

**S16. Text Multi-species analysis of Hector**  
**Supporting Figure 18\9**

CLUSTAL Line-ups; Genbank Reference IDs below

Predicted TM domains in **YELLOW**

BBS sequences in **RED**

missing mauritania

**CLUSTAL**

bipectinata	-----mglslasvtep-----dmessraqdapppqdnrflrflkhlyae	38
anannasae	-----mglslasvtep-----dme----qeapppqdnrflrflkhlyae	34
kikkawai	mtsi--eeapptmgtnasdsdsdsgsenvamatatasqqsytqpqaqdnrflrflrhlyae	58
seratta	-----mamakasgsqqsstqqaqdnrflrflrhlyae	32
eugracilis	mtrvthietptmvgttasese---senv-----emasqagtqdnllvflthlyae	47
ficuspheilia	-----mgt-gasssdsg---sekl-----etaaqagtqdnrflrflkhlyae	37
erecta	mtavthteqptm-attssdse---plnl-----dvasqagtqdnrflrflkhlyae	46
melanogaster	-----m-attssdse---sqnv-----dvasqagtqdnrflrflkhlyae	35
simulans	-----m-attssdsd---venv-----dvasqagtqdnrflrflkhlyae	35
sechellia	-----m-attssdsd---venv-----dvasqagtqdnrflrflrhlyae	35
elegans	mttvthfdtptm-gtvasdst---menv-----etatqstqdnrflrflkhlyae	46
rhopaloo	-----m-gtvasdsv---penv-----etatqstqdnrflrflkhlyae	35
takahashi	mtrvshtepptm-gaaasdsq---senv-----easqsmqdnrflrflkhlyae	46
Suzuki	mtrvsppteapptm-gtaasvse---senv-----evasqtqdnrflrflkhlyae	46
biarmipes	mtraspieapptm-gtaasese---senv-----easqtqdnrflrflkhlyae	46
grimshawi	-----mtasasasmppqdnlltflwhlyae	27
virilism	-----mallraaltma--taayfemtvsge----mppppqdnrlrtflrflkhlyae	42
mojavensis	-----mallraalamt--taayietamtasltpqprppqdnrflrflrhlye	47
	* **** * * * *	
bipectinata	cvryryqndtyddpste-----satdyesdfpenfspvprylenaalnegsidmrnvdek	92
anannasae	cvryryqndtyddpmt-----tatdyesdlpenfspvprylenaalnegsidmrnvdek	88
kikkawai	cvryryqndtyddpsvsv-vgeaaatdyldlpenfspvprylenaavnegaidsmrnvde	117
seratta	cvryryqndtyddpsvsv-dga-aatdyeselpenfspvprylenaavnegaidsmrnvde	90
eugracilis	cvhryqnvtdntedsslsлгаатdsend--lkgfstvprylenaalnegtidmrnvdek	105
ficuspheilia	cvryryqnvtyeaddpsvplgaateyvdanapdnfspvpryledavlnegaidsmrhvdee	97
erecta	cvfryqnvtydtgdpfsflgpattydsd--lpenfspvprylenaamnegvidmrnvdee	104
melanogaster	cvfryqnvtydtddpsfslgpattydsd--lpenfspvprylenaamnegvidmrnvdee	93
simulans	cvfryqnvtydtddpsfslgpattydsd--lpenfspvprylenaamnegvidmrnvdee	93
sechellia	cvfryqnvtydtddpsfslgpattydsd--lpenfspvprylenaamnegvidmsnvdek	93
elegans	cvryryqnvtydaadpsvslvaatdyesd--ltenfspvpryledavlnegaidsmrnvdee	104
rhopaloo	cvryryqndtydaddpsvslгаатdydld--lpenfspvpryledavlnegaidsmrnvdee	93
takahashi	cvryryqnvtydtedpsvplгаатdydfd--lpenfspvprylenaalnegaidsmrnvde	104
Suzuki	cvryryqnvtydtddpsvslгаатdydfd--lpenfspvprylenaamnegaidmrnvdae	104
biarmipes	cvryryqnvtydtddpsvslгаатdydfd--lpenfspvprylenaalnegaidsmrnvdae	104
grimshawi	cvryryqndtspgqat-----dpgdgniqllpeytrmpnylemavlnegtidmqdvnee	81
virilism	cvryryqndtataqlat-----epdgggl--lletytmipryleqavlnegtidmqdvdee	95
mojavensis	cvryryqndtakgda-k-----dsgdeel--mlatfttpryleqavlnegtidmqdvdee	99
	**.*:* * * : : :*.*** *.:*** ** * * :	
bipectinata	kaereelfatiltatmatnqnqddpagqrspgsns-sssrflfcpldfdygylcwprtpag	151
anannasae	qaekeelfatiltatmatnqnqdepagqrssgnsssgskrlfcpldfdygylcwprtpag	148
kikkawai	qaekeellatvlsqmatnqqkqshqatt-----tttgerlfcplnfdgylcwprtpag	171
seratta	laekeellatvlsvtmatnqqesehhevt--ttnnrsagerlfcplnfdgylcwprtpag	148
eugracilis	laequeelmatvssatmatnqr-----drrlfcpldfdygylcwprtpag	148
ficuspheilia	aaekeelmatvftatmatnqr-----eerlfcplnfdgylcwprtpag	140
erecta	laekeelmatvvsatmatnqk-----ehrlfcplnfdgylcwprtpag	147
melanogaster	laekeelmatvvsatmatnqk-----enrlfcplnfdgylcwprtpag	136
simulans	laekeelmatvvsatmatnqk-----esrlfcplnfdgylcwprtpag	136
sechellia	laekeelmatvvsatmatnqr-----esrlfcplnfdgylcwprtpag	136
elegans	laekeelmatvlsatmatnqq-----epllfcplnfdgylcwprtpag	147
rhopaloo	laekeelmatvlsatmatnqrp-----qgrlfcplnfdgylcwprtpag	137
takahashi	laekeelmatvvsatmatnqrqaeeg-----geeerrlfcplnfdgylcwprtpag	155
Suzuki	laekeelvatvvsatmatnqr-----eprlfcplnfdgylcwprtpag	148
biarmipes	qaekeelvatvvsatmatnqr-----aeprlfcplnfdgylcwprtpag	148
grimshawi	asslnelyatvlsatmapnqhsiqyngnnsna-nttremeilycpvnfdgylcwprtpag	140
virilism	aasenelyatvlsatmatnhhs-----h-n-tsemetlycpvnfdgylcwprtpag	144
mojavensis	aasenelyatihsmtmetnqhs-----r-natsemetlycpvnfdgylcwprtpag	149



rhopaloo	IPIAVVYGLARHFTSPDNKHCWINDSLYLWIFSVPTITLSLLASFI FLINVL RVI VRKLHP	377
takahashi	IPVAIVYGLARHFSSPDNKHCVINDSLYLWIFSVPTITLSLLASFI FLINVL RVI VRKLHP	395
Suzuki	IPIAVVYGLARHFSSPDNKHCVINDSLYLWIFSVPTITLSLLASFI FLINVL RVI VRKLHP	388
biarmipes	IPIAIVYGLARHFSSPDNKHCVINDSLYLWIFSVPTITLSLLASFI FLINVL RVI VRKLHP	388
grimshawi	LLFIIPYGVVRHFSANDNKHCVISESYLWILSVPTITLSLLASFI FLINVL RVI VRKLHP	380
virilism	LLFVLPYGVARHFSANDNAHCWINDSYLWIFSVPTITLSLLASFI FLINVL RVI VRKLHP	384
mojavensis	LVFVLPYGVARHLSVNDNEHCWINDSLYLWIFSVPTITLSLLASFI FLINVL RVI VRKLHP	389

bipectinata	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLLSVVLVSLQGQFVV	451
ananasae	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLLSVVLVSLQGQFVV	448
kikkawai	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLLSVVLVSLQGQFVV	471
seratta	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLLSVVLVSLQGQFVV	448
eugracilis	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGSGLDRFYQLMSVALVSPQGQFVV	448
ficuspheilia	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLLSVVLVSLQGQFVV	440
erecta	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLMSVVLVSLQGQFVV	447
melanogaster	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLMSVVLVSLQGQFVV	436
simulans	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLMSVVLVSLQGQFVV	436
sechellia	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLMSVVLVSLQGQFVV	436
elegans	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLLSVVLVSLQGQFVV	447
rhopaloo	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLLSVVLVSLQGLVV	437
takahashi	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLMSVVLVSLQGQFVV	455
Suzuki	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLMSVVLVSLQGQFVV	448
biarmipes	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLMSVVLVSLQGQFVV	448
grimshawi	QSAHPAPMAIRKAVRATIIILVPLFGLQHFLLPYRPEAGTKLDRFYQLMSVVLVSLQGQFVV	440
virilism	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPDAGTQLDRFYQLLSVVLVSLQGQFVV	444
mojavensis	QSAQPAPLAIRKAVRATIIILVPLFGLQHFLLPYRPEAGTKLDRFYQLLSVVLVSLQGQFVV	449

bipectinata	SFLFCFANHDVLFVARTLLNKLLPSLVSPPPAGSNTGQMATTTPSRELGV	501
ananasae	SFLFCFANHDVLFVARTLLNKLLPSLVSPPPAGSNTGQMATTTPSRELGV	498
kikkawai	SFLFCFANHDVTFARTLLNKWLP SLVAAPPAGSNTGQMATTTPSRELGV	521
seratta	SFLFCFANHDVTFARTLLNKWLP SVVAPPAGSNTGQMATTTPSRELGV	498
eugracilis	SFLFCFANHDVTFARTLLNKWLP SLVTPPPAGSNTGQMATTTPSRELGV	498
ficuspheilia	SFLFCFVNHVDTFAIRTLLNKMP TLVTAPPAGSNTGQMATTTPSRELGV	490
erecta	SFLFCFANHDVTFVARTLLNKWLP SLVIAPPAGSNTGQMATTTPSRELGV	497
melanogaster	SFLFCFANHDVTFARTLLNKLLPSLVTPPPAGSNTGQMATTTPSRELGV	486
simulans	SFLFCFANHDVTFARTLLNKLLPSLVTPPPAGSNTGQMATTTPSRELGV	486
sechellia	SFLFCFANHDVTFARTLLNKWLP SLVTPPPAGSNTGQMATTTPSRELGV	486
elegans	SFLFCFANHDVTFARTLLNKWLP RLVTAPPAGSNTGQMATTTPSRELGV	497
rhopaloo	SFLFCFANHDVTFARTLLNKWLP RLVTAPPAGSNTGQMATTTPSRELGV	487
takahashi	SFLFCFANHDVTFARTLLNKWLP SLVTPPPAGSNTGQMATTTPSRELGV	505
Suzuki	SFLFCFANHDVTFARTLLNKLLPSLVTPPPAGSNTGQMATTTPSRELGV	498
biarmipes	SFLFCFANHDVTFARTLLNKLLPSLVTPPPAGSNTGQMATTTPSRELGV	498
grimshawi	SFVFCFVNQDVIVARTLLNKWMP SLVSAPPAGSNTGQMATTTPSRELGV	490
virilism	SFLFCFANHDVTFAMRTLLNKLMPTLVAPPAGSNTGQLATTTPSRELGV	494
mojavensis	SFLFCFANHDVTFARTMLNKWMP NLIAPPAGSNTGQLATTTPSRELGV	499

melanogaster

1 mattssdses qnvdsasq tqdnrlflk hlyaecvfry qnvtydtddp sfslgpatdy

61 dsdlpenfsp vprylenaam negvidmrnv deelaeekeel matvvsatma tnqkenrlfc

121 plnfdgylcw prtpagtvls qycpdfvegfnrkflahktc lengswyrhp vsnqtwsnyt

181 ncvdyedlef rqfinelyvk gyalsllall isiiiflgfk slrctririh vhlfaslact

241 cvawilwyr1 vversetiae nplwciglhl vwhyfmlvny fwmfceg1hl hlvlvvvfvk

301 dtivmrwfv1 iswfspipia ivyglarhfs spdnhkwit dslylwifsv pitlsllasf

361 iflinvlrvi vrklhpqsaq paplairkav ratiilvplf glqhfllyr pdagtqldhf

421 yqmlsvvlvs lggfvvsflf cfanhdvtfa irtllnkllp slvtpppags ntgqmattp

481 srelgv

simulans [XP\\_016039137.1](#)

1 mattssdsdv envdsasq tqdnrlflk hlyaecvfry qnvtydtddp sfslgpatdy

61 dsdlpenfsp vprylenaam negvidmrnv deelaeekeel matvvsatma tnqkesrlfc

121 plnfdgylcw prtpagtvls qycpdfvegfnrkflahktc lengswyrhp vsnqtwsnyt

181 ncvdyedlef rqfinelyvk gyalsllall isiiiflgfk slrctririh vhlfaslact

241 cvawilwyr1 vversetiae nplwciglhl vwhyfmlvny fwmfceg1hl hlvlvvvfvk

301 dtivmrwfv iswfsipia ivyglarhfs spdnkhcwit dslylwifsv pitlsllasf  
361 iflinlvrv vrklhpgsaq paplairkav ratiilvplf glqhfllyr pdagtqldhf  
421 yqmlsvlv lqgfvvsflf cfanhdtfa irtllnkllp slvtpppags ntgqmattp  
481 srelgv

sechellia [XP\\_002042869.1](#)

1 mattssdsdv envdvasqag tqdnlriflr hlyaecvfry qnvtytddp sfslgpatdy  
61 dsdlpenfsp vprylenaam negvidmsnv deklaekeel matvvsatma tnqkesrlfc  
121 plnfdgylcw prtpagtvls qycpdfvegfnrklahktc lengswyrhp vsnqtwsnyt  
181 ncvdyedlef rqfinelyvk gyalsllall isiiiiflgfk slrctririh vhlfaslact  
241 cvawilwyr lversetiae nplwciglhl vvhfmlvny fwmfceglhl hlvlvfvvk  
301 dtivmrwfv iswfsipia ivyglarhfs spdnkhcwit dslylwifsv pitlsllasf  
361 iflinlvrv vrklhpgsaq paplairkav ratiilvplf glqhfllyr pdagtqldhf  
421 yqmlsvlv lqgfvvsflf cfanhdtfa irtllnkllp slvtpppags ntgqmattp  
481 srelgv

erecta [XP\\_001978328.2](#)

1 mtavthteqp tmattssde plnldvasqa qtqdnlrifl khlyaecvfr yqnvytdtgd  
61 psfslgpatd ydsdlpenfs pvprylenaam negvidmrs vdeelaekel lmatvvsatm  
121 atnqkehrflf cplnfdgylc wprtpagtv lsqycpdfvegfnrklahktc lengswyrh  
181 pvsnqtwsny tncvdykde frqfinelyv kgyalsllal lisiiflgf kslrctriri  
241 hvhlfaslac tcvawilwyr lvversetia enplwciglhl lvvhfmlvny yfwmfceglh  
301 hlvlvfvvk kdaivmrwfi liswflpihi tilyglarhf stpdnkchwi tdslylwifsv  
361 vpitlsllas fiflinlvrv ivrklhpgsa qpaplairka vratiilvpl fglqhfllyr  
421 rpdagtqldh fyqmlsvlv slqgfvvsfl fcfanhdtf avrtllnkwl pslviappag  
481 sntgqmattp psrelgv

Suzuki [XP\\_016923892.1](#)

1 mtrvstpeap tmgtasvse senveasqt qtqdnlrifl khlyaecvyr yqnvytdtd  
61 psvslgaatd ydfdlpenfs pvprylenaam negaidmrn vdaelaekel lmatvvsatm  
121 atnqreepflf fcplnfdgyl cwprtpagtv lsqycpdfvegfnrklahktc lengswfr  
181 hpesnqtwsn ytncvdyedl efrqfvnely vrgyalslla lliiiiiflg fkslrctrir  
241 ihvhlfasla ctcvawilwy rlvverpeti adnplwcigl hlvhfmlvny yfwmfcegl  
301 hlhlvlvfvvk vktivmrwf mviswlsppip iavyglarhf fsspdnkchwi indsllywif  
361 svpitlslla sfiflinlvrv vivrklhpgsa qpaplairka avratiilvpl fglqhfllyr  
421 yrpdagtqld hfqmlsvil vslqgfvvsf lfcfanhdtv fairtllnk lpslvtpppa  
481 gsntgqmattp psrelgv

biarmipes [XP\\_016956301.1](#)

1 mtraspieap tmgtasvse senveasqt qtqdnlrifl khlyaecvyr yqnvytdtd  
61 psvslgaatd ydfdlpenfs pvprylenaam negaidmrn vdaelaekel lmatvvsatm  
121 atnqraepflf fcplnfdgyl cwprtpagtv lsqycpdfvegfnrklahktc lengswfr  
181 hpesnqtwsn ytncvdyedl efrqfvnely vrgyalslla lliiiiiflg fkslrctrir  
241 ihvhlfasla ctcvawilwy rlvverpeti adnplwcigl hlvhfmlvny yfwmfcegl  
301 hlhlvlvfvvk vktivmrwf mviswlsppip iavyglarhf fsspdnkchwi indsllywif  
361 svpitlslla sfiflinlvrv vivrklhpgsa qpaplairka avratiilvpl fglqhfllyr  
421 yrpdagtqld hfqmlsvil vslqgfvvsf lfcfanhdtv fairtllnk lpslvtpppa  
481 gsntgqmattp psrelgv

takahashi [XP\\_016995732.2](#)

1 mtrvshtepp tmgaasdsq senveasqs qmqdnlrifl khlyaecvyr yqnvytdted  
61 psvplgaatd ydfdlpenfs pvprylenaam negaidmrn vdaelaekel lmatvvsatm  
121 atnqrqaeeq geeerrlfcplnfdgylcwprtpagtvlsq ycpdfvegfnrklahktcl  
181 engswfrhpv snqtwsnytn cvdyedlefr qfinelyvkg ytllsllalli siiiflgfks  
241 lrctririhv hlfaslactc vawilwyr lvergeaiaen plwciglhlv vhfmlvnyf  
301 wmfceglhl hlvlvfvvk tivmrwfv swfsvipvai vyglarhfss pdnkchwind  
361 slylwifsvp itlsllasfi flinlvrv rklhpgsaq aplairkavr atiilvplf  
421 lqhfllyrpd dagtqldhfy qmlsvlvsl qgfvvsflf fanhdtvai rllnkwlps  
481 lvtpppagsn tqgmattp relgv

elegans [XP\\_017133493.1](#)

1 mttvthfdtp tmgtvasdst menvetatqs qtqdnlrifl khlyaecvyr yknvytdaad  
61 psvslvaatd yesdltenfs pvpryledav negaidmrn vdeelaekel lmatvlsatm  
121 atnqqepllf cplnfdgylc wprtpagtv lsqycpdfvegfnrklahktc lengswfrh

181 pvsnqtwsny tncvdyedle frqfinelyv kgyalsllal lisiiflglf kslrctriri  
241 hvhlfaslac tcvawilwyr lvvernetia enplwcigl hlvhyfmlvn yfwmfceglh  
301 hlhlvllvfv kdtivmrwfi viswlsppv aivyglarhf sgpdnkchwi ndslylwifs  
361 vpitlslas fiflinvrv ivrklhpps qpaplairka vratiilvpl fglqhfllpy  
421 rpdagtqldr fyqllsvlv slqgfvvsfl fcfanhdvtf airtllnkwl prlvtappag  
481 sntgqmatt psrelgv

**rhopaloa** [XP\\_016985474.1](#)

1 mgtvasdsvp envetatqsq tqdnlriflk hlyaecvry qndtydaddp svslgaatdy  
61 dldlpsfesp vpryledavl negaidmrnv deelaeekeel matvlsatma tnqrpqrlf  
121 cplnfdgylc wprtpagtv lsqycpfdve gfnkflahk tclengswfrh pvsnqtwsny  
181 tncvdyedle frqfinelyv kgyalsllal lisiiflglf kslrctriri hvhlfaslac  
241 tcvawilwyr lvvernetia enplwscglh lvvhyfmlvn yfwmfceglh hlhlvllvfv  
301 kdtivmrwfi viswlsppi avvyglarhf tspdnkchwi ndslylwifs vpitlslas  
361 fiflinvrv ivrklhpps qpaplairka vratiilvpl fglqhfllpy rpdagtrldr  
421 fyqllsvlv slqglvvsfl fcfanhdvtf airtllnkwl prlvtappag sntgqmatt  
481 psrelgv

**ficuspheia** [XP\\_017052090.1](#)

1 mgtgassds gsekletaag aqtqdnrif lkhlyaecv ryqnvtyead dpsvplgaat  
61 eyvdanapd nfspvpryle davnegaid mrvhdeeeae keelmatvft atmatnqree  
121 rlfcpnfdg ylcwprtpag tvlsqycpdf vegfnskfla hktclengsw frhpvsnqtw  
181 snytscvdye dlefrqfine lyvkgyalsl lallisiif lgfkslrctr irihvhlfas  
241 lactcvawil wvrlvverpe tiaenqlwci ghhlvvhym lvnyfwfcm ghhlhlvlv  
301 vfvkdtivmr wfiviswfsf ipiaivygl rhfsspdnk cwindslylw ifsvpitlsl  
361 lasfiflinv lrivvrklhp qsaqpaplai rkavratiil vplfglqhf lpyrpdagtq  
421 ldrfyqllsv vlvsqgfvv sflfcfvnhd vtfairtlln kmmpvlvtap pagstgqma  
481 ttpsrelgv

**eugracilis** [XP\\_017065034.1](#)

1 mtrvthietp tmvgttases esenvemasq aqtqdnllvf lthlyaecvh ryqnvtdnte  
61 dssslsnga dsendlkgnf stvprylene alnegtidmr nvdeklaeqe elmatvssat  
121 matnqrdrll fcpldfdgyl cwprtpagtv lsqycpfdve gfnkflahk tclengswfr  
181 hpatnqtwsn ytnvcdhedl efrkfinely vkgyalslla llisiiflg fkslrctrir  
241 ihvhlfasla tcvawilwyr rlvverheti tenplwcigl hlvhyfmlv nyfwmfcegl  
301 hlhlvllvfv vkdtivmrwf iviswfsf ipiaivygl rhfsspdnk cwindslylw ifsvpitlsl  
361 svpitlslas sfiflinvrv vivrklhpps aqpaplairk avratiilvpl fglqhfllpy  
421 yrpdagqldr rfyqllsvl vspqgfvvsf lfcfanhdvt fairtllnkw lpslvtpppa  
481 gsntgqmatt tpsrelgv

**kikkawei** [XP\\_017029945.1](#)

1 mtsieeappt mgtnasdsds dsgsenvama tatasqqsyt qpqaqdnlri flrhlyaecv  
61 yryqndtydd psvsvvegea atdydldlpe nfspvpryle navlnegaid mrnvdvegae  
121 keellatvls gmatnqgkq shqatttttg erlfcpnfdg gylcwprtpa gtvlsqycpd  
181 fvegfnskfl ahktclengs wfrhpmtnrt wsnytnvdy edlefrqfin elyvkgyals  
241 llallvsiifl fgfkslrct ririhvhlfa slaftcvawi lwyrllvverp eiiadnplw  
301 ighlhvhyf mlvnyfwfcm eglhlhlvlv vfvkdtivm rfwiiiswfs pihfaivygl  
361 arhfsdsdne hcwindslyl wifsvpitls lvasfiflin vlrivvrklh pqaqpapla  
421 irkavratiil vplfglqhf lpyrpdagt qldrfyqlls vlvslqgfv vsflfcfanh  
481 dvtfairtll nkwlpslvaa ppagsntgqm atttpsrelg v

**seratta** [KAH8380938.1](#)

1 mamakasgsq qssstqqaqd nlriflrhly aecvryqnd tyddpsvsvd gaaatdyese  
61 lpenfsvpr ylenavneg aidmrnvdve laekeellat vlvstmatnq qesehevtt  
121 tnnrsagerl fcplnfdgyl cwprtpagtv lsqycpfdve gfnkflahk tclengswfr  
181 hpmnqtwsn ytnvcdyedl efrqfinely vkgyalslla llvsiliflg fkslrctrir  
241 ihvhlfasla ftcvawilwyr rlvverpeii adnplwcigl hlvhyfmlv nyfwmfcegl  
301 hlhlvllvfv vkdtivmrwf iiswfsf ipiaivygl rhfsspdnk cwindslylw ifsvpitlsl  
361 svpitlslas sfiflinvrv vivrklhpps aqpaplairk avratiilvpl fglqhfllpy  
421 yrpdagtqldr rfyqllsvl vslqgfvvsf lfcfanhdvt fairtllnkw lpsvppppa  
481 gsntgqmatt tpsrelgv

**bipectinata** [XP\\_017095188.2](#)

1 mgglsasvte pdmessraqd apqpqdnlri flkhlyaecv yryqndtydd pstesatdye  
61 sdfpenfsvpr prylenealn egsidmrnvd ekkareelf atiltatmat nqnqddpagq  
121 rpsgsnssss rrlfcpldfd gylcwprtpa gtvlsqycpd fvegfnskfl ahktcengs  
181 wyrhpetnkt wsnytnvdy vdfefrqfin elyvkgyals llallisiii flgfklsrct  
241 ririhvhlfa slaftcvawi lwyrllvverp eitaenplw ivlhlvhyf mlvnyfwfcm  
301 eglhlhlvlv vfvkdtivm rfwiiiswls pvhiaavygl arhfsspdne hcwindslyl

361 wifsvpitls llasfiflin vlrivvrklh pqsagpapla irkavratii lvplfqlghf  
421 lpyrpdagt qdrfyqls vlvslqgfv vsflfcfanh dvlfavrtll nkllpslvsp  
481 ppagsntgqm atttprsrelg v

anannasae [XP\\_001964132.2](#)

1 mgglsasvte pmeqeapqp qdnlriflkh lyaecvyryq ndtyddpnte tatdyesdlp  
61 enfspvpryl enaalnegsi dmrnvdekqa ekeelfatil tatmatnqnq depagqrssg  
121 nssssgskrl fcpldfdgyl cwprtpagtv lsqycpdfve gfnskflahk tcqengswyr  
181 hpesnktwsn ytnvcvdyvd efrqfinely vkgyaislla lllisiiiflg fkslrctrir  
241 ihvhlfasla ctcvawilwy rlvverpeit aenplwcill hlrvhyfmlv nyfwmfceg  
301 hlhlvlvrvv vkdtivmrwf iiswslspvh favvyglarh fsspdnehcw indslylwif  
361 svpitlslla sfiflinvrl vivrklhps aqaplairk avratiilvp lfglqhflp  
421 yrpdagtqld rfyqlsvvl vslqgfvvsf lfcfanhdvl favrtllnkl mpslvspppa  
481 gsntgqmatt tpsrelgv

virilism [XP\\_032296576.1](#)

1 mallraaltm ataayfemtv sgamppqqd nlrflkhly aecvyryqnd tataqlatep  
61 ddgglllety tmipryleqa vlnegtidmq dvdeeaasen elyatvlsat matnhhsht  
121 semetlycpv nfdgylcwpr tpagtvlsqy cpdfvegfnk kflahktcle tgswwfrhps  
181 nqtwsnytnv vdyedfqrq fvnelyvkgy alsllalfis iviflgfksl rctrihvh  
241 lfaslactci awilwrylvv eheteqiaenp pwcialhlv hyfmlvnyfw mfceglhlhl  
301 vlrvvfvkdt ivmrwfklls wllpllvfvp ygvarhfsan dnahcwmnds fylwifsvpi  
361 tllsllasfif linvlrvivr klhpsaqpa plairkavra tiilvplfql qhllpyrpd  
421 agtqldrifyq llsvvlvslq gfvvsflfcf anhdvtfamr tllnklmptl vappagsnt  
481 gqlatttprsr elgv

mojavensis [XP\\_015016349.1](#)

1 mallraalam ttaayietam tasltkpqr pqqdnlrif lrhlyvecvy ryqndtakgd  
61 akdsgdeelm latfvtvpry leqavlnegt idmqdvdeea asenelyati hsmmetnqh  
121 sratsetmet lypvnfdgy lcwprtpagt vlsqycpdfv egfsskflah ktclengtwy  
181 rhpvsnqtws nytnvcvdydd fqfrqfvnel yvkgysll aliisivifl gfkslrctri  
241 rihvhlfqsl actciawilw yrlvveqtdq iaenppwcia hlrvhyfml vnyfwmfceg  
301 hlhlvlvrvv fvkdtivmrw fkllswlsp vfvlpvgvar hlsvndnehc windslylwi  
361 fsvpitlsll asfiflinvl rvivrklhps saqaplairk kavratiiilv plfqlqhfl  
421 pyrpeagtql drfyqlsvv lvsqgfvvs flfcfanhdv tfairtmlnk wmpnliapp  
481 agsntgqlat ttpsrelgv

grimshawi [XP\\_001992054.1](#)

1 mtasasasms pqqdnlltf lwhlyaecvy ryqndtspgq qatdpgdgni qllepytrmp  
61 nylemavne gtidmqdvne easslnelya tvlsatmapn qhsiqyngnn snanttre  
121 ilycpvnfdg ylcwprtpag tvlsqycpdf vegfntkfla hktcmetgsw frhpvsnqt  
181 snytnvcvdy dlqfrqivne lyvkgysll lallisiiif vgfkslrcnr irihvhlfas  
241 lactcltwil wrylvvehse riaenpnwci alhlrvhyfm lvnyfwmfce glhlhlvlv  
301 fvkdtivlvr wfkffswlsp llfiipygv rhfsandkh cwisesfylw ilsvpitlsl  
361 lasfiflinv lrvivrklhp qsahpapmai rkavratiiil vplfqlqhfl lpyrpeagtk  
421 ldrfyqlmsv vlvslqgfvv sfvfcfvnqd vivairtlln kwmpslvsap pagsntgqma  
481 ttpsrelgv