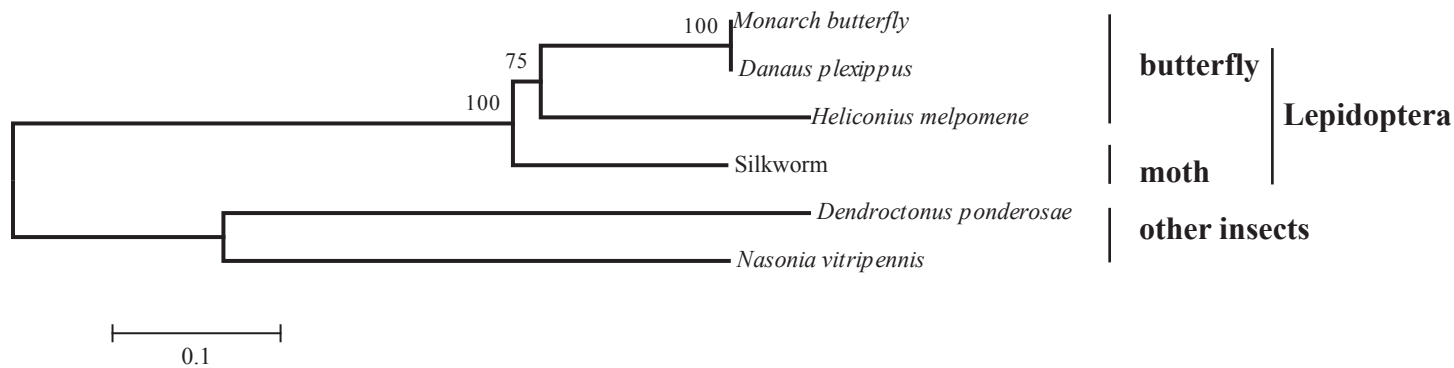


(A)



(B)

Monarch	1	QDAMEEEKKPEERKISTGFPEPEKMDMDEILKVLEQLVLOQT-----DPSCELSLEPPLLP	TDSVTRAAAILSHSISALFSRLERSHA
Danaus	1	QDAMEEEKKPEERKISTGFPEPEKMDMDEILKVLEQLVLOQT-----DPSCELSLEPPLLP	TDSVTRAAAILSHSISALFSRLERSHA
Heliconius	1	QETDEEEKKVEERKISSFFPEPELAMDILKVLEDLVIKTI-----DPSCDNLEPPLLP	TDAVTRAAAILSHSMTALFARLERSHA
silkworm_BGIBMGA003910-PA	1	QDAADDEKKREPRKISTGFPEPEETPMDEILKLEELVIKTI-----DPSCELSLEPPLLP	TDAVTRAAAILSHSISALFSRLERSHA
Dendroctonus	1	PKTPTEN---VRRATVFLGLQKXHSNETIHSHELISTD-----EDG---DPPTALP	LKTVAKLVMVSHSISAYCGSLEHSHLL
Nasonia	1	GTETEESG---TWNTPSGFL-LHFKAPELIFSSIQDLIVYEDAPQVVEEGKSEFSPITSLP	PLTDAAKLALISHSVSAYAMSLPRSHA
Monarch	83	LGTHIATETTRWMAHFLRISDYDAFYHQEQLEGLVRVTRMLLHHKYPRYLEDGALAFS	NRRLPSIYSCVASPLGVVQHLCRQLGLPLAC
Danaus	83	LGTHIATETTRWMAHFLRISDYDAFYHQEQLEGLVRVTRMLLHHKYPRYLEDGALAFS	NRRLPSIYSCVASPLGVVQHLCRQLGLPLAC
Heliconius	83	LGAHIASSETTRWMSHMFRLVDYNAFYHQEQLEGLVRVTRMLLHHRYPRYLEDGAMAFANRLPSIYSCVASPLGVVQHMCRLGLPLAC	
silkworm_BGIBMGA003910-PA	83	LGTHIASSETTRWMAHMFRLSDYNAFYHQEQLEGLVRVTRMLLHHRYPRYLEDG	
Dendroctonus	76	LSLRFETDTRRWLSHIFGLLDSAFYHDDNLEGLVRVTRMLLHHRYPRYLEDG	TLTFASSLPLIYSSISSPGLGVQYLCRQLGLPLAC
Nasonia	86	TAGRLAADTTRWLSHIFRFVDCASSFHEDPLEGLVRVTRMLLHHRYPRYVDEGFTALASSPPLIYSSVAAPLGLVQHLCRQLSLPLHC	
Monarch	173	PVPVD---SSGKMDLNALDRLCEEDSAG--RTPLLVLGEAGEPPLGGGSPKALALAEI	CGRRGVHLHVRGHALALPAAGCFEQT---V
Danaus	173	PVPVD---SSGKMDLNALDRLCEEDSAG--RTPLLVLGEAGEPPLGGGSPKALALAEI	CGRRGVHLHVRGHALALPAAGCFEQT---V
Heliconius	173	PVPVG---NNGKMDLALERLCEEDIAAN--RTPLLVLGEVGGPPLGFGSPKLTLRDI	CSKRNDHLHVRGHSHALALPAALGRDOT---V
silkworm_BGIBMGA003910-PA	136	---GKMDLALERLCEEDVAAAN--RTPLLVLGEVGGPPLGFGSPKLTLYTLGEL	CARRNDHLHVRGHALALPAGSLEKEQ---V
Dendroctonus	166	PVPVNTHFSGHYTMDVAALQKMLTDDGVITG--KVPLLVIADAGTPVTGHVDNARIKEL	CKAHNCWLHVRGHHTLSALTLPNHTRNHAT
Nasonia	176	EHPQNTMFGSRNSMDSIALERRLAEDSQSNVTPPLLLLAELAGSVLTGCHDNLNRLREI	CDKHNVLWHVRGDSLALALTLNNSAKD-LSS
Monarch	255	ADSLTLQPGPWFQIPGLPTVTFYKIPEPLTANDHSHKVVNSAS	SREGALAALGGLTAG--AARLALPLWTATRAAGAKRLARRIDAAF
Danaus	255	ADSLTLQPGPWFQIPGLPTVTFYKIPEPLTANDHSHKVVNSAS	SREGALAALGGLTAG--AARLALPLWTATRAAGAKRLARRIDAAF
Heliconius	256	ADSLTLQPGPWFQIPGLPTVTFYKIPEPLTANDHSHKVVNSAS	SRESALAALSGLTAG--AARLALPLWTARAAGAKRLAKRIEISAV
silkworm_BGIBMGA003910-PA	208	-----A-----GAREGAAALSGLCA--AGRAALPLWVMARAAGAPALHGAALRAAF	
Dendroctonus	255	ADSFITLGLGNWLGSN---INASKQKQVQ-----VSRESTLPLLAGLHNDHTSRRIITLPLWTALQSLGKDGWLSAIRENF	
Nasonia	265	ADSIITLPLGVWLGIPSLFVVTLVRLTDTRGA---R---PTSRDITLTLSLGMLADSLSRREPTLPLWTALQALGRDGIWNRFKQCF	
Monarch	343	ARTARALIAST-ELRLLSDRPGGDEPPNMDIVDAISE-----SSACVSFOFAPAGCA---DRPPPYDKLNSWLQVQLQREA	
Danaus	343	ARTARALIAST-ELRLLSDRPGGDEPPNMDIVDAISE-----SSACVSFOFAPAGCA---DRPPPYDKLNSWLQVQLQREA	
Heliconius	344	ARAASVVFASA-DLRLSDRPGGDEPPNMDIVDAISO-----ASACVAFQFAPPG-E---ERPPPYDKLNSWLQVQLQREA	
silkworm_BGIBMGA003910-PA	255	ARTAYTLVAAA-GLTTLV-----E-----AVSQ-----ASACVAFQFAPPG-A---ERPPPYDKLNSWLQVQLQREA	
Dendroctonus	329	SERLYSALDVFRRVRLSPKPGG--ESGAYTTTELTSKPAISMLFESTACCVFQFIPDLAENEVLKVPYYPYDKLNSWLQVQLQISA	
Nasonia	347	VEELYSKTKKFNIRLLSQEPGG--ETGAYTTNELLSNPLNGPQLLEVVASALVFQFVPPPEADMQELQRVPPYYPYDKLNSWLQVQLQIRDI	
Monarch	418	INIEICETESYGVLRYCPLEGIFLE---EDRLSEWAAVLDLQHLVLTATVALREPFOKTLQTHPCRLRVHVPGWAGLGGVRYVPPGW	
Danaus	418	INIEICETESYGVLRYCPLEGIFLE---EDRLSEWAAVLDLQHLVLTATVALREPFOKTLQTHPCRLRVHVPGWAGLGGVRYVPPGW	
Heliconius	418	ISIEVCETESHGVLRYCPLEGIMLD---DSQADACAARLDLQHLVLRATASLREPFQGVGRACRLRVHVNAGWAGLGGVRYVPPGW	
silkworm_BGIBMGA003910-PA	314	ISIEVCETESHGVLRYCPLEGISILE---EDKIESWSSILELQVHVLHATVALREPFQGVORVQNECLRNVHVPGWAGLGGVRYVPPGW	
Dendroctonus	418	IPIEICELLEDVGVTLRECPFESALSDQPTLEQKFSFVQCLEQQLVLRATLHHKETFKTIVEASPVLSVELPDPWAGLGGVRYCPGW	
Nasonia	436	VEIEECHEIQVYCAIRNCPLESPECP--PNSDDVDVNVVACLREQIETLLLATVQHKETEFVKLVTEENDSLHVRVEMPGWAGLGGVRYAPPTW	
Monarch	505	AP---LEELNSLNRQLVETLRATDGAFCGDDGDMACVRFMGVMTADTDVDELLDLVLSAGKDVEENSKALTDMEVLKKG-----	
Danaus	505	AP---LEELNSLNRQLVETLRATDGAFCGDDGDMACVRFMGVMTADTDVDELLDLVLSAGKDVEENSKALTDMEVLKKG-----	
Heliconius	505	AP---KEELNALNRQLVETLRATDGAFCGDDGDMACVRFMGVMTADTDVDELLDLVLSAGKDVEENSKALTDMEVLKKGRSVVRO	
silkworm_BGIBMGA003910-PA	401	AP---LEQLNSLNRQLVETLRATDGAFCGDDGDMACVRFMGVMTADTDVDELLDLVLSAAGREVEESKALTDMEVLKKG-----	
Dendroctonus	508	LLPDQLKEELNLNIALVDALKSVDSAFSLGEGQDGLICVRFMGMTFQSDVDEMLTLVHVQGSVEENSRVLDMSSEIVKKG-----	
Nasonia	525	VMTDQAKLEELNRLNTQLVETLRSTDAFSLGEGADGLACVRFMGVMTVDDTVAEILLSLVHQVGEVEEASSKLLDPMSEVVKRG-----	
Monarch	583	-----ISAAQEEELNR---SAWQEGLLRRVPPVGRVSVSWAP---POPFCGRRLLLTHGTLQATDDIYRFVQKDKKE--E	
Danaus	583	-----ISAAQEEELNR---SAWQEGLLRRVPPVGRVSVSWAP---POPFCGRRLLLTHGTLQATDDIYRFVQKDKKE--E	
Heliconius	591	VYIIFILCAVHGTGKAHLELDC---INFVDGLLRVPPVGRVSVSWAP---PPFPAGRRLLLAHGTLQATDDIYRFVQKDKKE--E	
silkworm_BGIBMGA003910-PA	479	-----LEAAQADIERESLERLWQEGLLRRVPPVGRVSVSWAPS---AAPVGRRLLEASGTLQPTDDIYRLVQNKSKNDTE	
Dendroctonus	590	-----IETARKDLQKNEERLWQEGLRHVPVGNFVNVWSPKTKETGVRGRSLNLTCQIVESTENIYKYHMQIQGTTF	
Nasonia	607	-----LEAAQTDLRENAEKLWQEGLRHVPVVGTFVNVWSPSPKEGGVGRSLNLQAGVVESTENIYKYHMQIQPNSTT	
Monarch	651	RA-----HSPTRQNTVP-----	
Danaus	651	RA-----HSPTRQNTVP-----	
Heliconius	672	RA-----HSPTRKEKENQDIQ-----	
silkworm_BGIBMGA003910-PA	554	RA-----HSPTRAAPQH-----	
Dendroctonus	667	GS--KSPPTPQIQTSVSN---HSRSSHASVSSQIRADAEPKPEVIAVKPPTDDVKGNSLVLVAIDSSSEKYARWKYS	
Nasonia	684	GSGARTPPQPLVQTPVAGSQS--HSRSSHSSLSQSGKNLQSSTT--T--SAIQSPT-----QLTLPLVSKKEKPCELKS--	