Figure S1. Maximum Likelihood tree of insect Grs and Ors based on full length sequences. Tree is rooted using Grs (grey) as the outgroup. Different colours represent different species. Neopteran Ors represented by desaturated colors. Species abbreviations: Lsac – *Lepisma saccharina (*light blue); Tger – *Tricholepidion gertschi* (dark blue); Tdom – *Thermobia domestica (*blue); Mhra – *Machilis hrabei* (orange); Edan – *Ephemera danica* (green); Lful – *Ladona fulva* (red); Cspl – *Calopteryx splendens* (dark red); Faur – *Forficula auricularia* (desaturated red); Ofas – *Oncopeltus fasciatus* (desaturated purple); Ccin – *Cephus cinctus* (desaturated yellow); Ldec – *Leptinotarsa decemlineata* (desaturated green); Msex – *Manduca sexta* (desaturated pink); Dmel – *Drosophila melanogaster* (desaturated blue); Bger – *Blattella germanica* (brown); Abak – *Apocrypta bakeri* (brown). Note clear separation between primitive Ors and neopteran Ors with the exception of OfasOr79 (arrowhead).

Table S1. List of RACE-PCR primers. Instances of n.a. indicate failed extension or full CDS already present in assembled transcript.

Transcript	3'-RACE-primer (forward)	5'-RACE-primer (reverse)
LsacOr2	CGCCGGCAGAGACCCAAAGG	AGGAGAAGCGCAAAGCCATATGTATCTCCGACAG
LsacOr4	CCTCTGGCAGTGGTCGGTGGA	n.a.
LsacOr5	GGTGGAATTGGGGCGTGATCAGA	TGCCACTGCATTAACTTCGCTCACAC
LsacOr6	CCTTTCAGGGCGGAACTTTTGACG	TGGGCTGCGCAGAGCATTGA
LsacOr7	ACCGAAGCGCAACAACGTCCA	CCTGTTCCTTGGCTTCGCTGTCC
LsacOr8	TGGACACGATTGCGTCGTCGTT	GAATTGGATGGCCGATTGTGCAAG
LsacOr9	n.a.	TGGATTCCCGATTGCGCAAGAA
LsacOr10	TGGTGCATGTTCGCGTTTCAAGTG	CGTTGCAATGGTCTCCAGAAGCATGTGCAGC
LsacOr11	n.a.	AACGGACACCGCATCCTTGACG
LsacOr13	GCAGCGGCCGGATTAGACCTG	n.a.

>LsacOr1
MKHIRQGLVADIWPVIKTMKFFGHYFFRYTEDDSSMKTAFRGIYSILNISLVTLHFIFG
SVSIIFKLNDIEGLVANAISTFFALHAVTKLIYFAIRRNAFYQTLDCWDVINSHPMFAE
SNLRYKEIAIKKVRRLVLCVSSAILLFAAFWSSKPFFASPFREIESGNETMIVEGTLLIV
DAWYPWSLHEFTFFAASYLYQLYWLIFCMFQVNSLDMLFCAWMIYSIEQLKHLKEI
MTPLVELSAGRDPDALRKAELWPEINTIDNTVSRQDTPPSYQAAARNRIYPETLNVE
MERSMVISDFAHLKEPIIAYNSDEANIGDNVLTIKQQVYVRSAIKYWVERHKHVVRFI
ESVXNTYGFALLLHMLTSTITLTLLAYEATKISAFDVYAMNVIGYLLYNLLQVFMFCI
FGNNLIEESISVMKAAYECPWYNGSEEAKTFIQIVCQQCQRALSISGAKFFTVSLDLF
ASVLGAVVTYFMVLIQLK*

>LsacOr2
MKLTNLMECVWTNVRVMQYVGHFMIDYGKDQSKRKQMLHALYSFAHMSLITTHF
VFSLIDLVMKRNDLDALVSNAISTCFTVHEVTKLYYFMINRKKFRETLGMWDEKNS
HPLFSASDAKYQENAVKTIRWVXFFVLFGTEVAGSVWAIKPFIMRKTVKVQEGNAT
VVTHRRMLICEAWYPVDIEDTGNFIYVYIYQLYWLAVGIFQVTSIDVLFCSWLIYACE
QLKHLKEIMVLLVELSAGRDPKALREAERQTDVNSDHHTGRDMIISVQQAPRNRIH
PTTFNVDMYKSLDDGNVGENALTTEQQLYVRSAIKYWVERHKHIVRFIDSVGDTYG
FALLLHMLTSTVALSLLGYELAKITALDVWAMNIVGYMIYTLAQVFLFCIFGNKLIEE
SKSVLQAAYECSWEDGSNEAQIFIRVVSQQCQKPLAISGANFFTVSLELFGSVCGAVV
TYCMVLIQMK*

>LsacOr3
MKWESKGLLRILSPHITFLQFCGHFVLDFHTNKAPMLQFFRGSYSVIQISLTFLHMAF
CFLKIVFSLSDLTKLVPAVVTTMLGIHGVIKLIYVASRXKRLARTLRLWDEVKTHLIF
ERNDEETLNRTKRRAAKWLIIAAIFYAFFSVAWIISPIFDSGFEDIIVDNVTMTVEKPRL
IVGAWYPMNLTTSPGYQIAYMYQMYWAVFCPMQVYGIDILFCCLLVHASEQLKHP
KQILIPLVEMSSNREGNPSAKSKYLGLSQLSLFQDNSLLSELPRRRQVAWSNNKIYVD
EILNNDNNLNAETGASPGDQGMAAQIMDAEKKKTVRSAIKYWVERHRQIIRFTVEV
EDMYGVALLLHILLAAMNLCILAFESSQIRQMNIYSINVLGFMIQNLLHIFVFCIEGNN
LMEESSSLMRSVYDSSWYAGSEEAKVFIQIVSQQCQRPLSISGAKFFTLSFDFFGSVLG
AVITYFIVLVQMK*

>LsacOr4
MITKQWCIAQVMIYPLTLAALSGHWPIRLPPNAEKIKYFTVRAIFTIVVIVVYCLMLTS
SIIDFCLNLDNITHLATNAIPTIFIAQSAFRVILLAWKRKEFSKMMLSCSLMARNCKFKI
FQNEYYLAFERQIKVMQYMDTVFRVACTLLWAVAPLLVHEVPVAHNGTQIVQEIHI
MHGWYPFDMDNPYVKDVIYAVHVTILILCTMHIMGCDYSFMTFFMFATHQQRHLK
TVLKDSLLEGLSGKYPTNVTDQLEQSKGFCAPGYIVNQISSVIDPGVAHKISQKKTDV
MEMRREGILGELKEWVKCHLEVIRLVDNINQISSTLVLVTFVGNAIQLCLMPFLLIQA
RGNWCIIGPIGAYFVLTITQTFLFCSIGQTVREESVSLSDALYEGNWPEASTDLNLMLL
LHMINQRLQRPLAVVGGGFFILSLDFFTSLLGAVLAYFVVLVQLK*

>LsacOr5
MDAKFKPRGLVAILWPSIRVMQLCGYLILDFYTNNSPFRVTMRVIFSVVHMAIAILQC
LSSVAAAFLNTEDFREFVFVISLSIYNINTVIKLLSISLRRMNFYKSLTLWDDMEFHPL
FKESDERSRNKTYSVNKKLLVLFNAMAVVDGLIWCAWIQIYPDMKEIEYGNSTIVVT
YRRLIIVGWYPWNIHTTIGCLISKPNRFYWMCFVIFQMTTFDITLCSCLNHICNQIRHL
KEIVAEVVELGRDQIEPKEILERNDYRESSVSEVNAVALYNANSSLDRKYLVQSAIAY
WTKRHRETIRFMGAVDDVFGFPLMLYMLLEMIAATLVVFEASKDKQMTFIANVHG

YIILIFFGVFLFSYFGQKVIDESTSLLRTLYDTPWYDTSDEVQVLLKIVTEQCKKPLAFS
GGMFFKLSYDFFSALLGSVATYYMFLVQIK*

>LsacOr6
MAEHTAMRDMLTLNFKLLRYSGHWMIEEPRNVWFTKRKFWLTMYRSVIRVFSDCH
SITTAIEFVLNITDIDKATRNVVIVLYNTNSFCKMSYYAFRRDTFEDIEETWNIEFKRD
SNFEEFRQSREELIEVSRKYSKALSLMITISAVSLVFKWCFFPLTVTQPPPDWKPEIIGN
DTSGAVFRVLPADAWFPFNALRSPAYEIMTFCQTVGATYIAFQGGTFDAYFIGVLIYI
VAMMKHLRWALGKLVDLSLEADENNESSSASIDEENNQLARNKNQKVDDAIVYCV
QLHQVITRSVKEINMLFGPVVFVQFVISVLAICTVTFQATTIRGYGLKIMSLIEYLVVS
LIQLFVFCFHGNRLIIESLAITDEAYGKQWHRTPSKVKTTLRNLLLRSKKALDLRGVG
MYSLSMENFLSIVTASFSYFMVLMSFDKGDDA*

>LsacOr7
MMNREEHRSRPGLGGLFRLAIREMQFAGHFDFDYYTDYSRWKVILRYAYSSFHFGV
LFLHIILTFVDIYFKRSDFEKMIPAIATTTYGTHGVMKALVFITKKEKFQKVLHCWDNI
ETHPLFVAENEKADLTTYKRSRWITALVSVLIFIDYIFWATKPLVDYPVREEKKGNET
ILVKKNIMIVECWYPFDIQITGNFLAAYAYQLYWMTVCIMTVTSIDMLFCNMLIHAR
EQCKYLRNTAKLIVELTLPKRNNVHEEPLLHLTPRNEQLITTDATAGVSAESEGLQAA
VQRLDSEAKEQVVSSVIEHWVNRHNSVVRYVALVEDAYGFAVLLHMLVSAIALSVL
AYEASMGDIGLVQAGNMLGYLIHSLGQVFLFCFYGDQLMDSSAQLMRDLYGTLWY
DGNHETRVFLKIASVQCLKPLKVTGSKFFTLSFEFLGTFIGAVVSYYLFLVQMK*

>LsacOr8
MAIKFKSRGLVAILWLNIVVFKLSGFYMMDFYPNNSLFRVTMRAILSIVNTSIVIMHC
CLYFTTAIFSTDDFNQLSILISIMILTINTVTKFMFISLRNRTFYKTLTLWDATEDHPLF
KESDERARNKTYLLNKRLLITLYVLCPLNGFLLSIWQFLQGDIKEEILTGNTTMIVAH
NRLMLEIWYPWDIDNPVGYGLTYAIQVYWLLLMIYQLVTFDITFCTMLNHIHNHIRS
LKEIVEDVVKLGSEKEELDELPGPSETNGFGHSSNNEIEEVELYNRERLSCRRFLAQS
AIQFWVKRHGEIIRFMGAVNNMYGSAVMLHMLLDTIASSLIVYKIGMDETTHFNATT
HGQLIFIFVRTLSFCYFGQKVIDESSSLITTVYDTPWYEATEDIQTFLKVVTEHCKKPL
VFSGAMFFSLSYDFFSAFLGSVVTYYLFLVQMQ*

>LsacOr9
MGTVTVIESSSMDTEYTPRGLVAILWPNIVVLKLGGIFFMDFNANKSFLRVTMRAIFS
VAIAFLVIMQCCLYITTTVFSFDDWNKFFLIFSQAIFTIHDVTKFLFLSLRNRTFYKTVT
LWDEMEDHPLFREAGEKARHKTHSLNKGLLIIFNVLSVINAIILCFWQAVQGDIEEEI
MMGNSTIIVTHKRLLYEIWYPWDTENPIGFVLTYVLQLYWTFVMISHVATFDMTFCS
VLNHIYHQLRFLNEIVEDVVKLGSEEKNLEELPGPSETNEFDQSSENEIKEVALYNRH
RLSPRRLLAQSGIQFWVKRHVQIIRFMGAVNNLYGYAVMIHMLLDTIASTLTVFKAG
KDEEITFSPNTHGYLIFIFVRTLSFCYFGQKIINESSSLMTTVYKTQWYKATEDVEVFL
RVVTEQCKKPLVFSGAMFFNLSYDFFTAFLGSIVTYYMFLVSVQ*

>LsacOr10
MGAAVIFPALRMDTRFKPRGLAAILWPSIRIMQLCGYLILDFYTNNSLFRVTMRVIFS
VIHTSIAVLQCIFCVAAAIVRFGHFSDLVLSMAVALYTVHNVSKLLFISMRRKLFIKTL
TLWDDMEYHPLFIESDDRARRKTYSLNKKLLLIFDGMTILNAIMWAAWLWVQGDIE
EKIMAGNSTIVVRHKRLIIDAWYPWDVYSSIGFGATYALQVYWCMFIAFQVPTFDIT
LCSMLNHACNQIRHLKEIVEEVVELGSGQIETEEVSGSPETNDSGNMRDNEVKVVAS
HRSQTPSDSRHIVQSGIEYWIKRHYKIIRFLDTINNMYGTPMMLHMLLETIATTLTAY

EASKDEGGNFLALVHGYMITILLRVFLFCYFGQKVIDESSSLFTTVYDTAWYEATDD
VHVFLKIVTEQSKKPLKFSGAKFFTLSYDFFSALLGSVVSYYLFLVQFN*

>LsacOr11
KINNFFRKTPWTIEEPLKFLIIKAAFTGMWVPCRLKNDRINTKPLWRLYSFLFAVGAS
TFCILTVVDFFLKYGNFLAMIFNCLSTLFIFEAAFKLIYIFYKRHELIRIMEVCNEMGNL
AFFPEFQSVRLKVMEHCFKITYYIFAFTCSFSAVFWVVVPFVTGDKSQWQQVIASWY
PFDYHSSPGYEISMGYQILSACTLAAVYMTTDGCFMAFFVFIHSQFSFLKMSIDKILR
GSELRDYYNGKRDGSRLNHRRFLSLVISDVQGGISPCEELFYNVQERQNLPTMTNNN
TAWNAKERKLLEWLQVHQATIRLADDVNNVASPVVTIVFLADGLVLCLLAFMATR
VKDAVSVMSLLVYFVLILVQVYIYCLCGDKVKNESESLANAVYDSPWMDLSPENIQ
TLQMIAQRCQKPVTINGGAFFTLSREFFLAVMGSVLTYFIVLMQLPDK*

>LsacOr12
SLRTFLKI*IPFKILANMFSFPTLHRCVRFNFQLLTLSGFWVSTVDDNGKRRSVLHWSF
WIAFLYRTVITLMVTVHFLAVVAGCLRNAXKKRIKGALDTWNDTYTNSTFSKSRVA
AVEASTVTSQKVSICLIVAYLTLAVQWCVAXTSVQFDXLQEVNSTFMXVTEYTRPLP
FLSWYPFDFQRSPIYELIYILQIVSAVYFALIVASFDSFFCSLMAQTVGQLDHLKSSLGF
LIDVCIDRESIPQDKTKSVTSIDEL

>LsacOr13
YRKYISMGSGRIRPDSNMYNAVVRKNNAMQTFGNREFGVLTGDYWENXKASMNY
CIHHHQYLIRFVDALEDLFAASMLVQFLYSTGLLCVLAFEATLIKGLEIKTLTLVLFLI
VSVLQLFSICGYGNKILSXSTRVTEDAYAKPWHKGSEDVKNVIQIIFQRSQRSLQLTG
ANIFTVNLETFANVLAASFTYFMVLIQLG*

>LsacOr14
NTTHYRASSGINTEYMGHKVEIITSDDDSVRNEALERQSPEGSNQAGTTPLPEVLLIW
IKEHQQLTRLMDDVQEIVSPIIFATFIVSQIVLFLTAFAFIKIPDPVYASFFLSFLIYVLTQ
LGILSFLGDELIQESAITPSTLYNMSFWKCNKELSTSFQIISNTAKKPFVITGLGFFKLS
KEFYSSVLGFAVSYFLVVVQLAE*

>LsacOr15
RDAKVDCIVDE*TEEEVLEALDYCVRIHQKILRYCEGLNSVFGIVVMEQFLISTLTLCT
LAFQATTIQGYGMKVLNIIEYIICATIQLFIMSRYGNHLLIESASITNEAYSRDWHQCP
MKVKGCLKLIFLRSRRRLQISG

>LsacOr16
GKSIQEYAYLEKEQHVNFSAESRVFDQLETLNIPTVAEIPKQMNLNLEQSLASWIQEH
QDLSRFVGDLEAAVSPIIFYTFFSSQCCLFMIAFATVKVDDPIYVSFFLTLGIYVVTELA
MLSILGTQLTEESFATLRHLYDIPWWSCSRGFKMAARIVNTTWNKPFALTGLGFFKL
SVDVFSSVLGVTVSYFLVLMQFQN*

>TgerOr1
GEILKSAMSYCIHHHQHMIKFVDAMEVFFAPVLLVQLLISTGLLCVVAFEATLIRGFD
MKAVNMIIFLLVSVLQLFAICYNGNRLIAESVSVTXXXXXXXXXSIFTVDLETFANVLA
AAFTYFMVLIQVG*

>TgerOr2
WSYPTLLLALVSSLFVTIHRIYLVCLYGAELIEQSQGVYLSGYNGPWYETSGNERFLL
QLIFQRAQTPLSITGAKFFTVSMELFVTILR

>TgerOr3
LSVSESAYRIPWISCHKDIKTSINFITLRSTVPARLTGCGIFSLSLDTFGSIVGAAVSYYL
VLKNFE*

>TgerOr4
VLDGLIYCVRVHAQMLRFLDELESIFSPIMLFQFVASTLVLCLLAFDASTSLQGGMRI
FNLIQYILVATMQLYLYCWFGNTLIQESLSLPVAAYRVPWFGCHNNIKTCVRLMTLR
SRIPAQLTGATIFNLSLETFKSILGAAFSYFLVLKNVQ*

>TgerOr5
INVIVERCKTPLGFTGMGYFQLSMEFYNSMLGAAVTYFLVLMSLN*

>TgerOr6
LRCWYPFNTDASPVYEMTIIFQLVASVVLVLITSSFDSFFCALLAQTVAQXXXXXXXX
XXXXXXXXXLEHLKGSLGFLVDVSIDRDGPVEMGKSVSSLDDLVSRTISGTGLYRRYL
GDNRNPAKPESALFNINRGGNKVQDLT

>TgerOr7
EAARSRQTAPTHTHTHGLMDEINDFTSPVVLSTFLLSVLNLCFLTYLVARNDGAVSF
VITSVAYACNELLYMFLYCNYGENIKQQSVSLLDEVYGDPWLGAPTEITLALHTISH
RCQRPLEVTGGNFFSLSYSFYVCVLSSILTYFIVLIQIKE*

>TgerOr8
KYAEDVKAEVLSSVVTYFIVLIQIH*

>TgerOr9
PDAEAGGNKPLEVRRLIELWILQHQHLLRLVDEIQDTFSLLIFVCSLIDVXXXXXXXXX
XXXXXXXXLTAFVVARLDDPMFAVVVGGYLVTVLLQMYLYSVHGNIVTDESLLLP
RAL

>TgerOr10
FQSNAISSRRKLSEQTFASTEEAEENIRMLENHGHVQKSDLKDEELFQSFXSYIIDIHQ
RTIRFVKLVESTFAFPVLMQNTFSTTTICFIAFQAATMKEFNLKFFNNLEYLLVAMLQ
MFIYARHGQRLITQSLRLTESAYRKKWHLAPPKLHGFMKVIFLNSRRALRVSGYGVF
TLSLESFASVLGAAFSYFLVLIHLQ*

>TgerOr11
LIRLWDDNDTCPDLFLKPKCDMITRARKHARHLTILILTSSLVLVTKWCFXXXXXXXX
XXXXXXXXXDPTRFRLLPANAWYPFDPLVTPVYQWISFYQALSADLTSAQVSTFDAW
FL

>LsacGr1
MKAIDLMASFAPYYYICKPFAVFPVSRVKNEKKELSFQNSIISRIYSLVLYFIFFVPTSV
LVTYKIIQELEHYKEKRVHMLVNTFLLLVDTCPVLIASFGTFVFIVYGSRKVPSIFSRM
AHADKVLEYRLSGHVKARRLLVGKAVLVFSVLVVLFVDLMVYKLVHMKHVNLWV
VLGVNCYFALHVLNVVLDMQFVGVVSLLKGRFGHLNKEVRKLQGYKEPDRPEPRP
NSVHPDGWNERMKLPPLTAARVQNVQPPCDFRERVKSLRTIHFELCDVVEDMNVA
YGFTMLAHFCDILFSVMYCSYHFIIHVTDLFAFPSHQILFNMLEVTVVSVRTIIITWICY
ATSEEANNTRNVVQKLTVETDMKSENASELRQFSSQLLHRRKVKLMACGVFQIDLA
LLRSIATSVMMYLVVLIQFDIQAKHHVLIGDTPHGDSTTESSAVTTSIPIE*

>LsacGr2
MAPHKKCQVLISPVFHTTRIIGLAPLSVLKGGSSTSYQSSFLLLFYSVVYLFVLTSIYLL
RLQWIFQEVAPSNIRNVDNWTFFAKEVLLFVSGLLIGLLSLIQSFQLQTLLEKVCKVD
ETLKITESRQRKTCRFSVLYLVLYLAYFIVENVLYGLAFPYGLTWNVIAYFTMTGYW
IGVSMQFVALCREIESRFSQLSEEIFECFKDEKHCYTEAFLHELSYDVYSCEEDRAKRE
PKDEVSSIEHLTNNFIQVSSCQDGVHIPKIQIESEIPDSVDTLEEIRSVYDSMCDVVDVF
NRAFGIRLLMIVLYKFFDVIFNIFCCIYKGKFMFVHHLETTLVVTAVLQVTQFFLLVFP
GNCVMAEAQKVEVVLHKLRNQRLHTCIKEEVELFSSLLKRRKVKINACGVFAIDSTL
AFWIIALVITYVVLLSQALIIGH*

>LsacGr3
RETSTSKAEKTGVLVHKLQDSGLYPAIKEEIQMFSSLLLYRKVQFTACGFFPLDLTLL
HSIAGSVTTYLVILIQFQIASKPTNDEELPESTSTEKWVSTT*

>LsacGr4
KYNFNFKYFLLPYFMSLYLGLCVLIQFMSFCCAMKERFLQLNKRIMLAEERLQDSSQ
KAFVTDCNMGEYRNVTGVLSDADTFQALRYGYDALCDTTDTLDSTYGLRMLGIVA
HSFCETVLYIFFAIHNVERLTSDALSTVALCACFLGPILINVLLTSCSSSVLSEAEKTGIL
VHKLQNRRLEPGVKEEVQMFSAQLLYRKVQFTACGFFPLDFTLLYSIAGAVTTYLVI
LIQFQVASKDQQNSTLRTDSTTESWLTSTNLTK*

>LsacGr5
VNSEKSLVKQSGYQQQFKFNNKIIPLRSTNKQEADELFLSFQNIINAYEKLCDATRML
NSVFGMCLLIYITNGFLQIVFTIFCVSRNNDFPDTAVITAVLFMSTLFPASAIILITTSSV
FIQKKAYQTGILVHKLQNRRLNPALKDKITNFCAQLLYTKITFTACGLFPLDFTLVHTI
AGAVTTYLVILLQL*

>LsacGr6
HRKIEFSICGLCPLDFTLLYYIA*AGTTYLIILVQFQTDKRHMEMSTPPS*

>LsacGr7
KLIWDAIATIILGLRCFIQFCLCQNMAKFLPTLFSALEKFGAANIAAEYRDRNRKLHPI
KRKCSIVARAIPMLITLSMLALSTFFVYDLFHEMMGGTNWNEVSLIIWFCIMNLWRTI
PLLLYMFICKHLSHDYKIIREAMKTLLRRLVANGVSVSAIKVSDESLELPEHKKDDHH
YELENLRCLHADLSSAVDVLSCSFGSTLLVEFFFSLVGTVVQLFMVISGVRLGIILYTV
TSFWLWIHVLNWTDKLSTQANGILEDLRGVPLSKLSQKCHIEIQMLMMQLIATPVNI
TAAGYFTIYKGLITSILGSIATYLIVMIQFKQQLLGLPENNATTSS*

>LsacGr8
FACAAEFKADRNDSGRCTGRKTKAMPDLFYHDLKPVFIVLQISGCFPIQHXXXXXHN
SQGEYTFAKCSLLTVLTILHYVIFVGMSGYFASSTIELFRKENREFDDLVFDAIRLIYIA
MPHIHLITFLCKSKQIARYLQKWYELQISFTKVTGIVLETNQRRNAMILVILTPVVTTL
TVALQHFIFVDLSLWHKGNTFYSITLSNYVEVMWVLICWSLTAAAKTYNEELKRSLS
APSTVPVVVLRRYRALWLQLCRLIEETGSVLCYQYATHFICIFIILTLSLYAAVSGVLD
DTTTCMKHLGFGIMALLFICQLHMMINSAHQVMQWAGNRVEDQLQDFHLRDIGER
AENEVRGFLQTIHYRSPCLNLGSYVDINRRYVTSLFGTLVTYLVVLVQFKVGQPSTPP
PPGNTTDIEIQELMKEY*

>LsacGr9
LLGKTFLLECSHGLFVTVLHFFVIFSGISYSTILFTCINLLMIIQLAFASEEISIQANGVIR
CLRTVPTSNLNQRCQLQIHMFMMQLIGSPVKVTAAGFFTINKGLLTSILGSIATYLIV
MLQFSPQLIKLAGRNESGPIK*
>LsacGr10
ICFCIFIWTGMTGPYLVTEEILKRLGSLGVVGEGAVAALSTALHSKRFSKCLNDILAX
XXFEYAPFFLQQSSQISGMYSSIPSCIFRLFHDLQQLPQFNSGXRFQRLNELVEDLTKK
TTAISRATSLCDDKASKIRAKKRYKLTSSQSLNTSVDTIVQVSSSEDATADLSEKLSRL
RKLHADICNTVSCFNSCFNPQLLICFMAEIYSVVRSLYLAIVSFGSPVEESLSRTVYVI
VHFLGILSYVIGGQAVYQGSRLPLSSLENFPIDELDSLGRYQIQLFLTKVYKSPARYNA
ASVFNIGAGLLAPIAGNVVTYLLVVLQFRPETFVNSTCEQCST*

>LsacGr11
TSFFPEDPKTFAMEFLGATGHREARMHKCEDLIVLRRCHDRLCGLIRELISVYQLQM
VMISINVXXXXXXSRLHMEDCVMIYTYLTFVIIVFAGTTLISTMTTKEAQGSGVLLYK
FADITLTHDVKEEIKLFSLQLLQSEPKFSVCGFFSLDLTLLHSMAAALTTYLVILIQM

>LsacGr12
NDMYFICVQLLQSLTPREGIVNAVYYFGSFACLLLRSTTVLVCGSRIYHESKKPAKIL
YSCPSESYNVEVQRFLEQVLSDEVALTGMNFFPVTRKLLLTVAGTIVTYEVVLLQFN
KGQGTE*

>LsacGr13
GCLSSRTCSYTLGCKAGF*VSHKAQQIGVLVHKLQDSRLDPLIKEEVQMFSAQLMYR
KVEFTACGFFPLDFTLLHSIAGXILIQFQISSKDKPKPSPPTDSSTEEWMSHT*

>LsacGr14
KIEFSVCGLFPLDFTLLYSIAGAVTTYLIILVQFQTDERQAEMSTKPS*

>LsacGr15
SLVRWTELYQGLVPTYGQGMFDYCYVLWSFLHLGARATTLSVLASAINDEAHRPISF
VRCCSSMEYNAEVFRFEQQLNIASIGLTGCGCFVITKPFILMIVSAICTFEVILLQSSSS
NSS*

>LsacGr16
NVNRESSRLCGSCLPGMKCFHNAIDDVETQMPKSGDQCKRXXXXXXXXXXXXXXXX
XNCIRAGDSSLMVSLRSEDNERLHESFRPVLVVAQLFGIMP

>LsacGr17
RILHNELCDVVDTLDDLFGFPMLAHSLEMFLWLVFVLYSIINAVMQNSILNLDWGIV
NDIIWLLMVAGRLLILSYSCHTLPGKARAVGVSISKMLRSQMEPLVKEELQLFSSQ

>LsacGr18
PSPHTAMGGTPVKLKQLSPSP*VS*IQDKTRGFLLQAQKFLEEDVGSIDTTYMSADAK
YEVQLLVQILSTKKAVINFGGFVVVNRALLTSVFSTVMTYLVVLVQF

>LsacGr19
GYSVIWFFYSLVELFFLANSSYRTTREAKRTGSLVHKLADRSLDATMKEEIHLFSMQ
LLHQKLEVSVCGFFPLDFSLLYS

>LsacGr20
ISSSAWLRTYRSLYCKVHMLLQRLGGTYPYIYIFIMGFFFIVLIFACFSFVTGILQNFSP
KFWIFISAGILVITGMSAGCIYAEMVSHEAQKFLEEDIGSIDTSRMDADTKYEVLLLV
QILSTKKAVINLGGFVVVNRALL

>LsacGr21
PKWN*NYMPVSRCNPLPAVRTSVDADEVGNLVHKLQDSRLDPSIKEEVQIFSSQLVY
RKIEFTASGFFPLDFTLLHSIAGAVTTYLVILMQFQIGSKDKSNSTQLTVSPTQKWINT
T*

>LsacGr22
AIYIISGGSHQSLLRRVSHLDEDHQIPLFSMQLLHHKMKFSVCDLFPLDFTVLYSIAGA
VTTYLIILVQFENREEHIGTTASSEF*

>LsacGr23
SINKPISVRGFLQTIHYRSPCLNLGSYVDINRRYVTSLFGTLVTYLVVLVQFKVGQPST
PPPPGNTTDIEIQELMKEY*

>TgerGr1
LVANRAGALVHKIANESLDKESKEELQLFSMQLIHRKAEFSACGFFPLDFTLLYSKN
GIASSRSRHHFP

>TgerGr2
LYCPGCALEAGTPSASTMKNVNLLWAMSPLFFISKICGTFPFSAAERGDKLIPSTCAR
VYSVALFIAVTLPGSVGLFSHIAKAVQGKTQEFETETVTSIIEIASIAIASAGSFTFTVY
QCQQLPAIISRLGTVDKILKFDSTNYGDFRKHQIYQICGAIIVSIGLSGYGIWVWYDGP
DIIDNLKNMFYINLLVNALVELQVVQFAVIVEDRLSALNRELFQHRESDKQLLQNTFL
KASMVSPDETRIASGVTHVRLQTSVVSLSQLELLRQVHHEICDXGDHLNAVYGFVLL
THMTHIFFGVFIDLYNVILCFTSHFNLDMFVHYLTSDGLWVTYYIIKLILMVQRCSAQ
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>TgerGr3
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YMTIRGLYIVILTYCRLEEPDIHLISVFVCVVHVLLHTFCIIMLINAGEMMXXASQLPV
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VVLQFELAQKSENEKTANSTIDIIMP*

>TgerGr4
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SRNVQITACGFFPLDFTLLNSIXXXXXAF*

>TgerGr5
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>TgerGr6
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VLIQFKVGLPTEKRQENSTSFLPSTSPGYN*

>TgerGr7
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X*

>TgerGr8
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XXXXXXXXXXXXXXXSLEVRSILQLIFQEVQQPLTISAYGYITLSVELLVSVLGIVTT
YYVVLIQLND*

>TgerGr9
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IIFFLVLSSPKYTILYFTYAHLVRLIAHTVAVVSTLYKSQTTFQMSQQPMKVLLAASTS
RMKQEERE

>TgerGr10
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>TgerGr11
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YRNPSFSTCGLFALNNTLLYSVA

>TgerGr12
REHYSMLCSICKTVDDNISGIVLLSFGNNLYFICLQLLNGLL*

>TgerGr13
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>TgerGr14
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>TgerGr15
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AEFDNFHTNIIYQIVYKIVFVLIHFSCILIYVIAGEAVHHSSKLPLSFLENIQAENLDVV
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>TgerGr16
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>TgerGr17
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T*

>TgerGr18
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SPSILSDGIALVVRLLKILLIIIMGERLKTKSRCPLLAVKRARTIHLCPAAREQVQLYIL
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N*

>TgerGr19
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QANRTPSVLSSIDSRSLDPDSRAEIKMFIMQTASRKIGFTACGFFPLDFTLLVSISGAMT
TYLVILLQFH*

>TgerGr20
SFPSIFTQSSFRREQTFVVHLCXQEELITSSPLFVLCLDGYRQDVYQLHRTVLENKAG
QTGVIIHKLLRRSMAPDIKEELKLFASQLLHRKIELTACGFFPLDFTLLHSIAGAVTTY
LVI

>TgerGr21
AYQANRTQAILSSLNSRSLDPDYREEVEMFLVQACSRKIKFTACGLFPLDFTLLCSIA
GAMTTYLVILIQFQ*

>TgerGr22
RTPEILSSLNSRSLDPDSREEANRTQAILSSLNSRSLDPDYREEVEMFLVQACSRKIKF
TACGLFPLDFTLLCSIAGAMTTYLVILIQFQ*

>TgerGr23
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>FaurOrco
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HPLFSESHSRYHAVAVGKIRKLILYIVIATLLSIGAWTGITFVGESTREISDPDSENETM
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QSDFNGFRNTGPLAMVDHSTTIVGPNGLSRKQEILVRSAIKYWVERHKHVVRFVGMI
GDTYGGALLLHMLTSTITLTLLAYQATKIDGVDVYAASVIGYLLYTLGQVFLFCIFGN
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GAVVTYFMVLVQLN*

>FaurOr1
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FGGKFYVLSIETFISILRASFSYFTLLKEMN

>FaurOr2
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LILGIGIFNFAILADTTEKFVLLPYMINMLAQLWCHCYFGEQLSTQSENIANQAYLTS
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>FaurOr3
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>FaurOr4
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EFNTLINWPMFFNCGRIVSSVGIFIFQASQMEPGDPKMLNQFEGAAFISGQFFIYAWY
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FLELLQFTFSIYTLLSQTKNKI*

>FaurOr5
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YFLTDNATHQLIQCMKAHQKLLKMYEEFNNAFSMVNFFHCSKTLVALCLLTFDFTTI
KAGDSKVINLVEFISIYIIEFFLYTWYTDEVTKLSGEVSVAVYECHWTEKSKPFKQSM
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>FaurOr6
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>FaurOr7
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KLHREVFGMFEDFKLLISPLMLSLSLRTLCALCLFSLDFIYVKPGDAKFIILIEYLILYSL
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>FaurOr8
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>FaurOr9
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YFKQTSSPAYEIIYILEYFQGIWMIPCNVTFDFSFVHIVKFLEAQLDALADRFESVTSKS
QLIYCLKLHQDLLSIIEDFKNYLNPAFVGLFFFGCLEVCLALFEIIMMESFDATAVVVF
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PMHLRASFLCVVDMKTFTAILQESLSYAMVLRQLQSAKN*

>FaurOr10
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SLKSEAVKMSAFSNNWTAKDEKYKQKLLFVMLRANFPVILKAGQFFTVSLATYSSIL
NSAYTYLTILHQILN*EISYLYK*KFNAIILTSYYK**ILKK*SIFQHFSKCIRYRL

>FaurOr11
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FNRIYKILKIRTILQVLLSNLSGLVWASKNIITDADEKTILKQFIQVPGLKKAFGFHMW
FPFAINSIPRFIFGYVIQVVLSIWVCTNFALTDLLFITMNENLKGHFDVLSYSLKNLNN
PEDPDINSKLADCLRYHDRLLGMSEKMGRLLGPQAFTQYSTFTFLFCFLGYSLLNDM
GAGLMFCIYITLLLSEVFMTSLTCDGVFQKSLEISTSAYFCCWPEFMDKSFRTGIQLCI
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>FaurOr12
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GIEVEKVVTLEAFSQYLMFSLLFCFLAYNISVADSLNVALYGFICYAAILLCQVFLTSK
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>FaurOr13
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RKRTIFYLCMCYMTSIPWILKGLMKDADDTVLARQKIEIPGFRRAFGAEAWYPFVID
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MKKKLVDCIRYHRILFELVKDVENTIGLEAFLQCFTFLFIFCFLGFTIMNANSIDQLYG
IMTYSVLFLGQVFLLTRSGNLIYENSQKIAYCAYNNEWIDSEKSFQIAILFIILRSQQTS
PIKAGYFVTLNLETFQSMVNTSFSYITILANFM*

>FaurOr14
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NIDYLCNHFGEKLCPEEQNALHLQMKKTLKIYAIIYFYLCMCSALMWLTRPIYEILPG
ENEYDLKGHLPIENYIPWKVETRQSLILTYIFQSVSFVALCMVFGAVNPIHVSFISHVT
AQFRILNMAIDKNGIKQPWTREKLALCIQYHNQIFKLAEKVEKFSGLEIFVQCSTFVY
SFGFLGFMASLLGITNPAISRLLIYIIILLVQVYMSLKTGDNIVQESLLIGESAYFSDWH
TSISSSQIPHIIQFIIMRSQKACMLKATSFIKVSIVTFASLINTSFGYITLLQNINKN*

>FaurOr15
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HCKEEKRKLFRDLNKYMRLFSYSYILLLYITASSWIFQIFFRTLTDESRQMSKIEVADF
TWTFHVDSYFPFVIRSRSVFWMCVFFHWFNYFVMVFIVGGGDLTYVLLMKYLHGHF
IILNMEILRSRQCPNHKMKYILDKCIEYHNELFRITNKIERIVGMDILLYCLCFTILLSFS
GYLMITTHEYLNAAIMKIYISILWFIIQLYMFFKVANDIHIEMLNVSRSAYDSTWEEA
DLISKVVIKLIIMRGQRSRPMRGSRFIEMTNQTFSKLINSAFSYIAILRNVGNEE*

>FaurOr16
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HSINKTYLKSSYYYVVISVITNLLWSLDFLTKPVVEMEHQILRIEIENFTWSFPTAFWM
PFPIRSKPVFWTILAYNFMLVLWTLFIILGADFLYLQLFNYSAGHFHILGIELQKSGQL
SDKKMHESLKNSVRYQNQIYGICKDIEVICGVDIFLHCASFIIIVSFSGYLVTTIEIFSET
FNKVGVYIAFNIFQLYLIIRGGQNVYEQILNIGYNAYDSSWYNANRTNRLLILIILIRGN
RSRPLKATSFMEITKETFSRLVNSSFSYITVLQNID*

>FaurOr17
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KHHFHLIHRSFRNFAIIFISCSIFANISWTLSFINETMDEKDRAVARIEIENFDWAFPVTF
WFPVPLRSKILFSILFLIYSQSVFTMLFVILASDFSIVLLFKYLTGHFHILGIELEKSGKL
SNDEMRRSLKNSVQYHSKIYSLCSEFEQIFGLPFLLYCMVFIAIISLSGYLVLTIDLFDS
TFKKVFSYFIFAIIQLYGVTSGGQSLFDEMNRISFCSYSSHWFDATPSNRLSILLIILRAQ
HSVPIKASMFFDITKETFASLVNTAFSYVTVLRKMEMSQE*

>FaurOr18
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FSRTNKYMDRFSYFYFCLTLCTAMSWLVQMFIRNPTEEGRALMRIEIPNFNWTFHVD
TYVPLAIHYPYEFWLWVIFHWYGNIVMVIIFAGVDPTYLLMLRYLLGHLKILNLELQ
RSASCSVHTFGEILGNCVQYHNSMFKIAKEIEVICGLDILFQCFSFILLVSFTGYLITILD
LFSPQITKIYIYIVWCNIQIYVLMKSGNDVYDEMLKVASYAYNSHWLNSSNNEKLKI
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>FaurOr19
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>FaurOr20
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KRNRSIKRAKNFLFAFGCISGSTWFLGALFFPDPQIMKDQNIEIENFIGQMPLTTWMPF
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LVKIYKYHLRIMRLAHDVENVAQFEIFFQCCCFIFLFCFMGFTLTQKMDRLEMYDFKI
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>FaurOr21
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FELLSIAFKRLSTKVEDPIDAEKILKGLIREHQELLNICDDIIYLLNPLMSVECLIISLINC
TLIFQASSVPVDNFYFFAMMIFLFCMTSELIIFCWYGTYLIEKSEEVSQSVFESHLFIKD
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>FaurOr22
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RRLPIPMRFLWDISISPYYELTYAFEFIATPMVAVSVTVCDVFFCALIYFNSIQYECLA
NDLKDIPAETNAIKILKKYVLKHRKIISFSDEIKKSIAPVVGFECVIVTIQSSFIIFAAAV
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>FaurOr23
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MSLPAKYPYDTNPSPIYELTFMLQLIQTPVNTVSVTISDLFYCALVYFNSIQFECLANN
LKDIPADENANRNLSKYARKHKQIIEFSLEVKKVLAPITSMECAIIVMQSSFIIFAAVL

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>FaurOr24
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FNQLTYFFVEMGELYAFGWFCSDLLETSQIIFALYSSDWFNVPKSLKLSIWIMMMRL
KPVKIFALKIILISLELCTELTRSSYSFYTLMSRMNEKQEVE*

>FaurOr25
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KIVLNGISGLHAMIYLTWLLTQLYCLCACGQHLQTKSEKFYSSIFHSGWERSPIEFRA
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>FaurOr26
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SVNAIYVPVFDCLVTVGFSKYISAHYQALRFHLESMRDASENFNFRKELIKAIGYHKN
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>FaurOr27
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KIEDNCDAWPAREPEDFAEPKDVDEIRKEKLKAPSEQDRHPGEAIVTKTLIKNNILLF
FYWIYSCFCGTCYTFIPIIKEAKEGERLLPHDGYFIINSQISPLYEILYVIMGITAVVNAL
YITSMDMIFCNFINFITAHYQALQLRLESMHTASDNFNFRKELIKCILHHKKLKDLAE
FAEDLFNKFFLYIYLLYLLLIGFILIRFFKGTDLSTVEKVTIFNVMMISLINLFIICYFCQI
ITDQSTFVPFSLYQCDWVHTNQTNRILVYIFYSGISKPIYFTTGKFASITLDIWVQLIKA
GYSLYTLFEQV*

>FaurOr28
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LLSQIVLRTQEKRIGNLIKMMEENLFAWPVRKPEDYLPPKSIDEVRETLESPSESKPHP
GEYVLTHFILKTNWLIMFFTSSSMIVASLFGLNPFLIKNPPGVRLLPHKGFFLVDETTS
PWYELVYIWIFFGCWVLCLYGSVIDIMIYTFIRYTSVQYQAIRLRLESLLDADAQGYN
IREQLIKCVHHHRKLSKFERYNEETFSVYYLFIYLYTLLCITFLLLKVGLTKVYNVEAF
LTTMILLILILNLYVMCYFCENVTRESLMLVNSLYQVDWINMNLETKKILIIFYYGIQK
PYYYTTGKFRKISLAMWMGVIRTGYSFFTLLFQIIE*

>FaurOr29
MASKSEKEDVIKGLTDRTSRYFRYNQILLQVIGYWPVNKDSSFWNKYSIAIQLFENIL
MVLLIISQIILVVLKWENQQLMLETIYVIMFAMAVLFKSLYLVSYAPRIVGLCVRLDE
RLGVAQNWSQDQVIILEKSKNIAKRVTFALTGMFVFAGSLYVFLPLWVFWGTGGYH
FQENATEPDDKYFVLLNVWLPVDQRFSPGYEIGFVFKGFNAIITTFILAVGDSLVLAVI
IMITGHFKVIQYTLENTSKFFENKNEKETINLPAQLESIMSRCIHHHQIVLEYINTCERI
LNIYMMVLMSQNFLLISSALIQITLGTPSQTLPGLIGSFSCYVADLFAVCWYCNILTIET
ARVSDSAWNSAWYNASSLYNKALILLMIRSKKPVRLTVAKFGPITIDTFIGVIRASYS
FFAVFNKN*

>FaurOr30
VLFRSVHAQHQRYLELPISTLRITGLLIVKYPDSNMRNLLAKIQFFFTCTVFLGAVLIQI
IGLFLGAHELKALTEVSMTMIPILMTFIKVTSTAYRVRSVRKLVDLIEDDFEQDTSTM
NQSVLNVVKHTNRFINTIFYICVFASFGYITIPVHELAQKDNTTVLDDLLPLKASYQY
DLEEERNFLITYLLETWVIINALLLVPSFDVFVVSLIAHASAQYDILKKCLENLRNEAI
GNIMMKEKNLAERPTEIEEKEDMATNIFYCNGYPIPKAKIDCEIVETLKKYINYHNRI
NNYIHLLSHTFQVVFLSQIQSSLLMICFTGFQIFTQAGVNLAKTEAIIVYLTFQLLELFM
FCWSADIMSKKSEEVAQSAYSLPWSRSGSEVRFCLRMIISRAYQPVIISVAGLHTLDL
QMFGKIINTSYQFLAIMQKMAKDELYMEQMAKG*

>FaurOr31
FVSLSVTVSSDIVVVVVVECVCSLSHKMSLQFRMMRLHLQLLWLSGVPLLQQTKKR
FLNIIGKIVCFLNVETLAFLIYSQIYSIWETDDLDVTARAFIMVSAGINSIFKIPHLLLFQ
SGISKLVVQVEDTFGRKDFLLNSKYGSWIMQCVRRTNFLLILSFILAFGASSSLCLMPI
IWYLNDSNLDANGSYIRELPYLCHLPFQLDCKTSPFYEFIYGHQFLMGSLAALTTIAA
DLLPITFLMHATVQLKIIGEEMQATTDKGIVIKCIKQHQKLIKFIGNVEKIFNPMLMVQ
FLMSLLNFIFAAFKTINSESVGLTSNIGTLVFTIYNLWQLFIFCFFGELLMGKAISLANE
GYSSGWMEMRPLDAILVKLFIQRAQQRLVVRVAVISKLDLDTFMNILRDSYSFLAVL
NTMNN*

>FaurOr32
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QEELDLRMRRKIKECIIHHQQIYSLTNDINELIFPSISIAWICLSLIYSFYLYLYASMEFD
KDGLLELYATLTDAMEPVPFCIIGTKLTTHSELVGFAAFSSAWYEIEPSFGRIIPLIMAR
SQKYLSINTLFMGEVSLKLFSNVLQSAYSFFTVLRTVKNDE*

>FaurOr33
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ATPALSPLLMDTPENVTIPRQLPHLCWYPFDTSPSPIFEIIYFVQIFSTYVHCMTISLMD
CFYISFVIGIISQLKGLAIGFEEINQVSSETRRNELGRLIRQHQMIIKFSESFNEFCKPMM
TMNWCAIGGILCTLIFQVSQTEIASIQFAMIMIFLTLELFHLFIFGYFGSDLVDKSFKVT
HSVYNCGWEEWQIDLKKCISFIISRAQKPLVVTAWIFGVSSLELSLALLRASYSYYA

>FaurOr34
MASFELQSYVGIQIKIMTICGFFPPNQTMRAYRFRVFYHYYMLILLAYISIFALHYAIEI
RNNINEAVRITFHGLLLLQMFIKSMSINVFYNNQFFDLIHQIDEYFIEHYPLEKHRKFIK
KHVRFIIIGCCAYNILTIVLYFLDSEHWFTGNSERPFKVPFHFPGFMELPKMLYYMVSF
SAIIFYSFFGLFCFPTVFFLQLGLFYYLIDHFQSMIVKFDTLLPENYSEKELRTSEMEKV

IIKRLVDLKKEHDKLLSAYDKLRTIITPVLIAQNICVSFLNCVLIINITSIDLAVTELAHN
VFILLICTLDHFMISWLCSKVQEMSPLLSDHVFHCGWNKMNPIFRKYLLILMSKLQKP
LIFTASVFGNVEIALTISMIQFSYSLFTILSKTN*

>FaurOr35
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YCLLRLNEMEKEPFILYFFCVTIQQLTFFFTINYHLDLFRETIEPTIDWYFRKYANKEP
HKQWIIKHTKFIQRLSFIHFFHNLIVVIIMDLKNLSSVQRERPLPLPFDFFEKDNIPILFY
YLLLIISSFVVMSMANYEHGTLLTSLAIIIYINDHINSLKYKIERIIYKIPEKKGYFNELS
VLKHLKNFHKEHLLLMRLLDDFNKFISPWLVSINIVIGVAISLSMFSLQKGDPDTQIIM
ISVSFVVSQLFIHFILSLFGSRFSSSMEEWLRELYCSGWEDLKPSSRKLILILMMKLNKP
LYLSAGIFGKMNLSLFLSVVHFTYSVFTLLSVKQY*

>FaurOr36
FSLYNPTLGYIRLQVKYFEWFGFFRPSATDSNKFYKFRLLYYFLNIVIIFLEILSVGFNN
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RIMRNTIFIQRLFYGNVVLYVCTIYFVLSRELDTTHDERPLALPIDFFTKNYIHLYGYYI
LLTLSIMIVLWIAIFSHGVIMFNFAILVFISDHSNSMKNKIKTIIYEKSESKNEINEKSFIV
RLQSIIKQHIILQRFFKEYNKILSPWLAFLNFMIGIVYSILIMILSKPEIHMEIILVSGVVF
ANYVLIHFYWSYCGTQILYSIDGWKEKLYCSGWEDLSPKNRKLILILSMNLNKPFYL
SAGIFGKMTLDLFLSIVQFSYSLFTLLSVTQ*

>FaurOr37
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KWIIKHTNLLQRFLYINRIIYFLETLVLYFKELDWQKEDRPLPLPIDLFIRYDIPLYAYY
LLLVTSILVLENMTNFYNGVFTYNFTLLIYISDHIKSLKYIIKFIIYDSEDREKMRDEKEI
KLKLMEFVKEHQNLTSFFKEYNKILAPWLGYLNIINVLLYSLLLITVYEESVGWKML
TLAGLIFLISLSLHFIWSFYGSSYSYAMSEIKSELYSCGWENLKPSMRKLFLITMLNLN
KPLEVSAGIFGPMNLELFVLIIRFSYTVYTILSVTH*

>FaurOr38
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PWLAFLNFTNVQFYSLIMIIIMTQDDVDMRMLSLTIAILAVLLVLHFIWSSFGSYILYS
STELKRELYFCGWEDLDPDLRKLFLIPMMNLNKQLKLSAGIFGNMSLDLFFSLIQFSY
SLYTLLSVSV*

>FaurOr39
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IWSITGFVDPVTDQERFLQHIEIENFPYKFGLDFWVPFPIRSKIQFFTVYAIMVFNFFEM
AWIYGGIDCLRVSLLRYLSAHLRILGKEIEKSSECKKHSMEENLIRCVQYHKELFRITK
EIETVYRIGISVSMHYVHNSICHLRSNIE*

>FaurOr40
VCSSDLSNSQPDNMFLFKRKDVSNDGIPVFGLPENLFIAHIAGGWPYKYSGYLYKTF
QVYVFFSGIVQCFSQGVFAYVHFEELTRALVSVMLLFGYTKGLLQLFFIIINHKRIKNI
YYSFSIAYYKFAIHCQKEKEEAFTLINKRLMKQFRFYTGLCVLVVINWILVGFLEVVT
EKDRKLQGIAIEDHNFKYAQDFWLPFDISTKTQYYIVFIFLTFNMVIMISIYGGVDCLR

VSLFRYLSCHLQILAKELEKAAECDKHSMKENLIQCVHYHRELSRLAKEVETVIRYD
LFLQCCIFIVVFAISGATPNENFDSNLLKMYFVAVIHLLQIYMIMSAGADVFQDFQDIS
FTAYKCPWMDKDKEIKYIIYFLIQKSILTGPLHATH

>FaurOr41
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HGIEVINLAITISIIHAVLKGVLIIRERKFIKSIVEEFIRISNMLKYNEDKNFLILNRVETSL
KKRTVVFFYVCLITVLIWNFKNVIMNGDEETVKLQKIDIIGWKKHYAVYVWYPFVID
NQFKFYFILLYQTYSGIILAGIYAFVDSFIVALNETLGAHFEVLDNALINIKSEPEKEMR
EKLVQCIRYHQQIFSLSQRVQNFIQLEAFFHCFSFSFLFSFLGYSGIKAESMDQIYALIS
YGCVIFIQLFFLTRSGDILYNNSLDIGE

>FaurOr42
SSDLENHSRYFRVNQICLRILGFWTSKHDQSRLQIILSKLFSAFVFLLMILLVISELLLCI
FNLNDTQIIFEALYVMIFALISTLKMTYLYFTVDQIISLCTLIDHHFNLNSNKWKHEQF
AILDICLMQSKYISISIVFLFITSSLVYFCLPVYMYIFLPPIESNLTGQTDFLLFNIWTPW
NQSETGYFEISLAFKLLNCVGTTGSAGTCDALILSIVIHVTGHFKVIQWSGKNIKEIAM
MNLNIEHEIENENEHFAIPNEMHNVFKDMIIHHQTLMRSIIKMEKLFNVYSLLQIGNIF
IFICLILLESIIFI

>FaurOr43
PVFGLPENLFIVHIAGGWPYKNSGYLYKMYQIYIISTMTIQILCQGVFTYLYFDHLSIA
LVAFMAMLSFLTGTMKLLFINIHYKRINHIYDSFRNAYRKFALHCQEEKKVEFDSVN
KRLRGQFQIYMTICFIAALTWNISGFVDQVTEQDHILQRIEIDNFHFKFGVDFWLPFVI
RSKLQFYIVYAIFVINTFENSSIYGGIDCIRVSLLR

>FaurOr44
NLFIAHIAGGWPYKNSGYLYKTFQIYILISMTLHTISEGVFTYLNFDDLSVSLIGLMLV
LSFSKGTIKLLFINIHFKRITHIYDSFRKAYLKFALHCQEEKKMEFNSVNKRLRSQFRIF
MAICFITSMIWSITGFIDPVVEKDHILQRIEIENFSFKYGINFWLPFVIRSRFQFYIVGFLL
NINLYELTWVFCGIDCIQVSLLRYLS

>FaurOr45
VLPVIITITCNSTKMIYFLCKHKTVKRLIGKLNQGLYPGNLKFSEKEIQAKKRSSNLTA
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SLHGTVGVMTWGPVTDMGNDCLIATFLIHIACQFEMIQERIADYGTKMQLDDRKRF
DLLRKCVVFHQNSLKFTTELEQLLSPFL

>FaurOr46
QFSTSFFGLCLTLFMILQDGFTSDIHTISYLIWMYLQIFAYCILGERLISKSDNLQEAIFH
CGWERDPIRFRMIILMMLNHNKKPLQMTMLKLLTLSFETFSFILKTSYQVFTLLMNY
KSIEEE*

>FaurOr47
ETFTIITFLIVCFSIFIFELFVFCWFMEDLSIQSSAILSSVYESFWYEGSNELKKSMIIFMI
KAQKPVILSMGKFGPITMETFTTVVRGSYSFFAVFSSL*

>FaurOr48
*LMSPFKGIANLMSNRFIGNVEKIFNPMLMVQFLMSLLNFIFAAFKTINSESVGLTSNI
GTLVFTIYNLWQLFIFCFFGELLMGKAISLANEGYSSGWLGMWALAV