


Problème pratique de statistique n° pps090
Stage de formation ade4 du 1er au 5 septembre
2008 à Lyon

J.R. Lobry

19 août 2008

Importation des données utilisées pour illustrer la formation.

1 Origine et transformation des données

Les données originelles au format Excel (*.xls) sont disponibles à <http://pbil.univ-lyon1.fr/R/donnees/>. Elles ont été converties au format *.csv en utilisant une tabulation comme séparateur. On voit ici comment les importer dans .

2 Le fichier TotAppetChimBiomecaADE4.csv

2.1 Brève description des données (Michel de Garine-Wichatitsky)

Contexte : le cerf rusa a été introduit en Nouvelle-Calédonie il y a près d'un siècle et demi. A l'heure actuelle, il a un impact important sur la régénération des formations végétales endémiques.

Le fichier concerne des analyses effectuées sur les feuilles d'une quarantaine de plantes (essentiellement natives ou endémiques), issues de deux formations végétales endémiques de Nouvelle-Calédonie (Maquis et Forêt Sclérophylle) : paramètres chimiques, physiques et mesure d'appétence pour les cerfs rusa.

38 observations (plantes)

1 ligne de titres

Col. A-C : Variables taxonomie, type de végétation

Col. D-J : Variables Composition Chimique des feuilles

Col. K-N : Variables Défenses Chimique des feuilles

Col. O-AA : Variables Caractéristiques Physiques des feuilles

Col AB-AC : Appétence des feuilles pour les cerfs rusa (AB : classification subjective basée sur fréquence d'latiabrouissement ; AC : mesure tests cafétéria LogRatio test/control)

2.2 Importation des données

```
cerf <- read.table("http://pbil.univ-lyon1.fr/R/donnees/TotAppetChimBiomecaADE4.csv",  
  sep = "\t", header = TRUE, na.string = "", dec = ",")  
dim(cerf)
```

[1] 46 40

summary(cerf)

	Species	family	vegetation	DeerPref
Acacia spirorbis FS	: 1	Euphorbiaceae: 5	maquis :21	Min. :-1.0000
Acacia spirorbis M	: 1	Apocynaceae : 4	sclerophyll:25	1st Qu.:-1.0000
Alphitonia neocaledonica:	1	Myrtaceae : 3		Median : 0.0000
Alyxia tisserantii	: 1	Rubiaceae : 3		Mean :-0.2286
Arytera arcuata	: 1	Sapindaceae : 3		3rd Qu.: 0.0000
Capparis artensis	: 1	Cunoniaceae : 2		Max. : 1.0000
(Other)	:40	(Other) :26		NA's :11.0000
EauComp	water..g.g.1.	MM	MAT	NDF
Min. :0.510	Min. :0.890	Min. : 2.280	Min. : 3.790	Min. :28.69
1st Qu.:0.960	1st Qu.:1.093	1st Qu.: 6.440	1st Qu.: 5.510	1st Qu.:40.55
Median :1.150	Median :1.245	Median : 7.640	Median : 9.690	Median :45.52
Mean :1.251	Mean :1.357	Mean : 8.529	Mean : 9.988	Mean :46.74
3rd Qu.:1.470	3rd Qu.:1.530	3rd Qu.:11.095	3rd Qu.:13.265	3rd Qu.:52.63
Max. :2.780	Max. :2.830	Max. :14.780	Max. :21.300	Max. :63.13
NA's :3.000	NA's :4.000	NA's : 3.000	NA's : 3.000	NA's : 3.00
ADF	ADL	SMS	SMD	PhTot
Min. :19.30	Min. : 4.21	Min. :29.62	Min. :32.06	Min. : 0.260
1st Qu.:26.24	1st Qu.:11.41	1st Qu.:47.91	1st Qu.:48.08	1st Qu.: 4.025
Median :30.25	Median :15.44	Median :63.39	Median :59.92	Median : 6.580
Mean :31.94	Mean :16.02	Mean :60.64	Mean :58.43	Mean : 9.054
3rd Qu.:37.50	3rd Qu.:21.21	3rd Qu.:72.52	3rd Qu.:69.24	3rd Qu.:14.810
Max. :49.84	Max. :32.83	Max. :86.97	Max. :84.77	Max. :24.930
NA's : 3.00	NA's : 3.00	NA's : 3.00	NA's : 3.00	NA's : 3.000
phenolics	TanCond	blue.bsa	water..g.g.1..1	
Min. : 0.850	Min. : 0.000	Min. :0.0100	Min. :0.890	
1st Qu.: 2.263	1st Qu.: 0.655	1st Qu.:0.0500	1st Qu.:1.093	
Median : 5.250	Median : 2.430	Median :0.2400	Median :1.245	
Mean : 5.665	Mean : 7.037	Mean :0.2643	Mean :1.357	
3rd Qu.: 8.227	3rd Qu.:10.020	3rd Qu.:0.4350	3rd Qu.:1.530	
Max. :12.840	Max. :32.530	Max. :0.8100	Max. :2.830	
NA's : 4.000	NA's : 3.000	NA's :4.0000	NA's :4.000	
leaf.size..mm2.	LMA..g.m.2.	work..J.m.1.	swork..kJ.m.2.	
Min. : 95.97	Min. : 70.88	Min. :0.0500	Min. :0.2000	
1st Qu.: 601.95	1st Qu.:117.69	1st Qu.:0.1400	1st Qu.:0.4625	
Median :1161.70	Median :158.76	Median :0.2450	Median :0.7400	
Mean :1518.19	Mean :171.83	Mean :0.3579	Mean :0.8814	
3rd Qu.:2331.05	3rd Qu.:222.44	3rd Qu.:0.4650	3rd Qu.:0.9825	
Max. :4271.20	Max. :334.78	Max. :1.3200	Max. :2.9700	
NA's : 4.00	NA's : 4.00	NA's :4.0000	NA's :4.0000	
herb..ave.	E	EIW	strength..MN.m.2.	
Min. :0.000	Min. : 82.73	Min. :0.040	Min. : 2.600	
1st Qu.:0.630	1st Qu.: 137.85	1st Qu.:0.195	1st Qu.: 6.515	
Median :1.335	Median : 206.01	Median :0.470	Median : 8.685	
Mean :1.954	Mean : 277.34	Mean :1.269	Mean : 9.385	
3rd Qu.:2.842	3rd Qu.: 285.75	3rd Qu.:1.705	3rd Qu.:11.238	
Max. :7.760	Max. :1250.83	Max. :5.540	Max. :27.140	
NA's :4.000	NA's : 4.00	NA's :4.000	NA's : 4.000	
sstrength..GN.m.2.m.1.	work..kJ.m.2.	swork..MJ.m.2.m.1.	Carbon	
Min. : 8.20	Min. : 0.680	Min. : 3.750	Min. :37.74	
1st Qu.:20.78	1st Qu.: 1.930	1st Qu.: 6.535	1st Qu.:44.35	
Median :26.98	Median : 2.595	Median : 8.420	Median :46.88	
Mean :29.63	Mean : 3.392	Mean : 9.570	Mean :46.62	
3rd Qu.:37.50	3rd Qu.: 4.423	3rd Qu.:11.615	3rd Qu.:48.61	
Max. :70.81	Max. :10.830	Max. :26.040	Max. :53.03	
NA's : 4.00	NA's : 4.000	NA's : 4.000	NA's : 4.00	
Nitrogen	C.N	SI	ndf	ash
Min. :0.6500	Min. :14.29	Min. : 1.110	Min. :16.35	Min. :0.230
1st Qu.:0.8275	1st Qu.:25.22	1st Qu.: 2.473	1st Qu.:25.10	1st Qu.:0.580
Median :1.4300	Median :33.58	Median : 3.360	Median :30.14	Median :0.765
Mean :1.4671	Mean :39.67	Mean : 4.268	Mean :31.05	Mean :1.097
3rd Qu.:1.8800	3rd Qu.:58.71	3rd Qu.: 6.060	3rd Qu.:35.62	3rd Qu.:1.060
Max. :3.0500	Max. :67.33	Max. :10.150	Max. :50.03	Max. : 5.390
NA's :4.0000	NA's : 4.00	NA's :4.000	NA's : 4.00	NA's :4.000
phos	TSTRENGTH	TFORCE	TWORK	TWORK
Min. :0.02000	Min. :0.340	Min. : 257.7	Min. :0.1100	Min. :0.130
1st Qu.:0.03000	1st Qu.:1.700	1st Qu.: 493.4	1st Qu.:0.2925	1st Qu.:1.025
Median :0.07000	Median :2.140	Median : 598.6	Median :0.4700	Median :1.820
Mean :0.07238	Mean :2.801	Mean : 898.3	Mean :0.6769	Mean :2.087
3rd Qu.:0.11000	3rd Qu.:3.290	3rd Qu.: 912.0	3rd Qu.:0.7525	3rd Qu.:2.393
Max. :0.14000	Max. :9.500	Max. :4173.9	Max. :3.4100	Max. :8.760
NA's :4.00000	NA's :4.000	NA's : 4.0	NA's :4.0000	NA's :4.000

dim(cerf[complete.cases(cerf),])

[1] 29 40

3 Le fichier Gaujour_Traits.csv

3.1 Brève description des données (Etienne Gaujour)

Le premier fichier (Gaujour_Traits.xls) contient pour toutes les espèces les caractéristiques fonctionnelles : chaque colonne est un état de trait fonctionnel (exple "dissémination des graines par le vent" pour le traits fonctionnel "mode de dissémination des graines") et l'espèce a ou non cet état de trait (1 ou 0). ATTENTION : ce fichier contient des valeurs manquantes. D'après votre mail, vous souhaitez un fichier complet ... est-ce possible de traiter des tables avec données manquantes ?

3.2 Importation des données

```
gt <- read.table("http://pbil.univ-lyon1.fr/R/donnees/Gaujour_Traits.csv",
  sep = "\t", header = TRUE, dec = ",",)
dim(gt)
[1] 94 44
summary(gt)
```

Code	Nom.latin	DiasDisp_Zoo
Achmill: 1	Achillea millefolium L. ssp millefolium P.Fou.: 1	Min. :0.0000
Agrcap : 1	Agrimonia eupatoria L.	: 1 1st Qu.:0.0000
Agreup : 1	Agrostis capillaris L.	: 1 Median :0.0000
Agrsto : 1	Agrostis stolonifera L.	: 1 Mean :0.4086
Ajurep : 1	Ajuga reptans L.	: 1 3rd Qu.:1.0000
Allvin : 1	Allium vineale L.	: 1 Max. :1.0000
(Other):88	(Other)	:88 NA's :1.0000

DiasDisp_Anemo	DiasDips_Auto	DiasDisp_Baro	DiasDisp_Anthropo
Min. :0.0000	Min. :0.0000	Min. :0.00000	Min. :0.0000
1st Qu.:0.0000	1st Qu.:0.0000	1st Qu.:0.00000	1st Qu.:0.0000
Median :0.0000	Median :0.0000	Median :0.00000	Median :0.0000
Mean :0.2903	Mean :0.3763	Mean :0.07527	Mean :0.1613
3rd Qu.:1.0000	3rd Qu.:1.0000	3rd Qu.:0.00000	3rd Qu.:0.0000
Max. :1.0000	Max. :1.0000	Max. :1.00000	Max. :1.0000
NA's :1.0000	NA's :1.0000	NA's :1.00000	NA's :1.0000

DiasDisp_Hydro	DiasDisp_Myrm	DiasDisp_NS	Mass_low
Min. :0.00000	Min. :0.00000	Min. :0.00000	Min. :0.0000
1st Qu.:0.00000	1st Qu.:0.00000	1st Qu.:0.00000	1st Qu.:0.0000
Median :0.00000	Median :0.00000	Median :0.00000	Median :0.0000
Mean :0.05376	Mean :0.02151	Mean :0.09677	Mean :0.1413
3rd Qu.:0.00000	3rd Qu.:0.00000	3rd Qu.:0.00000	3rd Qu.:0.0000
Max. :1.00000	Max. :1.00000	Max. :1.00000	Max. :1.0000
NA's :1.00000	NA's :1.00000	NA's :1.00000	NA's :2.0000

Mass_med1	Mass_med2	Mass_med3	Mass_med4
Min. :0.0000	Min. :0.0000	Min. :0.0000	Min. :0.0000
1st Qu.:0.0000	1st Qu.:0.0000	1st Qu.:0.0000	1st Qu.:0.0000
Median :0.0000	Median :0.0000	Median :0.0000	Median :0.0000
Mean :0.1957	Mean :0.3043	Mean :0.1304	Mean :0.1087
3rd Qu.:0.0000	3rd Qu.:1.0000	3rd Qu.:0.0000	3rd Qu.:0.0000
Max. :1.0000	Max. :1.0000	Max. :1.0000	Max. :1.0000
NA's :2.0000	NA's :2.0000	NA's :2.0000	NA's :2.0000

Mass_high	SeedBk_1	SeedBk_2	SeedBk_3
Min. :0.00000	Min. :0.0000	Min. :0.0000	Min. :0.0000
1st Qu.:0.00000	1st Qu.:0.0000	1st Qu.:0.0000	1st Qu.:0.0000
Median :0.00000	Median :0.0000	Median :0.0000	Median :0.0000
Mean :0.08696	Mean :0.2151	Mean :0.1613	Mean :0.3871
3rd Qu.:0.00000	3rd Qu.:0.0000	3rd Qu.:0.0000	3rd Qu.:1.0000
Max. :1.00000	Max. :1.0000	Max. :1.0000	Max. :1.0000
NA's :2.00000	NA's :1.0000	NA's :1.0000	NA's :1.0000

SeedBk_4	LifHist_P	LifHist_M	LifHist_Aw
Min. :0.0000	Min. :0.0000	Min. :0.00000	Min. :0.0000
1st Qu.:0.0000	1st Qu.:1.0000	1st Qu.:0.00000	1st Qu.:0.0000
Median :0.0000	Median :1.0000	Median :0.00000	Median :0.0000
Mean :0.2903	Mean :0.7634	Mean :0.01075	Mean :0.2151
3rd Qu.:1.0000	3rd Qu.:1.0000	3rd Qu.:0.00000	3rd Qu.:0.0000
Max. :1.0000	Max. :1.0000	Max. :1.00000	Max. :1.0000
NA's :1.0000	NA's :1.0000	NA's :1.00000	NA's :1.0000

LifHist_As	LifHist_B	Strat_CSR	Strat_C
Min. :0.0000	Min. :0.0000	Min. :0.0000	Min. :0.00000
1st Qu.:0.0000	1st Qu.:0.0000	1st Qu.:0.0000	1st Qu.:0.00000
Median :0.0000	Median :0.0000	Median :1.0000	Median :0.00000
Mean :0.1828	Mean :0.1183	Mean :0.5604	Mean :0.08791

```

3rd Qu.:0.0000 3rd Qu.:0.0000 3rd Qu.:1.0000 3rd Qu.:0.00000
Max. :1.0000 Max. :1.0000 Max. :1.0000 Max. :1.00000
NA's :1.0000 NA's :1.0000 NA's :3.0000 NA's :3.00000
  Strat_S Strat_R Strat_SC Strat_SR
Min. :0.0000 Min. :0.0000 Min. :0.00000 Min. :0.0000
1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0.00000 1st Qu.:0.0000
Median :0.0000 Median :0.0000 Median :0.00000 Median :0.0000
Mean :0.0989 Mean :0.2967 Mean :0.04396 Mean :0.0989
3rd Qu.:0.0000 3rd Qu.:1.0000 3rd Qu.:0.00000 3rd Qu.:0.0000
Max. :1.0000 Max. :1.0000 Max. :1.00000 Max. :1.0000
NA's :3.0000 NA's :3.0000 NA's :3.00000 NA's :3.0000
  Strat_CR LifForm_H LifForm_Th LifForm_Ch
Min. :0.0000 Min. :0.0000 Min. :0.0000 Min. :0.0000
1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0.0000
Median :0.0000 Median :1.0000 Median :0.0000 Median :0.0000
Mean :0.2637 Mean :0.6882 Mean :0.2796 Mean :0.1075
3rd Qu.:1.0000 3rd Qu.:1.0000 3rd Qu.:1.0000 3rd Qu.:0.0000
Max. :1.0000 Max. :1.0000 Max. :1.0000 Max. :1.0000
NA's :3.0000 NA's :1.0000 NA's :1.0000 NA's :1.0000
  LifForm_G LifForm_Ph LifForm_Hel RegStrat_V
Min. :0.00000 Min. :0.00000 Min. :0.00000 Min. :0.0000
1st Qu.:0.00000 1st Qu.:0.00000 1st Qu.:0.00000 1st Qu.:0.0000
Median :0.00000 Median :0.00000 Median :0.00000 Median :0.0000
Mean :0.09677 Mean :0.01075 Mean :0.02151 Mean :0.4624
3rd Qu.:0.00000 3rd Qu.:0.00000 3rd Qu.:0.00000 3rd Qu.:1.0000
Max. :1.00000 Max. :1.00000 Max. :1.00000 Max. :1.0000
NA's :1.00000 NA's :1.00000 NA's :1.00000 NA's :1.0000
  RegStrat_S RegStrat_Bs RegStrat_Sv RegStrat_.V.
Min. :0.0000 Min. :0.0000 Min. :0.00000 Min. :0.0000
1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0.00000 1st Qu.:0.0000
Median :0.0000 Median :0.0000 Median :0.00000 Median :0.0000
Mean :0.3871 Mean :0.4839 Mean :0.03226 Mean :0.08602
3rd Qu.:1.0000 3rd Qu.:1.0000 3rd Qu.:0.00000 3rd Qu.:0.0000
Max. :1.0000 Max. :1.0000 Max. :1.00000 Max. :1.0000
NA's :1.0000 NA's :1.0000 NA's :1.00000 NA's :1.0000
  RegStrat_W
Min. :0.00000
1st Qu.:0.00000
Median :0.00000
Mean :0.06452
3rd Qu.:0.00000
Max. :1.00000
NA's :1.00000

```

```
dim(gt[complete.cases(gt), ])
```

```
[1] 90 44
```

4 Le fichier Gaujour_Relevés.csv

4.1 Brève description des données (Etienne Gaujour)

Le second fichier (Gaujour_Relevés) contient les relevés floristiques (intitulé des colonnes = intitulé des lignes du fichier précédent). La première feuille contient des données en présence absence, et la seconde feuille contient des abondances relatives. Ce fichier contient une première colonne d'identificateur non-informative contrairement à la troisième colonne qui est un identifiant permettant d'avoir des informations sur le relevé. La seconde colonne indique si le relevé a été fait au centre ou en bordure de parcelle.

4.2 Importation des données

```

gr <- read.table("http://pbil.univ-lyon1.fr/R/donnees/Gaujour_Relevés.csv",
  sep = "\t", header = TRUE, dec = ",", )
dim(gr)
[1] 490 99
summary(gr)

```

CodeFlora	Parcelle	Position	Ident	Sol.nu
MI6001 : 1	Friche EST : 30	bord :260	dom4Ab1 : 2	Min. : 0.00
MI6002 : 1	Friche WEST : 30	centre:230	dom4Ab2 : 2	1st Qu.: 1.00
MI6003 : 1	Joly 2 : 30		dom4Ab3 : 2	Median : 5.00
MI6004 : 1	Domvallier 3: 25		dom4Ab4 : 2	Mean :13.20
MI6005 : 1	Domvallier 6: 25		dom4Ab5 : 2	3rd Qu.:20.00
MI6006 : 1	Joly 4 : 25		jus122Cb1: 2	Max. :95.00
(Other):484	(Other) :325		(Other) :478	
Alopra		Dacglo		Fesaru
Min. : 0.000	Min. : 0.000	Min. : 0.000	Min. : 0.000	Min. : 0.000
1st Qu.: 0.000	1st Qu.: 0.000	1st Qu.: 0.000	1st Qu.: 0.000	1st Qu.: 0.000
Median : 0.000	Median : 0.000	Median : 1.000	Median : 0.000	Median : 0.000
Mean : 2.855	Mean : 2.855	Mean : 4.502	Mean : 8.802	Mean : 8.802
3rd Qu.: 0.000	3rd Qu.: 0.000	3rd Qu.: 5.000	3rd Qu.:11.000	3rd Qu.:11.000
Max. :75.000	Max. :64.000	Max. :90.000	Max. :90.000	Max. :90.000
Fespra		Elyrep		Broere
Min. : 0.000	Min. : 0.0000	Min. : 0.000	Min. : 0.0000	Min. : 0.0000
1st Qu.: 0.000	1st Qu.: 0.0000	1st Qu.: 0.000	1st Qu.: 0.0000	1st Qu.: 0.0000
Median : 0.000	Median : 0.0000	Median : 0.000	Median : 0.0000	Median : 0.0000
Mean : 1.863	Mean : 0.6755	Mean : 4.927	Mean : 0.6816	Mean : 0.6816
3rd Qu.: 0.000	3rd Qu.: 0.0000	3rd Qu.: 3.000	3rd Qu.: 0.0000	3rd Qu.: 0.0000
Max. :60.000	Max. :25.0000	Max. :75.000	Max. :49.0000	Max. :49.0000
Brohor		Lolmul		Trifla
Min. : 0.000	Min. : 0.0000	Min. : 0.0000	Min. : 0.00000	Min. : 0.00000
1st Qu.: 0.000	1st Qu.: 0.0000	1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.00000
Median : 0.000	Median : 0.0000	Median : 0.0000	Median : 0.00000	Median : 0.00000
Mean : 1.271	Mean : 0.6265	Mean : 0.8776	Mean : 0.01837	Mean : 0.01837
3rd Qu.: 0.000	3rd Qu.: 0.0000	3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 0.00000
Max. :33.000	Max. :23.0000	Max. :45.0000	Max. :6.00000	Max. :6.00000
Agrsto		Alogen		Antodo
Min. : 0.000	Min. : 0.0000	Min. : 0.0	Min. : 0.0000	Min. : 0.0000
1st Qu.: 0.000	1st Qu.: 0.0000	1st Qu.: 0.0	1st Qu.: 0.0000	1st Qu.: 0.0000
Median : 0.000	Median : 0.0000	Median : 0.0	Median : 0.0000	Median : 0.0000
Mean : 1.476	Mean : 0.3673	Mean : 0.1	Mean : 0.5408	Mean : 0.5408
3rd Qu.: 0.000	3rd Qu.: 0.0000	3rd Qu.: 0.0	3rd Qu.: 0.0000	3rd Qu.: 0.0000
Max. :34.000	Max. :80.0000	Max. :20.0	Max. :32.0000	Max. :32.0000
Cyncri		Holmol		Lolper
Min. : 0.0000	Min. : 0.000	Min. : 0.0000	Min. : 0.00	Min. : 0.00
1st Qu.: 0.0000	1st Qu.: 0.0000	1st Qu.: 0.0000	1st Qu.: 0.00	1st Qu.: 0.00
Median : 0.0000	Median : 0.000	Median : 0.0000	Median : 1.00	Median : 1.00
Mean : 0.9857	Mean : 2.449	Mean : 0.2408	Mean : 10.78	Mean : 10.78
3rd Qu.: 0.0000	3rd Qu.: 0.000	3rd Qu.: 0.0000	3rd Qu.: 15.00	3rd Qu.: 15.00
Max. :56.0000	Max. :71.000	Max. :33.0000	Max. :92.00	Max. :92.00
Poaann		Broste		Horsec
Min. : 0.000	Min. : 0.000	Min. : 0.0000	Min. : 0.000000	Min. : 0.000000
1st Qu.: 0.000	1st Qu.: 0.000	1st Qu.: 0.0000	1st Qu.: 0.000000	1st Qu.: 0.000000
Median : 0.000	Median : 1.000	Median : 0.0000	Median : 0.000000	Median : 0.000000
Mean : 1.082	Mean : 7.539	Mean : 0.2265	Mean : 0.004082	Mean : 0.004082
3rd Qu.: 0.000	3rd Qu.: 11.000	3rd Qu.: 0.0000	3rd Qu.: 0.000000	3rd Qu.: 0.000000
Max. :42.000	Max. :72.000	Max. :22.0000	Max. :1.000000	Max. :1.000000
Poapra		Trirep		Vicsat
Min. : 0.000	Min. : 0.000	Min. : 0.000	Min. : 0.0000	Min. : 0.0000
1st Qu.: 0.000	1st Qu.: 0.000	1st Qu.: 0.000	1st Qu.: 0.0000	1st Qu.: 0.0000
Median : 0.000	Median : 0.000	Median : 0.000	Median : 0.0000	Median : 0.0000
Mean : 1.676	Mean : 5.886	Mean : 2.882	Mean : 0.7429	Mean : 0.7429
3rd Qu.: 0.000	3rd Qu.: 5.000	3rd Qu.: 0.000	3rd Qu.: 0.0000	3rd Qu.: 0.0000
Max. :70.000	Max. :61.000	Max. :54.000	Max. :25.0000	Max. :25.0000
Lotcor		Medlup		Tridub
Min. : 0.0000	Min. : 0.00000	Min. : 0.0000	Min. : 0.0000	Min. : 0.0000
1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.0000	1st Qu.: 0.0000	1st Qu.: 0.0000
Median : 0.0000	Median : 0.00000	Median : 0.0000	Median : 0.0000	Median : 0.0000
Mean : 0.1082	Mean : 0.03265	Mean : 0.1286	Mean : 0.2959	Mean : 0.2959
3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 0.0000	3rd Qu.: 0.0000	3rd Qu.: 0.0000
Max. :13.0000	Max. :4.00000	Max. :19.0000	Max. :40.0000	Max. :40.0000
Vichir		Lattub		Latlat
Min. : 0.0000	Min. : 0.00000	Min. : 0.0000	Min. : 0.000000	Min. : 0.000000
1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.0000	1st Qu.: 0.000000	1st Qu.: 0.000000
Median : 0.0000	Median : 0.00000	Median : 0.0000	Median : 0.000000	Median : 0.000000
Mean : 0.2224	Mean : 0.02857	Mean : 0.1143	Mean : 0.002041	Mean : 0.002041
3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 0.0000	3rd Qu.: 0.000000	3rd Qu.: 0.000000
Max. :19.0000	Max. :9.00000	Max. :14.0000	Max. :1.000000	Max. :1.000000
Antsyl		Rumcrl		Rumobt
Min. : 0.0000	Min. : 0.0000	Min. : 0.00000	Min. : 0.00000	Min. : 0.00000
1st Qu.: 0.0000	1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.00000	1st Qu.: 0.00000
Median : 0.0000	Median : 0.0000	Median : 0.00000	Median : 0.00000	Median : 0.00000

Mean : 0.7163	Mean : 0.1776	Mean : 0.06939	Mean : 0.01837
3rd Qu.: 0.0000	3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 0.00000
Max. : 44.0000	Max. : 34.0000	Max. : 14.00000	Max. : 5.00000
Rumace	Trapra	Achmill	Ajurep
Min. : 0.00000	Min. : 0.0000	Min. : 0.000	Min. : 0.000000
1st Qu.: 0.00000	1st Qu.: 0.0000	1st Qu.: 0.000	1st Qu.: 0.000000
Median : 0.00000	Median : 0.0000	Median : 0.000	Median : 0.000000
Mean : 0.09796	Mean : 0.1918	Mean : 1.869	Mean : 0.002041
3rd Qu.: 0.00000	3rd Qu.: 0.0000	3rd Qu.: 0.000	3rd Qu.: 0.000000
Max. : 5.00000	Max. : 17.0000	Max. : 46.000	Max. : 1.000000
Belper	Carpra	Cerfon	Leuvul
Min. : 0.00000	Min. : 0.00000	Min. : 0.0	Min. : 0.000000
1st Qu.: 0.00000	1st Qu.: 0.00000	1st Qu.: 0.0	1st Qu.: 0.000000
Median : 0.00000	Median : 0.00000	Median : 0.0	Median : 0.000000
Mean : 0.02041	Mean : 0.01224	Mean : 1.1	Mean : 0.008163
3rd Qu.: 0.00000	3rd Qu.: 0.00000	3rd Qu.: 1.0	3rd Qu.: 0.000000
Max. : 1.00000	Max. : 5.00000	Max. : 38.0	Max. : 1.000000
Leohis	Lysnum	Plamaj	Plalan
Min. : 0.000000	Min. : 0.00000	Min. : 0.00000	Min. : 0.0000
1st Qu.: 0.000000	1st Qu.: 0.00000	1st Qu.: 0.00000	1st Qu.: 0.0000
Median : 0.000000	Median : 0.00000	Median : 0.00000	Median : 0.0000
Mean : 0.002041	Mean : 0.09184	Mean : 0.04898	Mean : 0.0653
3rd Qu.: 0.000000	3rd Qu.: 0.00000	3rd Qu.: 0.00000	3rd Qu.: 0.0000
Max. : 1.000000	Max. : 14.00000	Max. : 5.00000	Max. : 9.00000
Potrep	Priver	Ranbul	Ranrep
Min. : 0.0000	Min. : 0.00000	Min. : 0.000	Min. : 0.000
1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.000	1st Qu.: 0.000
Median : 0.0000	Median : 0.00000	Median : 0.000	Median : 0.000
Mean : 0.7449	Mean : 0.06939	Mean : 3.998	Mean : 3.039
3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 4.000	3rd Qu.: 1.000
Max. : 47.0000	Max. : 15.00000	Max. : 60.000	Max. : 80.000
Stegra	Taroff	Vercha	Verser
Min. : 0.000000	Min. : 0.000	Min. : 0.0000	Min. : 0.00000
1st Qu.: 0.000000	1st Qu.: 0.000	1st Qu.: 0.0000	1st Qu.: 0.00000
Median : 0.000000	Median : 1.000	Median : 0.0000	Median : 0.00000
Mean : 0.002041	Mean : 4.857	Mean : 0.2041	Mean : 0.08163
3rd Qu.: 0.000000	3rd Qu.: 5.000	3rd Qu.: 0.0000	3rd Qu.: 0.00000
Max. : 1.000000	Max. : 80.000	Max. : 32.0000	Max. : 9.00000
Cirarv	Stemed	Capbur	Gerdis
Min. : 0.0000	Min. : 0.00000	Min. : 0.00000	Min. : 0.0000
1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.00000	1st Qu.: 0.0000
Median : 0.0000	Median : 0.00000	Median : 0.00000	Median : 0.0000
Mean : 0.2286	Mean : 0.03878	Mean : 0.03061	Mean : 0.4082
3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 0.00000	3rd Qu.: 0.0000
Max. : 15.0000	Max. : 4.00000	Max. : 4.00000	Max. : 18.0000
Hyprad	Carexsp	Rubpli	Urtdio
Min. : 0.0000	Min. : 0.00000	Min. : 0.0000	Min. : 0.0000
1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.0000	1st Qu.: 0.0000
Median : 0.0000	Median : 0.00000	Median : 0.0000	Median : 0.0000
Mean : 0.1980	Mean : 0.05306	Mean : 0.0551	Mean : 0.4061
3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 0.0000	3rd Qu.: 0.0000
Max. : 35.0000	Max. : 25.00000	Max. : 8.0000	Max. : 64.0000
Glehed	Allvin	Thlarv	Ranfic
Min. : 0.000000	Min. : 0.00000	Min. : 0.00000	Min. : 0.00000
1st Qu.: 0.000000	1st Qu.: 0.00000	1st Qu.: 0.00000	1st Qu.: 0.00000
Median : 0.000000	Median : 0.00000	Median : 0.00000	Median : 0.00000
Mean : 0.002041	Mean : 0.06939	Mean : 0.01837	Mean : 0.02449
3rd Qu.: 0.000000	3rd Qu.: 0.00000	3rd Qu.: 0.00000	3rd Qu.: 0.00000
Max. : 1.000000	Max. : 5.00000	Max. : 3.00000	Max. : 10.00000
Stehol	Calpal	Potans	Fraves
Min. : 0.0000	Min. : 0.00000	Min. : 0.00000	Min. : 0.00000
1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.00000	1st Qu.: 0.00000
Median : 0.0000	Median : 0.00000	Median : 0.00000	Median : 0.00000
Mean : 0.1959	Mean : 0.01837	Mean : 0.01020	Mean : 0.06327
3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 0.00000	3rd Qu.: 0.00000
Max. : 49.0000	Max. : 5.00000	Max. : 1.00000	Max. : 13.00000
Galapa	Crulae	Conarv	Agreup
Min. : 0.0000	Min. : 0.00000	Min. : 0.0000	Min. : 0.00000
1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.0000	1st Qu.: 0.00000
Median : 0.0000	Median : 0.00000	Median : 0.0000	Median : 0.00000
Mean : 0.4633	Mean : 0.09184	Mean : 0.5408	Mean : 0.02041
3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 0.0000	3rd Qu.: 0.00000
Max. : 24.0000	Max. : 19.00000	Max. : 20.0000	Max. : 5.00000

Galsax	Verarv	Geurb	Myoarv
Min. : 0.00000	Min. : 0.0000	Min. : 0.00000	Min. : 0.00000
1st Qu.: 0.00000	1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.00000
Median : 0.00000	Median : 0.0000	Median : 0.00000	Median : 0.00000
Mean : 0.07755	Mean : 0.2469	Mean : 0.07755	Mean : 0.07551
3rd Qu.: 0.00000	3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 0.00000
Max. : 15.00000	Max. : 46.0000	Max. : 24.00000	Max. : 5.00000
Erover	Senvul	Galuli	Equarv
Min. : 0.000000	Min. : 0.00000	Min. : 0.000000	Min. : 0.00000
1st Qu.: 0.000000	1st Qu.: 0.00000	1st Qu.: 0.000000	1st Qu.: 0.00000
Median : 0.000000	Median : 0.00000	Median : 0.000000	Median : 0.00000
Mean : 0.002041	Mean : 0.01633	Mean : 0.002041	Mean : 0.01633
3rd Qu.: 0.000000	3rd Qu.: 0.00000	3rd Qu.: 0.000000	3rd Qu.: 0.00000
Max. : 1.000000	Max. : 3.00000	Max. : 1.000000	Max. : 1.00000
Arclap	Verper	Centhu	Lepcam
Min. : 0.0000	Min. : 0.00000	Min. : 0.00000	Min. : 0.000000
1st Qu.: 0.0000	1st Qu.: 0.00000	1st Qu.: 0.00000	1st Qu.: 0.000000
Median : 0.0000	Median : 0.00000	Median : 0.00000	Median : 0.000000
Mean : 0.0653	Mean : 0.04694	Mean : 0.06327	Mean : 0.004082
3rd Qu.: 0.0000	3rd Qu.: 0.00000	3rd Qu.: 0.00000	3rd Qu.: 0.000000
Max. : 32.0000	Max. : 5.00000	Max. : 16.00000	Max. : 1.000000
Verpol	Carnut		
Min. : 0.000000	Min. : 0.00000		
1st Qu.: 0.000000	1st Qu.: 0.00000		
Median : 0.000000	Median : 0.00000		
Mean : 0.008163	Mean : 0.09184		
3rd Qu.: 0.000000	3rd Qu.: 0.00000		
Max. : 1.000000	Max. : 24.00000		