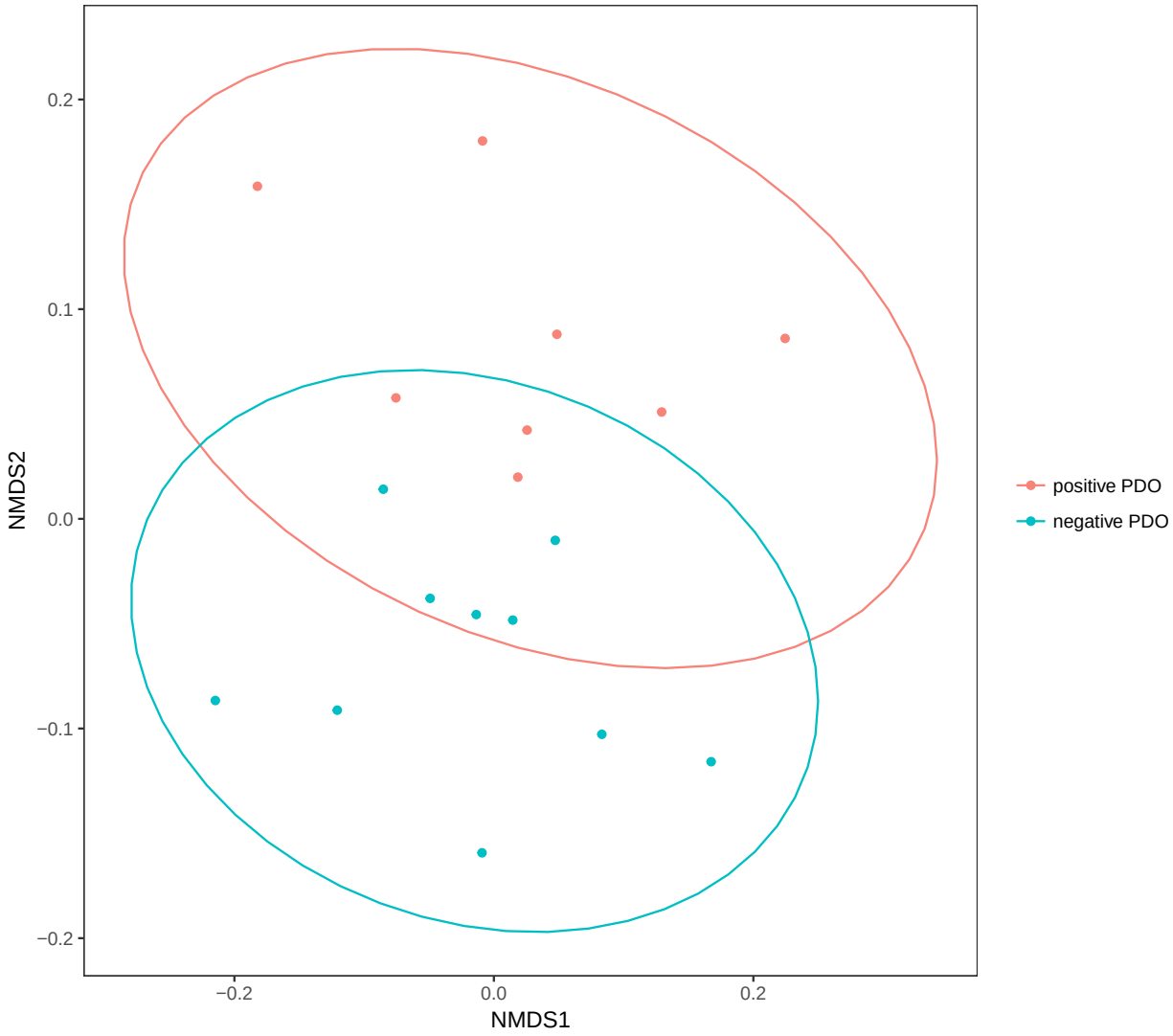



```
## Warning: Removed 2 rows containing missing values (position_stack).
```


15
10
5
0
−5
−10
−15
Anomaly
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
Year
Barnacle % cover
positive temp C
negative temp C

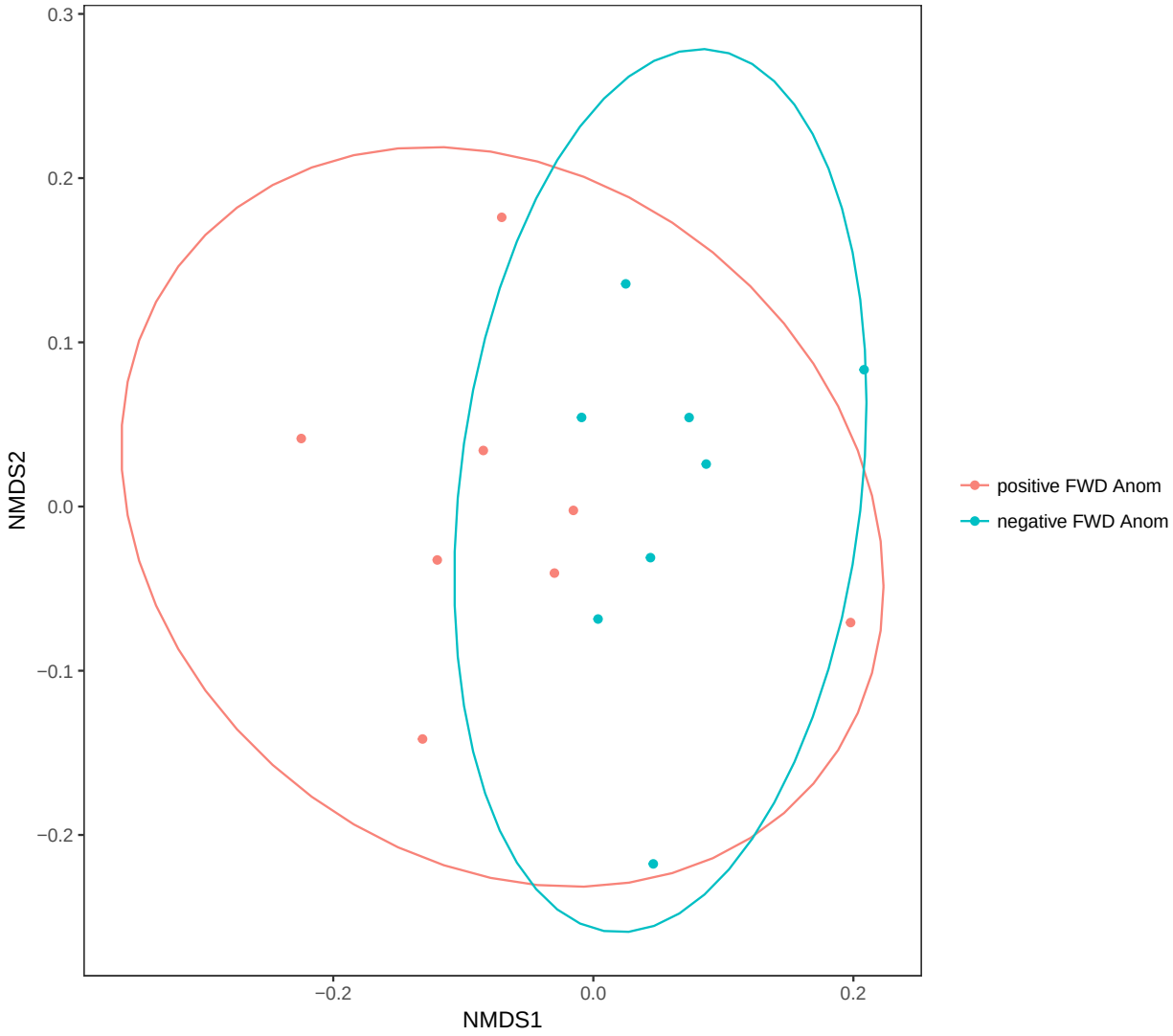
NMDS Plots

PDO



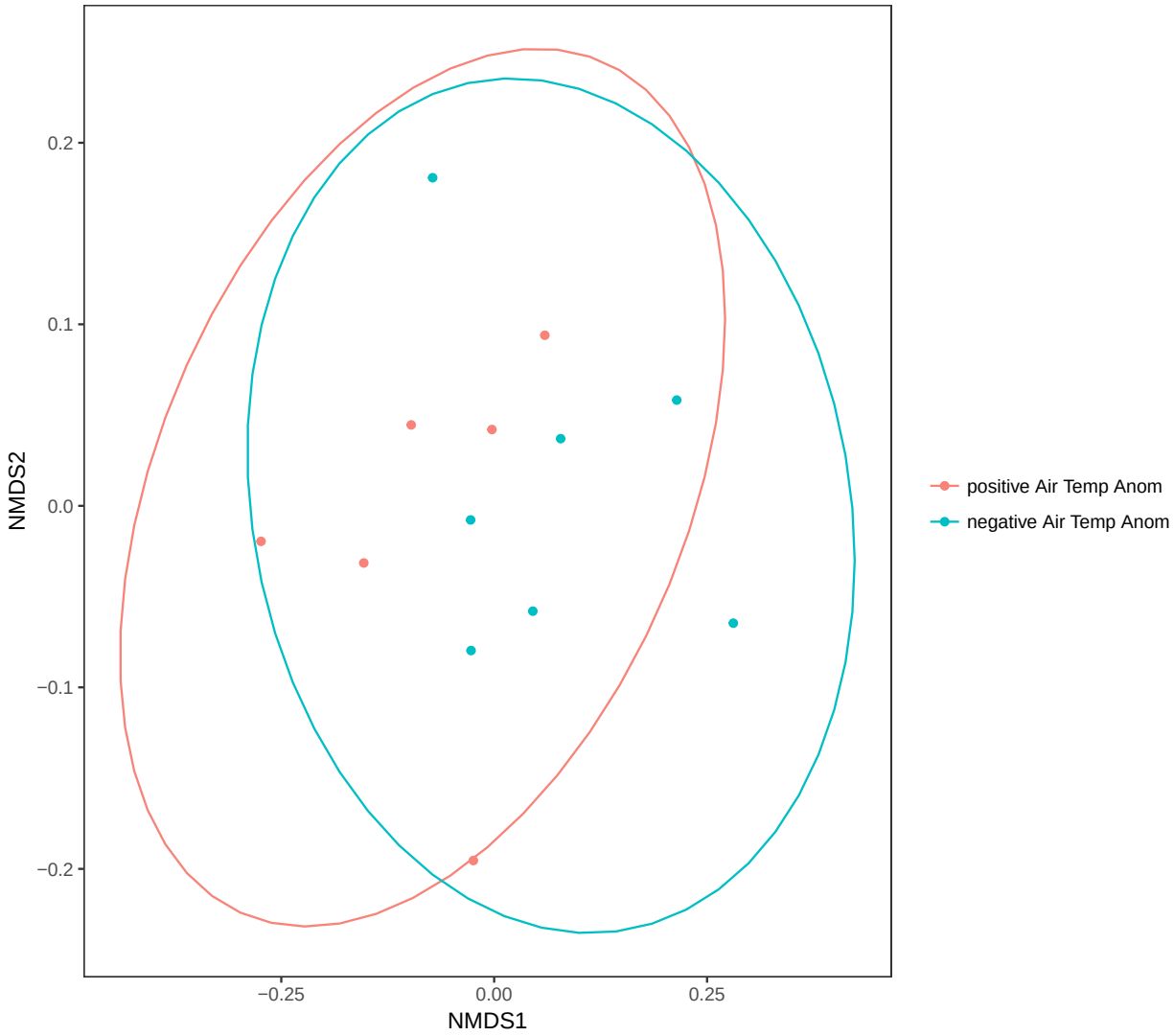

```
##
## Call:
## vegan::adonis(formula = sp_percov ~ PDO_anul_mn, data = pdo_treats,      permutations = 1000, method
##
## Permutation: free
## Number of permutations: 1000
##
## Terms added sequentially (first to last)
##
##             Df SumsOfSqs  MeanSqs F.Model      R2  Pr(>F)
## PDO_anul_mn  1   0.13244 0.132442  3.5615 0.18207 0.01299 *
## Residuals   16   0.59500 0.037187         0.81793
## Total       17   0.72744                 1.00000
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Freshwater



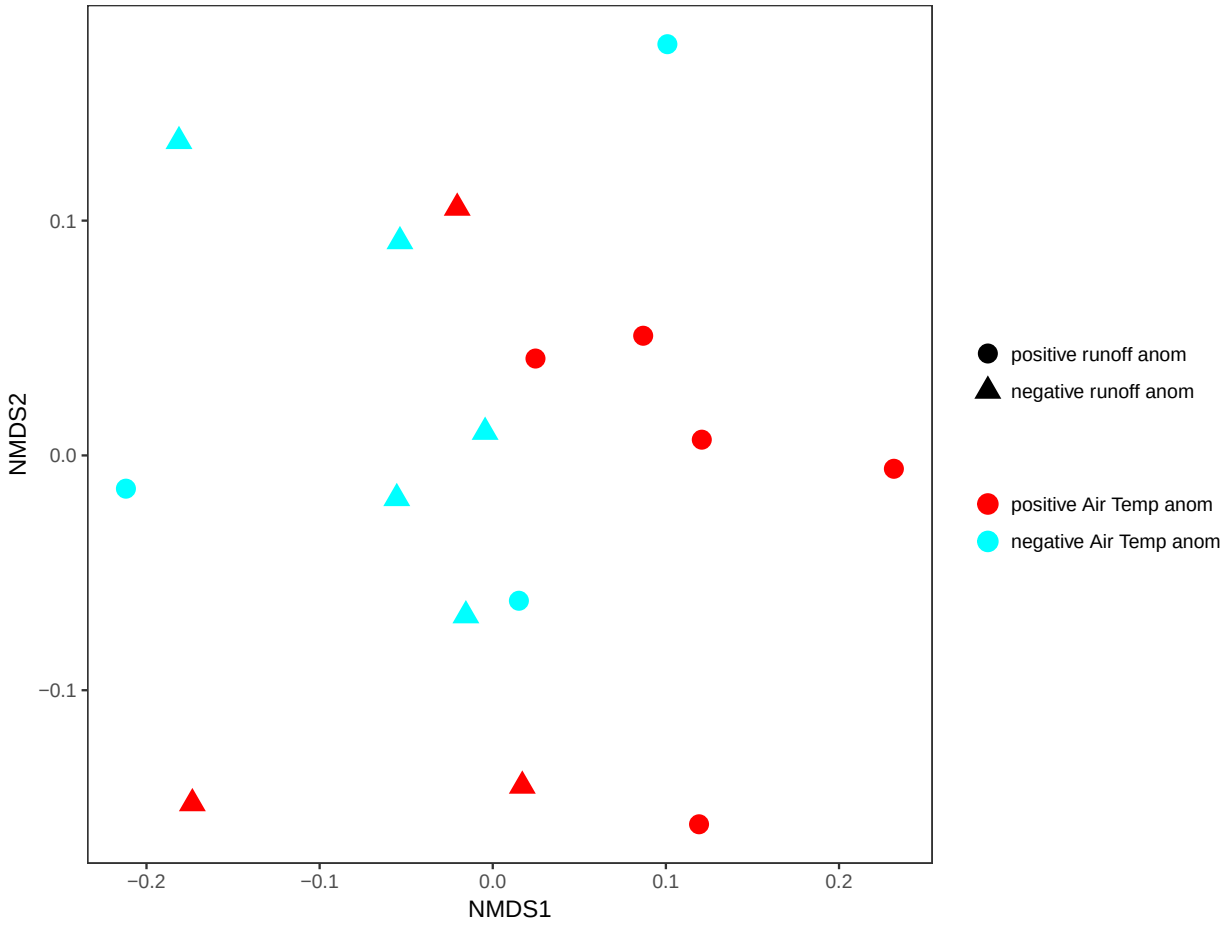

```
##
## Call:
## vegan::adonis(formula = sp_percov2 ~ mean_yearly_discharge_m3s1,      data = fresh_treats, permutati
##
## Permutation: free
## Number of permutations: 1000
##
## Terms added sequentially (first to last)
##
##                            Df SumsOfSqs  MeanSqs F.Model     R2  Pr(>F)
## mean_yearly_discharge_m3s1  1   0.10861 0.108610   2.645 0.1589 0.05395 .
## Residuals                  14   0.57488 0.041063         0.8411
## Total                      15   0.68349                  1.0000
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Air Temp



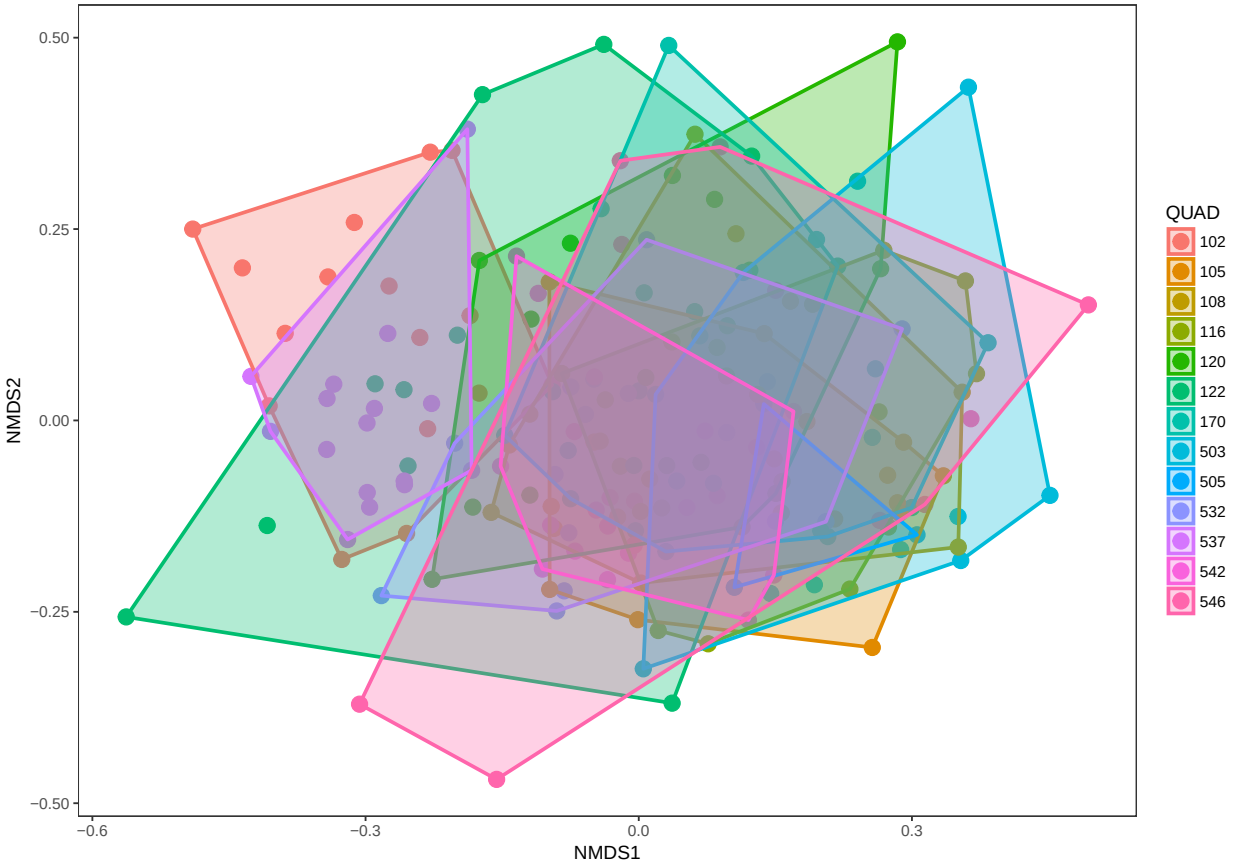

```
##
## Call:
## vegan::adonis(formula = sp_percov3 ~ ATemp_YearMn, data = atemp_treats,      permutations = 1000, me
##
## Permutation: free
## Number of permutations: 1000
##
## Terms added sequentially (first to last)
##
##              Df SumsOfSqs  MeanSqs F.Model      R2  Pr(>F)
## ATemp_YearMn  1   0.11104 0.111036  2.5455 0.18792 0.05694 .
## Residuals    11   0.47983 0.043621         0.81208
## Total        12   0.59087                  1.00000
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

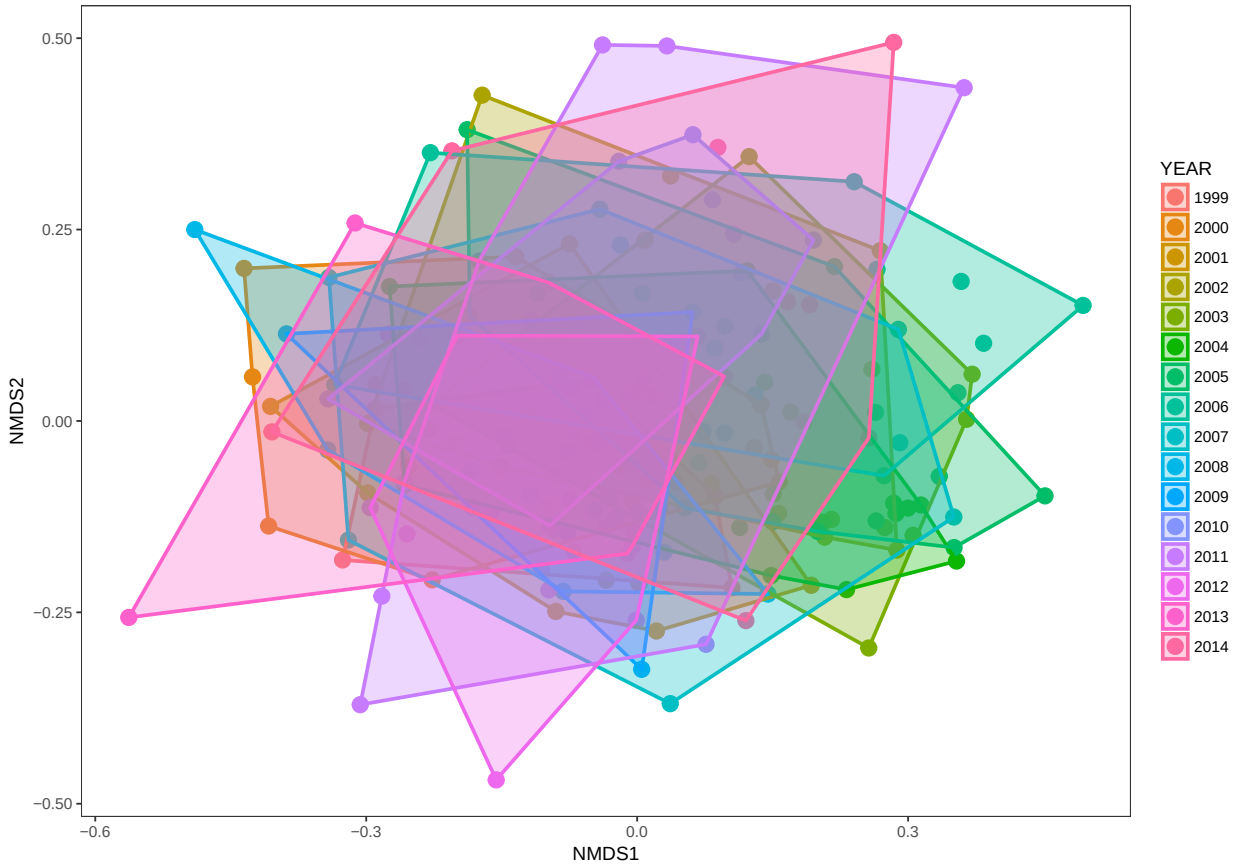
All env. variables



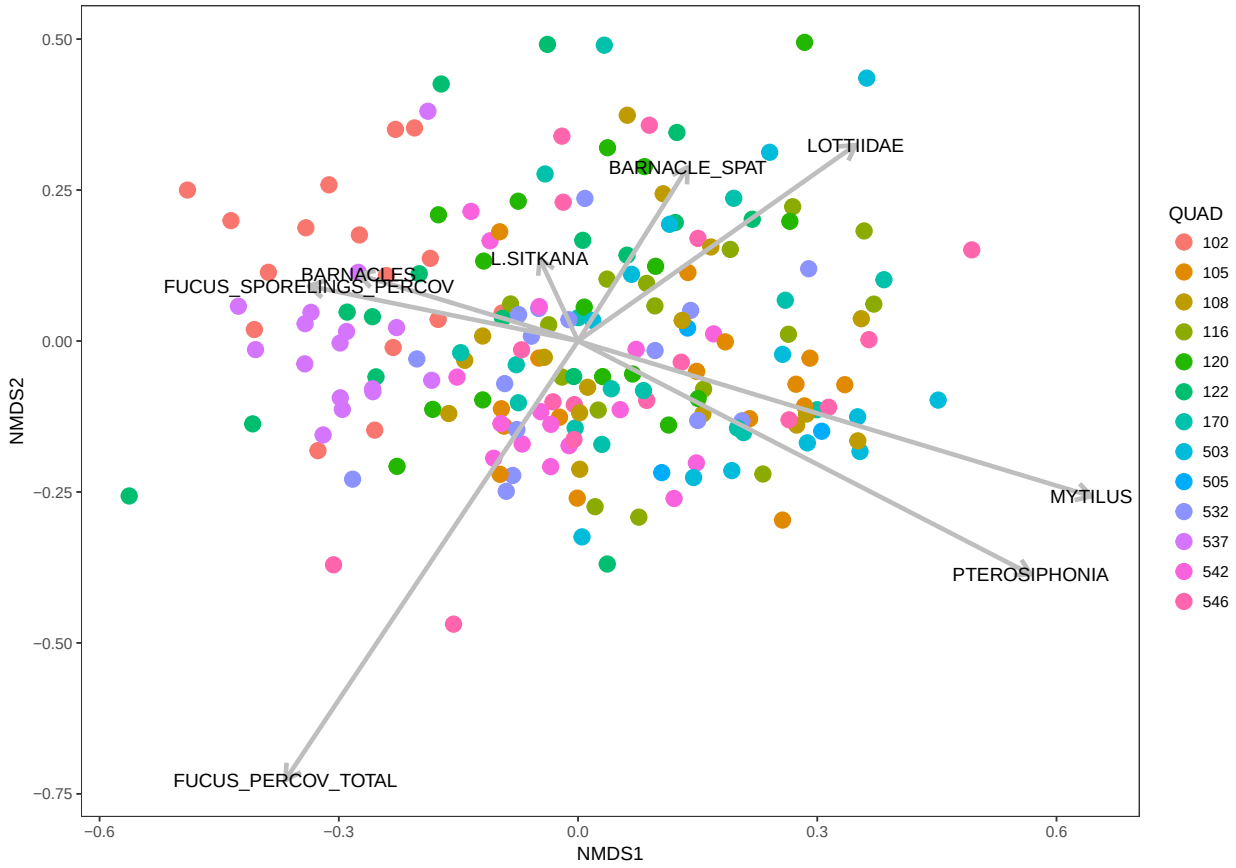

```
##
## Call:
## vegan::adonis(formula = sp_percov4 ~ ATemp_YearMn + mn_yr_discharge,      data = all_treats, permuta
##
## Permutation: free
## Number of permutations: 1000
##
## Terms added sequentially (first to last)
##
##                 Df SumsOfSqs  MeanSqs F.Model      R2  Pr(>F)
## ATemp_YearMn     1   0.13125 0.131246  3.6168 0.19202 0.01698 *
## mn_yr_discharge  1   0.08050 0.080499  2.2183 0.11778 0.09291 .
## Residuals       13   0.47175 0.036288         0.69020
## Total           15   0.68349                  1.00000
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

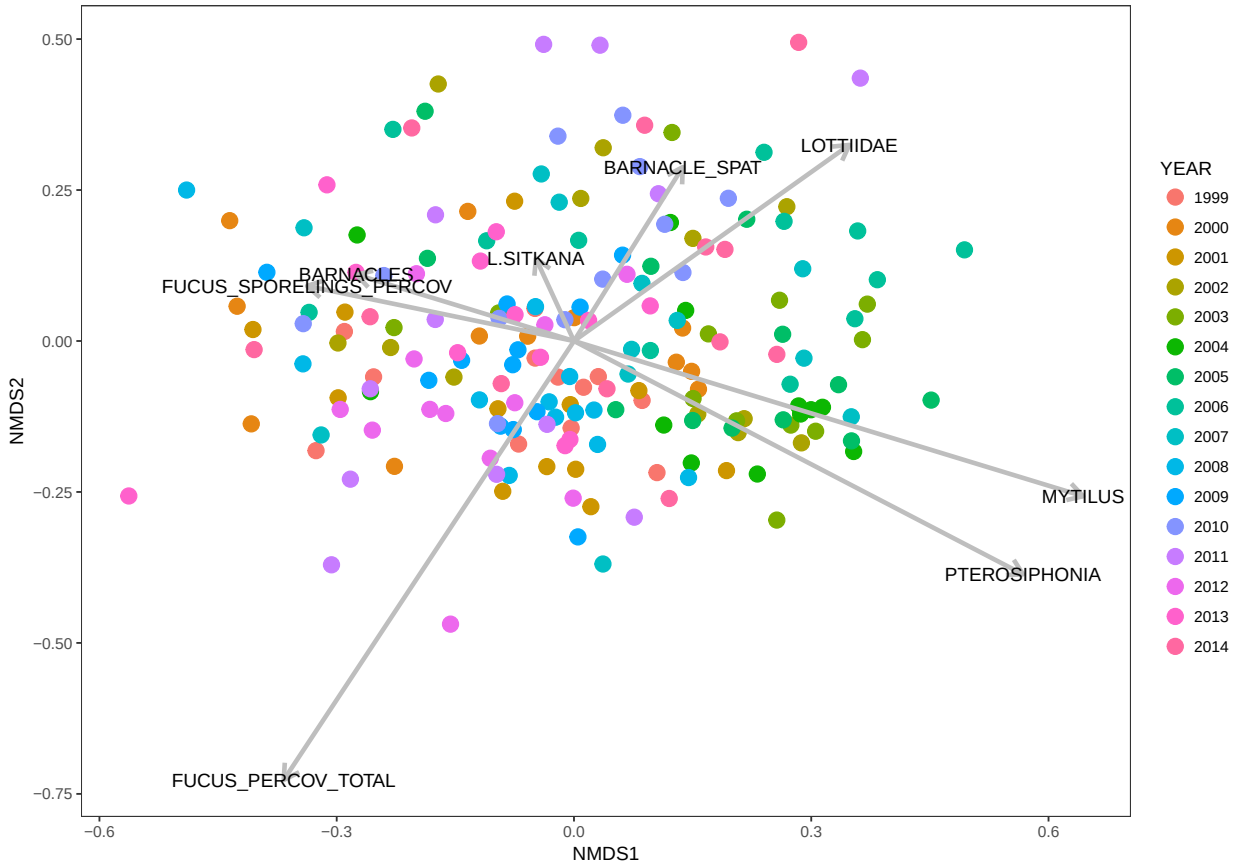
Biological NMDS



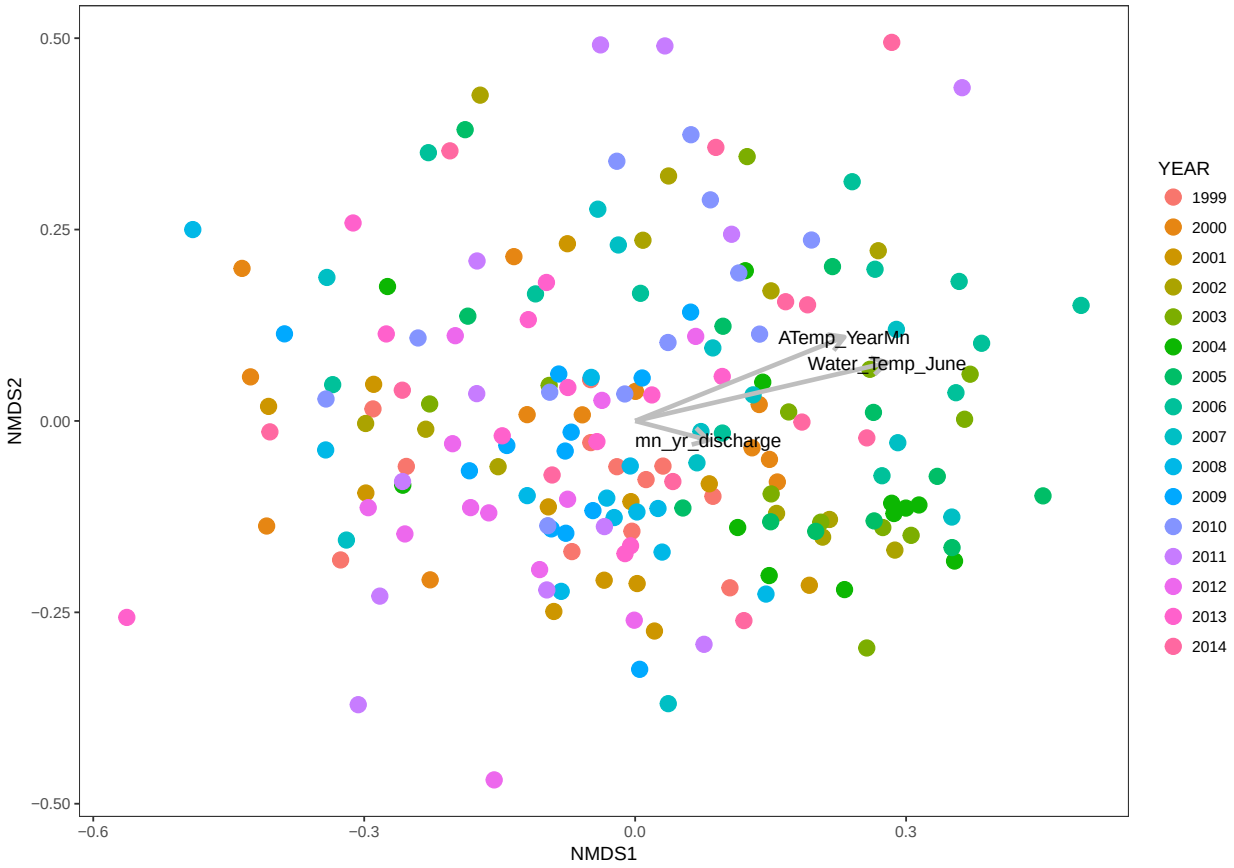


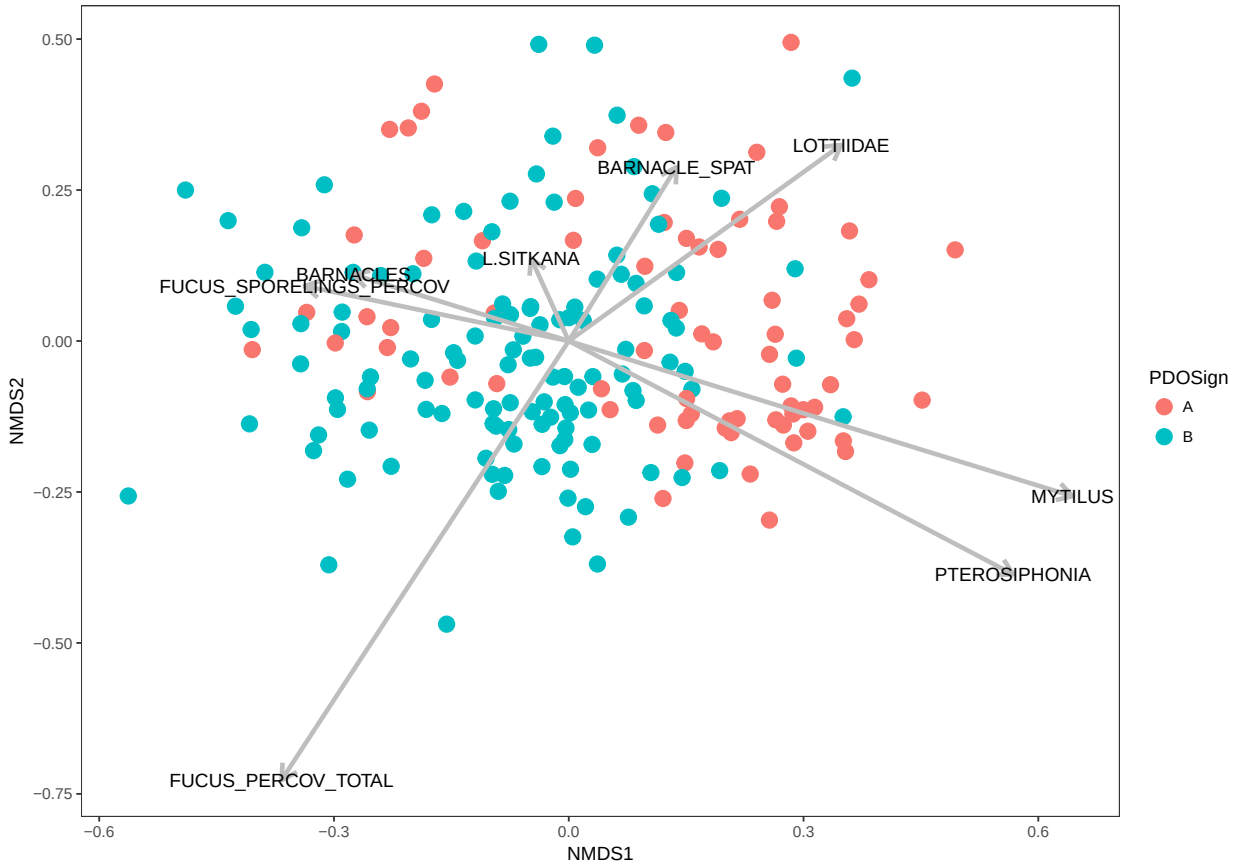

```
##
## ***VECTORS
##
##                              MDS1     MDS2     r2   Pr(>r)
## FUCUS_PERCOV_TOTAL      -0.45069 -0.89268 0.6629 0.000999 ***
## BARNACLES               -0.92864  0.37098 0.0877 0.000999 ***
## MYTILUS                  0.92871 -0.37081 0.4805 0.000999 ***
## PTEROSIPHONIA            0.82674 -0.56259 0.4717 0.000999 ***
## BARNACLE_SPAT            0.43105  0.90233 0.1018 0.000999 ***
## FUCUS_SPORELINGS_PERCOV -0.96541  0.26072 0.1222 0.000999 ***
## LOTTIIDAE                0.73134  0.68201 0.2266 0.000999 ***
## L.SITKANA               -0.33243  0.94313 0.0209 0.139860
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## Permutation: free
## Number of permutations: 1000
```


0.50
0.25
0.00
−0.25
−0.50
−0.75
NMDS2
−0.6
−0.3
0.0
0.3
0.6
NMDS1
LOTTIIDAE
BARNACLE_SPAT
L.SITKANA
BARNACLES
FUCUS_SPORELINGS_PERCOV
MYTILUS
PTEROSIPHONIA
FUCUS_PERCOV_TOTAL
QUAD
102
105
108
116
120
122
170
503
505
532
537
542
546




```
##
## ***VECTORS
##
##                     MDS1     MDS2     r2   Pr(>r)
## mn_yr_discharge  0.95569 -0.29437 0.0072 0.506494
## ATemp_YearMn     0.90376  0.42804 0.0657 0.000999 ***
## Water_Temp_June  0.96471  0.26333 0.0837 0.000999 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## Permutation: free
## Number of permutations: 1000
```

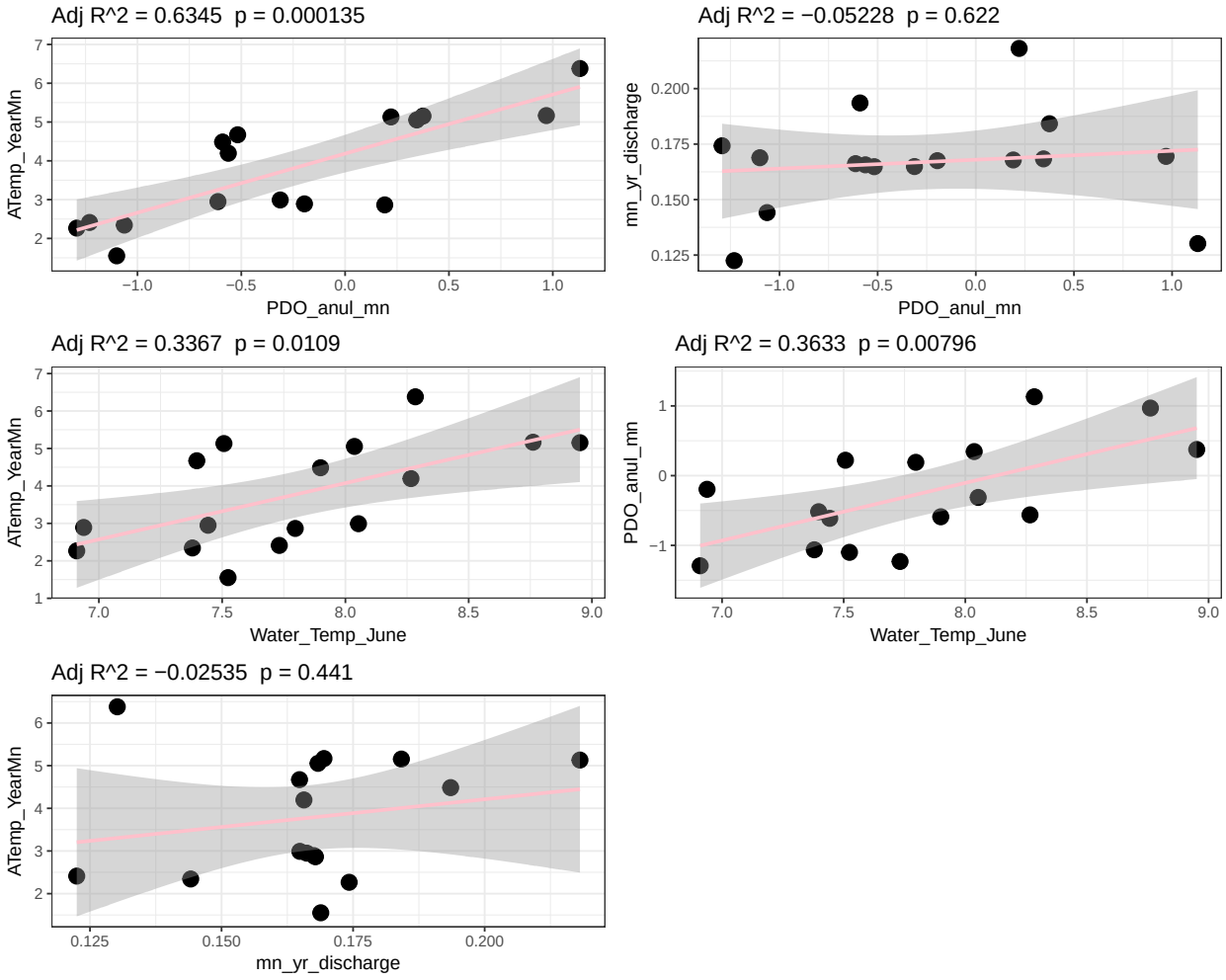

0.50
0.25
0.00
−0.25
−0.50
NMDS2
−0.6
−0.3
0.0
0.3
NMDS1
ATemp_YearMn
Water_Temp_June
mn_yr_discharge
YEAR
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014



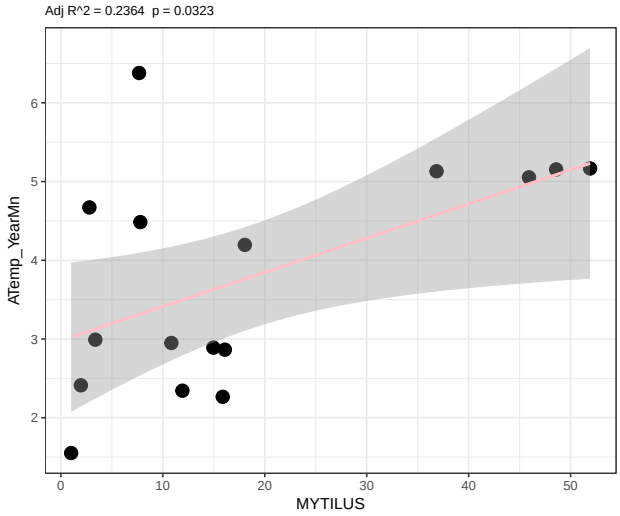

```
##
## Call:
## vegan::adonis(formula = sp_percov5 ~ ATemp_YearMn * mn_yr_discharge *      Water_Temp_June, data = a
##
## Permutation: free
## Number of permutations: 1000
##
## Terms added sequentially (first to last)
##
##                                              Df SumsOfSqs MeanSqs F.Model
## ATemp_YearMn                                  1    0.4967 0.49673  6.4060
## mn_yr_discharge                               1    0.3659 0.36587  4.7184
## Water_Temp_June                               1    0.2328 0.23276  3.0018
## ATemp_YearMn:mn_yr_discharge                  1    0.1418 0.14179  1.8286
## ATemp_YearMn:Water_Temp_June                  1    0.3122 0.31220  4.0263
## mn_yr_discharge:Water_Temp_June               1    0.1262 0.12619  1.6274
## ATemp_YearMn:mn_yr_discharge:Water_Temp_June  1    0.0207 0.02067  0.2666
## Residuals                                   184   14.2676 0.07754
## Total                                       191   15.9638
##                                                   R2   Pr(>F)
## ATemp_YearMn                                 0.03112 0.000999 ***
## mn_yr_discharge                              0.02292 0.002997 **
## Water_Temp_June                              0.01458 0.020979 *
## ATemp_YearMn:mn_yr_discharge                 0.00888 0.134865
## ATemp_YearMn:Water_Temp_June                 0.01956 0.007992 **
## mn_yr_discharge:Water_Temp_June              0.00790 0.168831
```

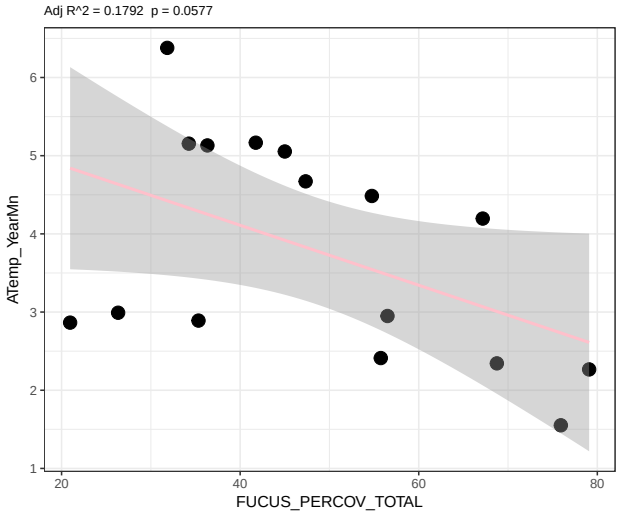
```
## ATemp_YearMn:mn_yr_discharge:Water_Temp_June 0.00129 0.897103
## Residuals                                    0.89375
## Total                                        1.00000
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

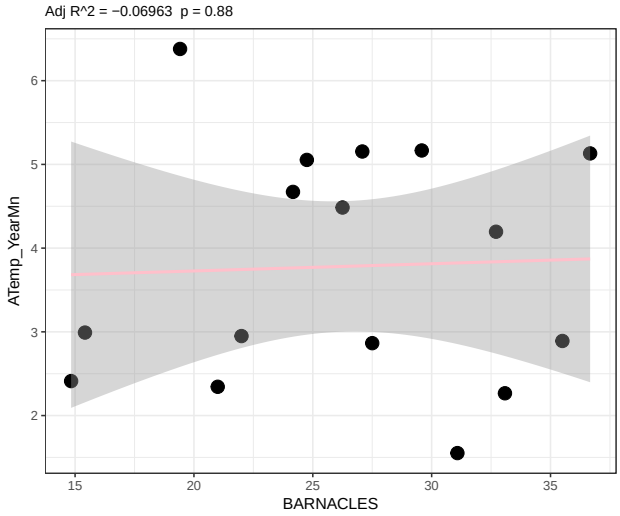
Correlations between env. variables

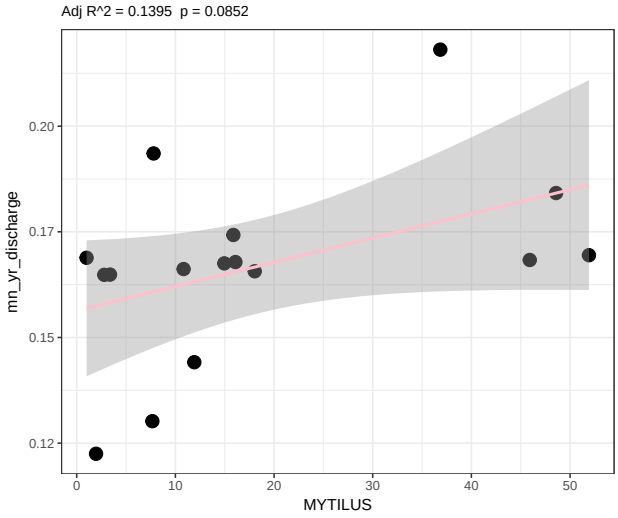


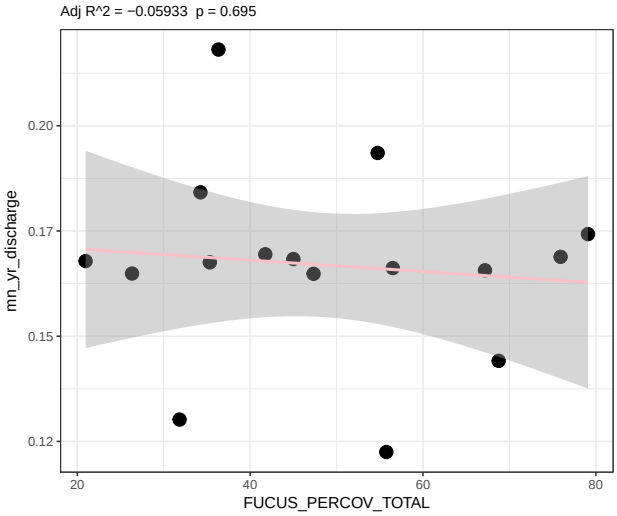
Correlations between other variables

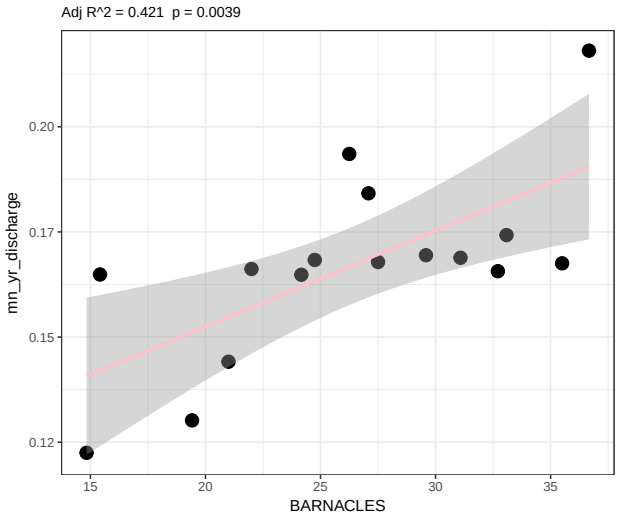


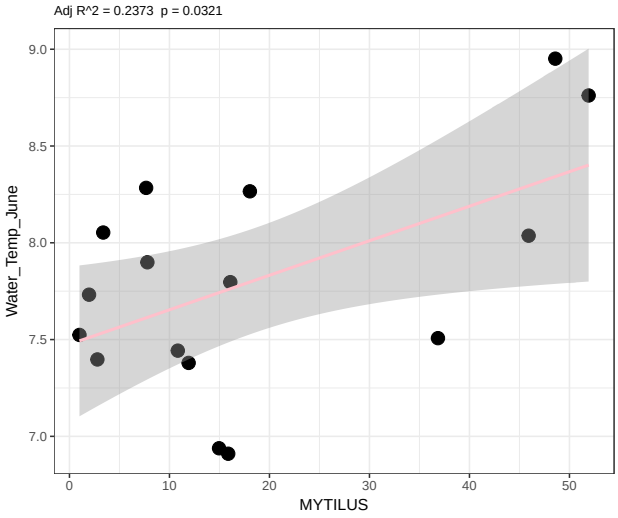


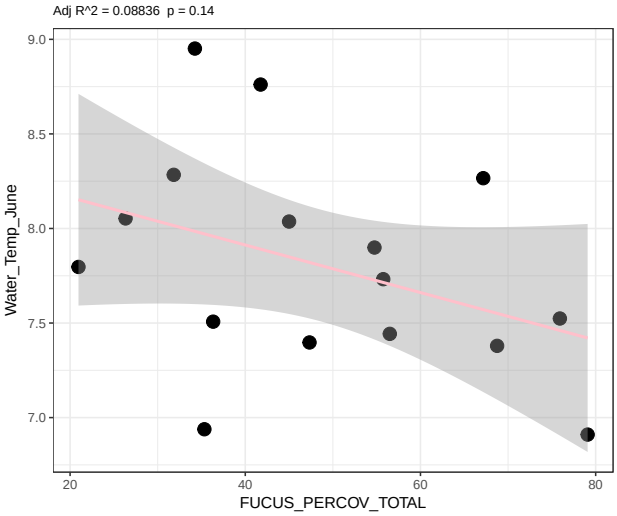


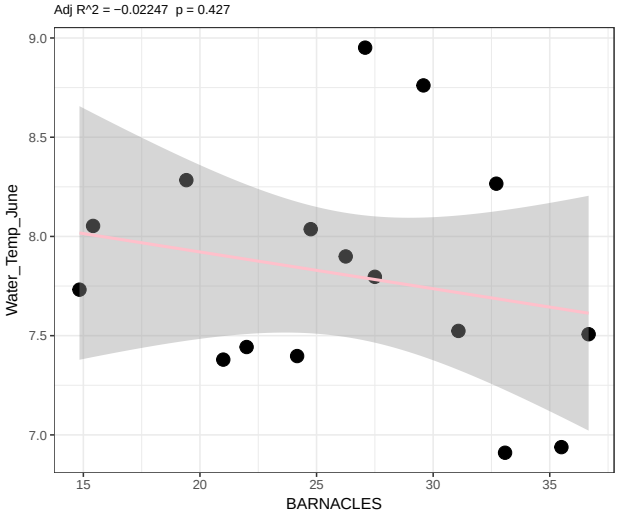

Adj R^2 = 0.1395 p = 0.0852
mn_yr_discharge
0.20
0.17
0.15
0.12
0
10
20
30
40
50
MYTILUS

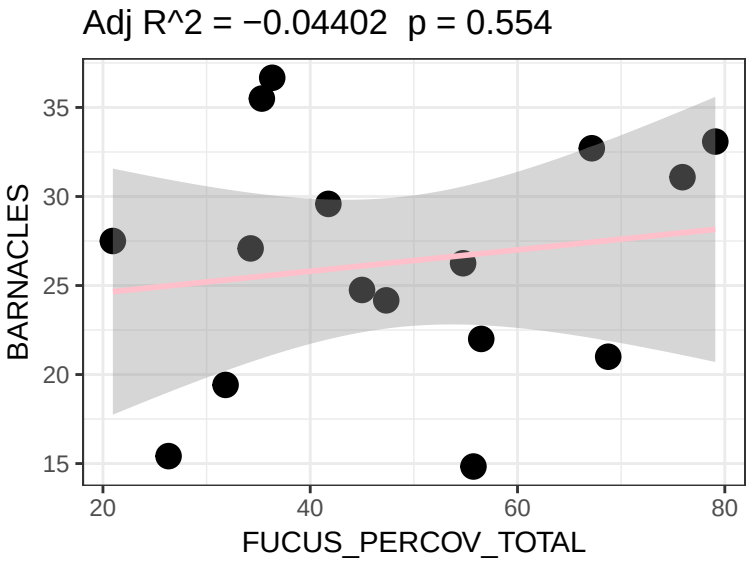

Adj R^2 = −0.05933 p = 0.695
mn_yr_discharge
0.20
0.17
0.15
0.12
20
40
60
80
FUCUS_PERCOV_TOTAL


Adj R^2 = 0.421 p = 0.0039
mn_yr_discharge
0.20
0.17
0.15
0.12
15
20
25
30
35
BARNACLES


Adj R^2 = 0.2373 p = 0.0321
Water_Temp_June
MYTILUS


Adj R^2 = 0.08836 p = 0.14
Water_Temp_June
FUCUS_PERCOV_TOTAL


Adj R^2 = −0.02247 p = 0.427
Water_Temp_June
BARNACLES


Adj R^2 = −0.04402 p = 0.554
BARNACLES
FUCUS_PERCOV_TOTAL