

Chromosome rearrangements are not accompanied by expected genome size change in the tree weta *Hemideina thoracica* (Orthoptera, Anostostomatidae)

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H. thoracica	"S	"S	I@	HRZR\RdV	2e` "&	SZ`A` %`	#Z`"
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H. thoracica	"&Q	"'	II	5`^ VGR V	5`^ #%	SZ`A`" S	SZ`'
					5`^ #%	SZ`&#` %`	#Z`!
H. thoracica	"&Q	"'	II	5`^ VGR V	5`^ #S	SZ` ((SZ`&#`
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					ARZ`%#	SZ`&#`'	SZ` (
					ARZ`%#	SZ`S`"	SZ`*`
H. thoracica	"(")	II	ARZ`ZR	ARZ`%#	SZ`&#` #	SZ`*`
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H. thoracica	"("(I@	ARZ`ZR	ARZ`%# S	SZ` &	#Z` S
H. thoracica	"*	#!	II	> eEVAf`V			#Z`#

EYVRZ `WYZdfUj hRde fd^ VRfd VWRZV5? 2T_e_e
`WhVR_fTjVZe` e`hYVcTYR_XdZ TYc ^ `d ^ V_f^ SVc
hVVT_dhV_ehZy` eVYja` eVZMUac` TdVZ5fa|ZIRZ_ `c
]` d` WYc ^ `d ^ VhRdMaVtUe` dV` jZ TYR_XdZ` e` d] 5? 2
T_e_e` dhYZdeCS` e` d` TRZ_` hRdMaVtUe` YRgV_` dX` Z` TR_e
WVte` _` eV` e` d] 5? 2T_e_e` e` AVtj` et al. #! !%Z

Methods

EcWhVRRV~ZYeVdLRS` dRjL` Tf` c` RjL` ^` _Z` dVdVRef` dV
Y` jVdZ` eWaf` _` d` RUVSj` h` `` Uis` cZ` XSWeVjRgRve` YZUVf` c

lj dZ XDj dV^ 1A2D hRdV a] j VUf dZ X} j dC T ^ SZ RZ_d`W
 F8 "LE-%#! LE-&! LR U88%&&R UR^ VIF g R TjR^ a 193@
 "!! HZ#Z7ZgVeY f dR_U_f TjVzhV^ V Rf dUWcVRiYhV R Laf d
 Z eC Rj dR UR U1o#&! W^ VRIY/Z5? 2 hRd dRZ VUh ZY 52A:L
 hYZY ZIR _ Z eC RjRZ Xj V eR sZ U d aC WcV eR j] e 2IESR d d
 Z eZ d eV WcV _ e Raac aC Z eV e T _ gV e5? 2 ^ V Rf dV V e d Z e
 aZT XR dZ;`Y d e _ et al 1"***/ dY h eY R Z XV V R L XV ^ V
 dK V V eZ R e d f d Z X52A: R X W U h V j] h Z Y eY dV` S e R Z W f d Z X
 ` eV c~f` c` Tyc ^ V eZ 8V ^ V d K V R V a d V e U R d e V R e Z ` W
 eYV^ VR _ f TjV Z d V W e V Z d V e T e T ^ a R C U e e Y V d W c V T V R U
 eY V W e V R c V _ j T ^ a R F S j V h Z Y Z e Z d f U j Z

2 g r Z j ` W d f V j a d W ^ e Y h V e R h V e c Z U E Z j f U Z X e S Z R
 Z e d e Z V R U ^ R j a Z Y R d f S f j V e S W c V e V R e V _ R h R d d V I e U
 W c ~ h T j e ^ V e Z T R R j d Z 4 V j d W ^ e V R e V _ R` W R U F j e h V e R
 h V e d U ^ Z d R V 8 # ` W Z e d I R U d e Y Z e d f V X R V R d Z X V
 a R ` W f T j V Z Z 8! z 8 " Z 2 _ e V _ R e Z h V Y R d e V R U U R U R g R d X d
 e Y e Z e Z f _ j V j e S V T _ e R Z R e U h Z Y T j j d W ^ a R R d a d ` c
 W U a j R e d R U d R ^ a j V d I R S V e R V h Z Y f e ` Z j Z X e V Z d V e Z j j
 ~ h T j e ^ V e j d f j e d a d V e U R e W ^ R e V _ R e Z h V e R V S W e V
 T j j Y Z Z V e R e V d R U f d U h Z Y Z " Y ` W j j V e Z _ Z 2 R j d d W
 g R Z R T V i _ V h R j 2? @ C 2 / h R d a V e W ^ V U d a R R e V j W e e V e h`
 d M V d i a j R _ U T ^ a R Z i _ d L ` U M :: f d Z X D A D g v c Z _ "" Z Z Z

Results

7 c H. crassidens1" & Tyc ^ ` d ^ V d R I V e V I Tyc ^ ` d ^ V Z I
 R a a c i Z R e V j "" ` ` W e V ^ R j V X V ^ ^ V Z E Y Z I Z I T _ d e V e h Z Y
 V e Z R e d W ^ ^ V R f c Z X a j R Z d R Z V U Tyc ^ ` d ^ V d e Y R e R V
 S V h W "" Z e 1" & Tyc ^ ` d ^ V d R I V R U " ! " ` ` W e V ^ R j V X I
 _ ^ V i " * I Tyc ^ ` d ^ V d R I V > ` c X R I C Z I Y R d " * * & L # ! ! / Z 7 c
 H. thoracica V e Z R e d ` W e V d K V ` W e V Z e I Tyc ^ ` d ^ V S R M j
 ` _ ~ h T j e ^ V e j L e R X V W ^ * Z ` e " # ` W e V ^ R j V X V ^ ^ V
 1 7 Z Z S / Z E Y V d V } X c d R e V d Z Z R e V e Z R e d W ^ ^ V R f c V V e d
 ` W a j R Z d R Z V U Tyc ^ ` d ^ V d V S V h W _ * Z % R U " S Z # 1 > ` d
 X R I C Z I Y R d " * * (/ Z E Y V e V R e Z V 5 ? 2 T _ e V e W e V # d R I V d W I
 c r a s s i d e n s 1 h Z Y Z e Y V e R X V W I . t h o r a c i c a e R S j V " / Z

EYV Tyc ^ ` d ^ R j d R I V d W I . t h o r a c i c a d a c d V e U Z e Y Z d f U j
 U Z W c Z c V R e Z V 5 ? 2 T _ e V e i 2 ? @ C 2 + ^ R j V d U W S L 7 . & Z L a -
 ! Z ! " , W R j V d U W S L 7 . ") Z L a - ! Z ! " L Z E Y V " S I Tyc ^ ` d ^ R j
 d R I V Y R d e V R e Z V j ^ ` c V 5 ? 2 e Y R e V e V c S Tyc ^ ` d ^ R j d R I V L
 h Y Z I Y U _ e U Z W c d X Z T R e j W ^ V R I Y ` e Y V c 1 2 ? @ C 2 + ^ R j V d
 U W # L 7 . % Z L a . ! Z & , W R j V d U W # L 7 . # Z L a . ! Z * / Z E Y V " &
 R U " (I Tyc ^ ` d ^ V d R I V d U Z W c S j R y a ` e V d Z M d Z X V C S e R d
 j T R e Z _ , Y h V g c e V " S R U " & L (R U " * a R Z d h V e V a d V e Z f d j
 e Y f X Y e e U Z W c W ^ V R I Y ` e V c S j R d Z X V U f a j Z R e Z _ z j d d V R
 d R j R I c T V Y e T R e d ^ V 1 7 Z Z / Z @ _ R g V R V e V " S I R j ` g a V
 Y R d e V R e Z V j ^ ` c V 5 ? 2 e Y R e V e V c R j ` g a V d e Y Z U Z W c V T V
 d R X d W ^ R a a c i Z R e V j & ` W e V W R j V X V ^ ^ V 1 S V h W _
 "% I I / R U " ! I I // e "" ` ` W e V ^ R j V X V ^ ^ V 1 S V h W _ " S i I @ / Z

EYV%Tyc ^ ` d ^ R j d R I V d W I . t h o r a c i c a d a c d V e U Z e Y Z d f U j
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 ! Z ! " , W R j V d U W S L 7 . ") Z L a - ! Z ! " L Z E Y V " S I Tyc ^ ` d ^ R j
 d R I V Y R d e V R e Z V j ^ ` c V 5 ? 2 e Y R e V e V c S Tyc ^ ` d ^ R j d R I V L
 h Y Z I Y U _ e U Z W c d X Z T R e j W ^ V R I Y ` e Y V c 1 2 ? @ C 2 + ^ R j V d
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 R U " (I Tyc ^ ` d ^ V d R I V d U Z W c S j R y a ` e V d Z M d Z X V C S e R d
 j T R e Z _ , Y h V g c e V " S R U " & L (R U " * a R Z d h V e V a d V e Z f d j
 e Y f X Y e e U Z W c W ^ V R I Y ` e V c S j R d Z X V U f a j Z R e Z _ z j d d V R
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 d R X d W ^ R a a c i Z R e V j & ` W e V W R j V X V ^ ^ V 1 S V h W _
 "% I I / R U " ! I I // e "" ` ` W e V ^ R j V X V ^ ^ V 1 S V h W _ " S i I @ / Z

Discussion

CS e R d j T R e Z _ d R e V _ e V a V I e U e T Y R X V e V e d j 5 ? 2
 T _ e V e R U ^ L

Fig 3

> R\DIRIYZ @Š DIRJZ GŠ KF TT eZ > Ž"**) Ž 7\ h1Tj e ^ V eZT R Rj dVd
 `VZ eRchVIZ T XV `^ V dKv gRZ eZ _d Z_ Bacillus atticus 1: _dVTeL
 AYRt Re UVR ŽS V `^ V%+ ' #*1' S&Ž

> `cR ICZYRUd > Ž"*** &Ž2 _Vh chVIZd `W eWh V eR W ^ eYV? `c eY
 :dR U `W? Vh KVRJR U 19 V^ ZUZ R+ D eV `aV ^ R eZURV+ @c eY a eVR Ž
 ? Vh KVRJR U 6_e `^ `j` XZe") + " &1#%Ž

> `cR ICZYRUd > Ž"*(Ž _eRthVIZ T Rj `g aVgRZ eZ _ZL `eT _T dR_e
 h eY Rj\ kj ^ V gRZ eZ _Z eYV 2f T\ R U eW h V eR `W? Vh KVRJR UL
 Hemideina thoracica1@c eY a eVR+D eV `aV ^ R eZURV ŽS Z j` XZIR; `f c_Rj
 `V eV=Z _VR D TZe j `! +%#S1%#Ž

> `cR ICZYRUd > Ž#! Ž S V eT _Z eR d j` TReZ _dR U 3Tyc `^ `d ^ Vd
 Z eYV HVj\ Z X e _ eW h V eR Hemideina crassidens 1@c eY a eVR+
 2_ `d e `^ R eZURV Ž9 V eV U Z d" S+#%1&Ž

> `cR ICZYRUd > ŽE ch Z T D Ž Ž H R j\ Z 8 Ž Ž#! " ŽAYc `^ `d ^ V eR V d h eY
 A j Z T V `V `c Z Z d e V g Z U V T V W ^ `^ e 5? 2 Ž Ž V e V U Z j)' +S! S! S' #Ž

> `cR ICZYRUd > Ž H R j\ Z 8 Ž Ž#! S Ž 2 T ^ a R e Ž _ `W g V y j S c Z U k _ V d' W
 eY V h V eR Hemideina thoracica1@c eY a eVR+2_ `d e `^ R eZURV +5 V e W W
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 ` _ W e Z j Ž e Y V T ^ `^ ` _ d y c h 1 S r e x a r a n e u s `R U Y f d v `^ f d v i M u s
 musculus domesticus Ž > R `^ R j R ' (+S! ' IS! ' Ž