

# Data Sheet for Chautauqua Mesa, Plains (1,752m or 5,750ft)

Key for 2007 reflects the number of grasshoppers that could be placed within each sampling bin during each sampling period.

Bin number					1	2	3	4	5
Calendar date 2007	13-May	21-May	30-May	4-Jun	13-Jun	18-Jun	25-Jun	2-Jul	9-Jul
Ordinal date	135	141	150	155	164	169	176	183	190

**Species in study 2007**

<i>Aeropedullus clavatus</i>	<b>No adults found</b>	6	10	14	15	15	20	20	16	116
<i>Melanoplus confusus</i>				6	11	12	10	8	4	51
<i>Melanoplus sanguinipes</i>								8	15	23
<i>Melanoplus bivittatus</i>								12	20	32
<i>Melanoplus dawsoni</i>									20	20
<i>Hesperotettix viridis</i>								12	13	25

**Additional species not in the study**

1. <i>Arphia conspersa</i>				6	2				8
2. <i>Chortophaga viridifasciata</i>				6	6	4			16
3. <i>Pseudopomala brachyptera</i>					5	4			9
4. <i>Trachyrachus kiowa</i>						6			6

<i>Species in study</i>	Ordinal date to adulthood 2007	Ordinal date to adulthood 1959-1960	between surveys (current)
<i>Aeropedullus clavatus</i>	141	152	-11
<i>Melanoplus confusus</i>	155	155	0
<i>Melanoplus sanguinipes</i>	183	176	7
<i>Melanoplus bivittatus</i>	183	181	2
<i>Hesperotettix viridis</i>	183	186	-3
<i>Melanoplus dawsoni</i>	190	186	4

**NUMBERS IN GRAY DENOTE NUMBERS PROVIDED ON STUDENT DATA SHEETS. THESE DO NOT HAVE TO BE ADDED TO COLLECTING BINS!**

Average of the difference in days between surveys = -0.2  
 Number of species advancing (greater than 7 days) = 1 of 6 species

\* NOTE: In order to be of consequence, the difference between 1959-1960 & 2007 ordinal dates must be greater than seven because sampling was only done weekly.

## Data Sheet for A1, Foothills (2195m or 7201ft)

Key for 2007 reflects the number of grasshoppers that could be placed within each sampling bin during each sampling period.

Bin number			1	2	3	4	5		
Calendar date 2007	1-Jun	6-Jun	11-Jun	18-Jun	25-Jun	2-Jul	9-Jul	16-Jul	24-Jul
<b>Ordinal date</b>	<b>152</b>	<b>157</b>	<b>162</b>	<b>169</b>	<b>176</b>	<b>183</b>	<b>190</b>	<b>197</b>	<b>205</b>

### Species in study 2007

	2	3	8	10	20	15	10	8	
<i>Aeropedullus clavatus</i>									76
<i>Melanoplus confusus</i>									23
<i>Melanoplus dodgei</i>									77
<i>Melanoplus sanguinipes</i>									20
<i>Cratypedes neglectus</i>									37
<i>Camnula pellucida</i>									9
<i>Hesperotettix viridis</i>									25
<i>Melanoplus bivittatus</i>									8

### List additional species not in the study

<i>Xanthipus corallipes</i>					6				6
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	Ordinal date to adulthood 2007	Ordinal date of adulthood 1959-1960	Difference in days between 1960 and 2007 *
<i>Aeropedullus clavatus</i>	157	167	-10
<i>Melanoplus confusus</i>	176	167	9
<i>Melanoplus dodgei</i>	157	174	-17
<i>Melanoplus sanguinipes</i>	190	183	7
<i>Cratypedes neglectus</i>	169	195	-26
<i>Camnula pellucida</i>	205	195	10
<i>Hesperotettix viridis</i>	190	202	-12
<i>Melanoplus bivittatus</i>	205	202	3

**NUMBERS IN GRAY DENOTE NUMBERS PROVIDED ON STUDENT DATA SHEETS. THESE DO NOT HAVE TO BE ADDED TO COLLECTING BINS!**

Average of the difference in days between surveys=

-5.6

Number of species advancing (greater than 7 days) =

**4 of 8 species**

\* NOTE: In order to be of consequence, the difference between 1959-1960 & 2007 ordinal dates must be greater than seven because sampling was only done weekly.

## Data Sheet for B1, Montane (2591m or 8500ft)

Key for 2007 reflects the number of grasshoppers that could be placed within each sampling bin during each sampling period.

Bin number	1		2		3		4	
Calendar date 2007	2-Jun	8-Jun	15-Jun	22-Jun	29-Jun	7-Jul	13-Jul	
<b>Ordinal date</b>	<b>153</b>	<b>159</b>	<b>166</b>	<b>173</b>	<b>180</b>	<b>188</b>	<b>194</b>	

### Species in study 2007

Species	Bin 1	Bin 2	Bin 3	Bin 4	Total
<i>Aeropedellus clavatus</i>	9	20	11	19	90
<i>Melanoplus dodgei</i>	9	8	16	16	68
<i>Camnula pellucida</i>				6	24
<i>Circotettix rabula</i>				8	16
<i>Melanoplus dawsoni</i>				5	28
<i>Melanoplus packardii</i>			10	14	48
<i>Chloealtis abdominalis</i>				6	6

### List additional species not in the study

<i>Xanthipus corallipes</i>			8	8			16
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Species in study	Ordinal date to adulthood 2006	Ordinal date of adulthood 1959-1960	Difference between surveys (current survey-previous)
<i>Aeropedellus clavatus</i>	159	172	-13
<i>Melanoplus dodgei</i>	159	172	-13
<i>Camnula pellucida</i>	188	202	-14
<i>Circotettix rabula</i>	188	207	-19
<i>Melanoplus dawsoni</i>	188	215	-27
<i>Melanoplus packardii</i>	180	216	-36
<i>Chloealtis abdominalis</i>	194	216	-22

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Average of the difference in days between surveys =  $\frac{-20.6}{7}$   
 Number of species advancing (greater than 7 days) = 7 of 7 species

\* NOTE: In order to be of consequence, the difference between 1960 & 2007 ordinal dates must be greater than seven because sampling was only done weekly.

## Data Sheet for C1, Subalpine (3048m or 10,000ft)

**Key for 2006 reflects the number of grasshoppers that could be placed within each sampling bin during each sampling period.**

Bin number	1	2	3	4	5		
Calendar date 2006	14-Jun	21-Jun	29-Jun	6-Jul	12-Jul	19-Jul	26-Jul
<b>Ordinal date</b>	<b>165</b>	<b>172</b>	<b>180</b>	<b>187</b>	<b>193</b>	<b>200</b>	<b>207</b>

### Species in study 2006

<i>Melanoplus dodgei</i>	<b>10</b>	<b>15</b>	<b>13</b>	<b>14</b>	<b>12</b>	<b>4</b>	<b>68</b>
<i>Melanoplus fasciatus</i>			<b>4</b>	<b>10</b>	<b>6</b>	<b>6</b>	<b>26</b>
<i>Camnula pellucida</i>			<b>7</b>	<b>15</b>	<b>14</b>	<b>15</b>	<b>51</b>
<i>Chloea abdominalis</i>					<b>8</b>	<b>6</b>	<b>14</b>

### Additional species not in the study

1. <i>Circotettix rabula</i>		<b>3</b>		<b>2</b>	<b>3</b>		<b>8</b>
2. <i>Trachyrachus kiowa</i>				<b>2</b>	<b>1</b>		<b>3</b>
3. <i>Arphia conspersa</i>	<b>8</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>2</b>		<b>20</b>

Species in study	Ordinal date to adulthood 2006	Ordinal date to adulthood 1959-1960	Difference between surveys (current survey- previous)
<i>Melanoplus dodgei</i>	<b>172</b>	<b>182</b>	<b>-10</b>
<i>Melanoplus fasciatus</i>	<b>187</b>	<b>202</b>	<b>-15</b>
<i>Camnula pellucida</i>	<b>187</b>	<b>209</b>	<b>-22</b>
<i>Chloea abdominalis</i>	<b>200</b>	<b>216</b>	<b>-16</b>

**NUMBERS IN GRAY DENOTE NUMBERS PROVIDED ON STUDENT DATA SHEETS. THESE DO NOT HAVE TO BE ADDED TO COLLECTING BINS!**

Average of the difference in days between surveys = **-15.8**  
 Number of species advancing (greater than 7 days) = **4 of 4 species**

\* NOTE: In order to be of consequence, the difference between 1959-1960 & 2007 ordinal dates must be greater than seven because sampling was only done weekly.