ALLEGANY, NEW YORK
J.Karl Maize

The maximum height of the maize subspecies: data
--Karl, JR

This is to report a maize plant standing 34 feet from the ground (Figure 1), furthering the literature on the diversity of natural maize (compendium on the history of maximum height of the subspecies: Karl, JR, *Tallest Corn*, Independent Publisher, Allegany, NY, 2010). The 34-foot plant is a sib increase from accession 234 (Figure 9, 10) of Colonia (Jesus Sanchez, personal communication, courtesy Major Goodman), Alvarado, Chiapas, adjacent to the state of Huehuetenango, Guatemala. The author appropriated it in 2001 from CIMMYT after finding the work published by Stevenson in the 1972 edition of the *Crop Science* journal (p. 864). It seems that the collection was made in the initial sweep commencing in 1943 (e.g., GRIN has accession 241 as being collected in 1944). It was cultivated (about 212 days in a tall greenhouse [Figure 2, 3, 4]) by the author, in Allegany, New York, USA, in 2010. It is a mere Tehua plant (cf. monograph by Wellhausen, *Races of Maize in Mexico*, Bussey Institute of Harvard University, Cambridge, MA, 1952) that was grown out. The plant has no visible tassel, though indication of tasseling (irregular appearance of the upper plant, entailing the whorl irregularities of being tightly funneled, with upright leaves, irregular leaf spacing, creases, and forked tips, as well as nodal protrusion from leaf sheaths) has been evident since probably 28 feet. The newest leaf is at 33 feet, and the highest visible leaf collar at 31 feet; it is the 48th collar. There are 4 visible leaves above the 48th. As it is a short-internode strain, the longest internode is 11.5 inches Roots on (shorter) neighboring plants issue from nodes at 20 feet, at which height the 34th internode lies on short-internode strains and the 24th internode on long-internode strains (Figure 5, 6). When a short-internode strain and a long-internode strain (17.5" longest on plants: Chiapas 234 x Montana race accession 689 of Ecuador; F1 [Figure 7]) are at, e.g., 23-27 feet, both showing no signs of tasseling, the short-internode plant will have 13 more leaves (Figure 8). Figures 1, 5 supplied in print copy. Others available in online copy.

Thanks to Frank Kutka and Barb Every for editing counsel.

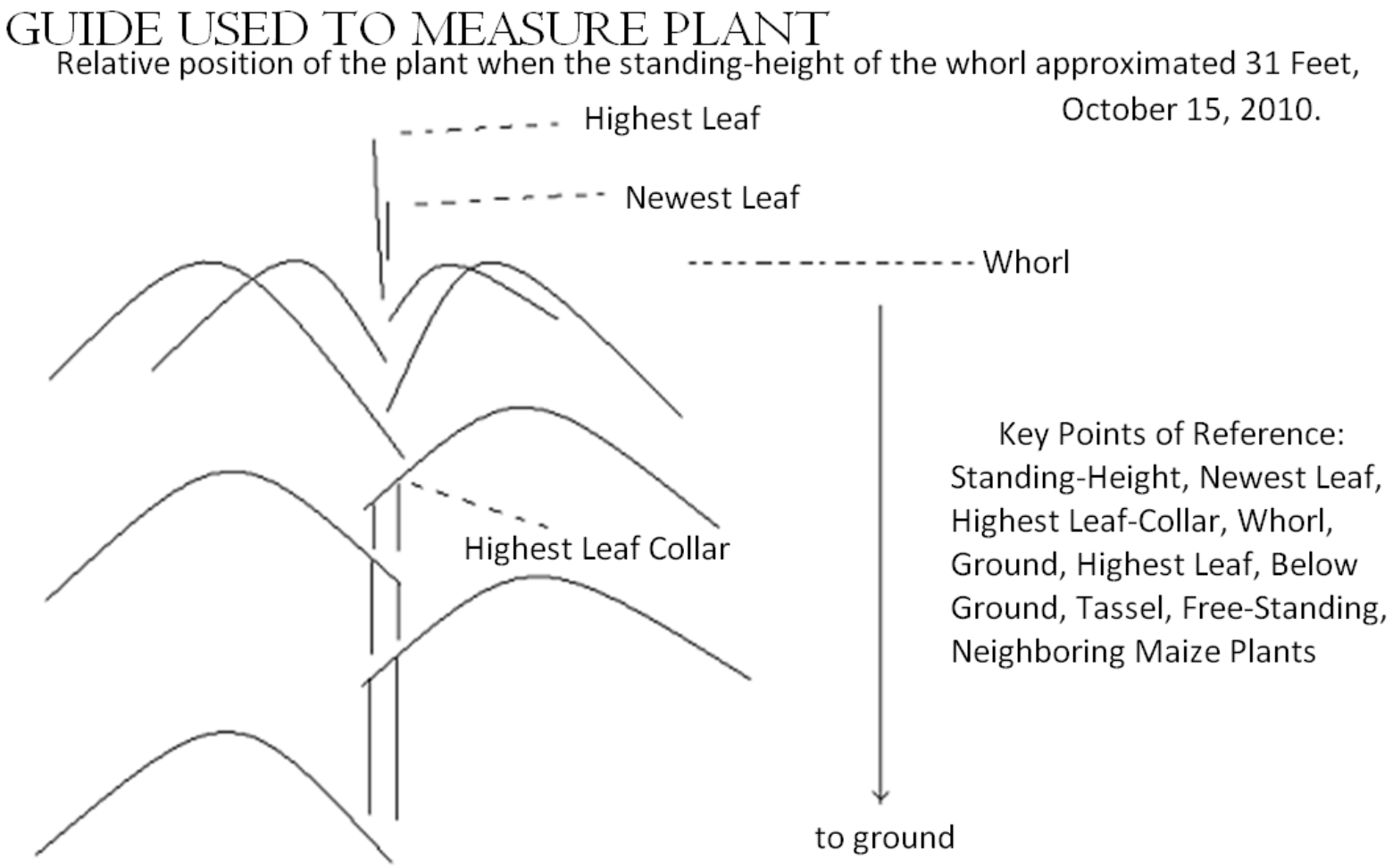

Figure 1. This is the author's figure.

Figure 2 is at the top of the article.

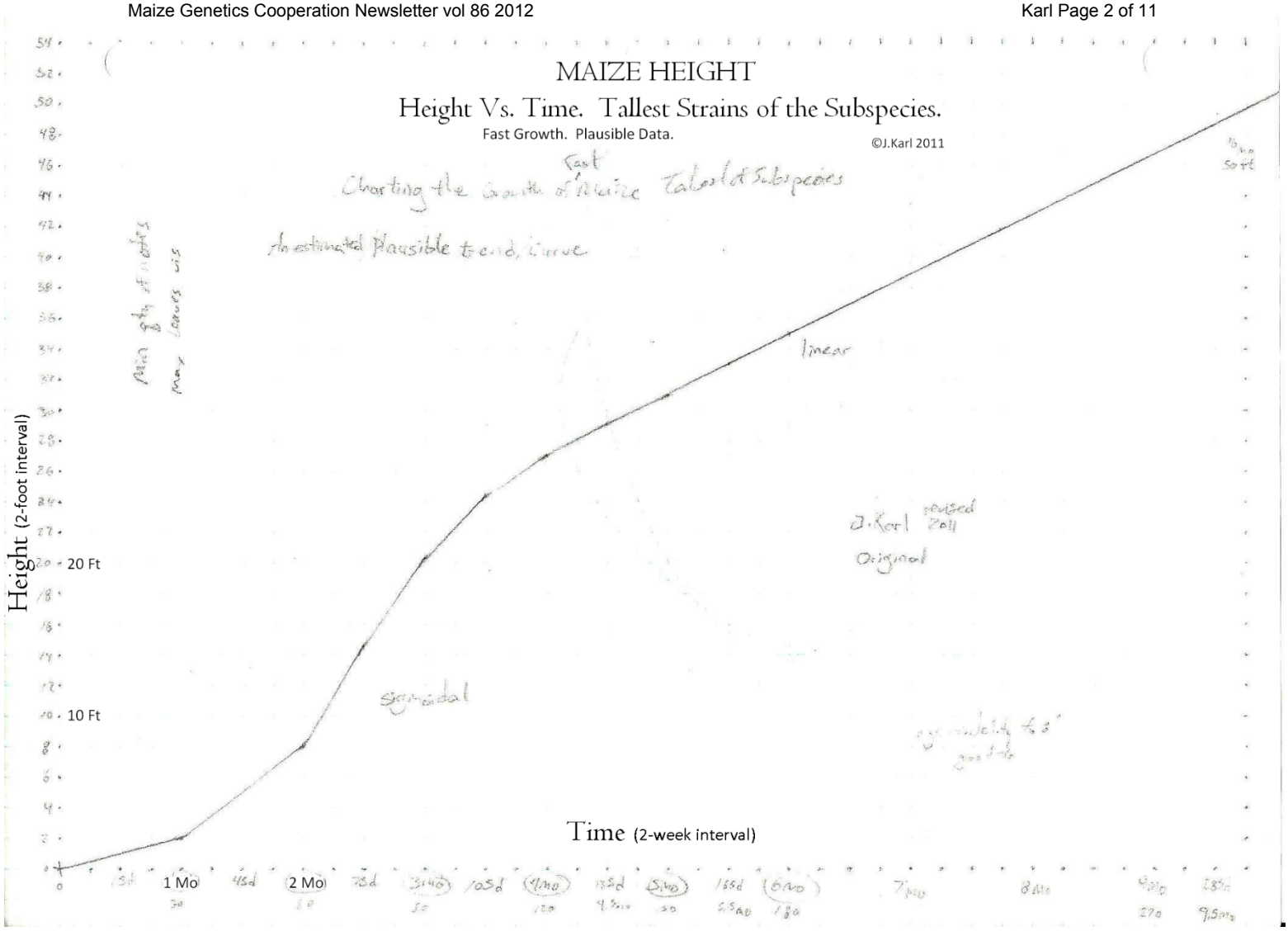

Figure 3. This is the author's graph.

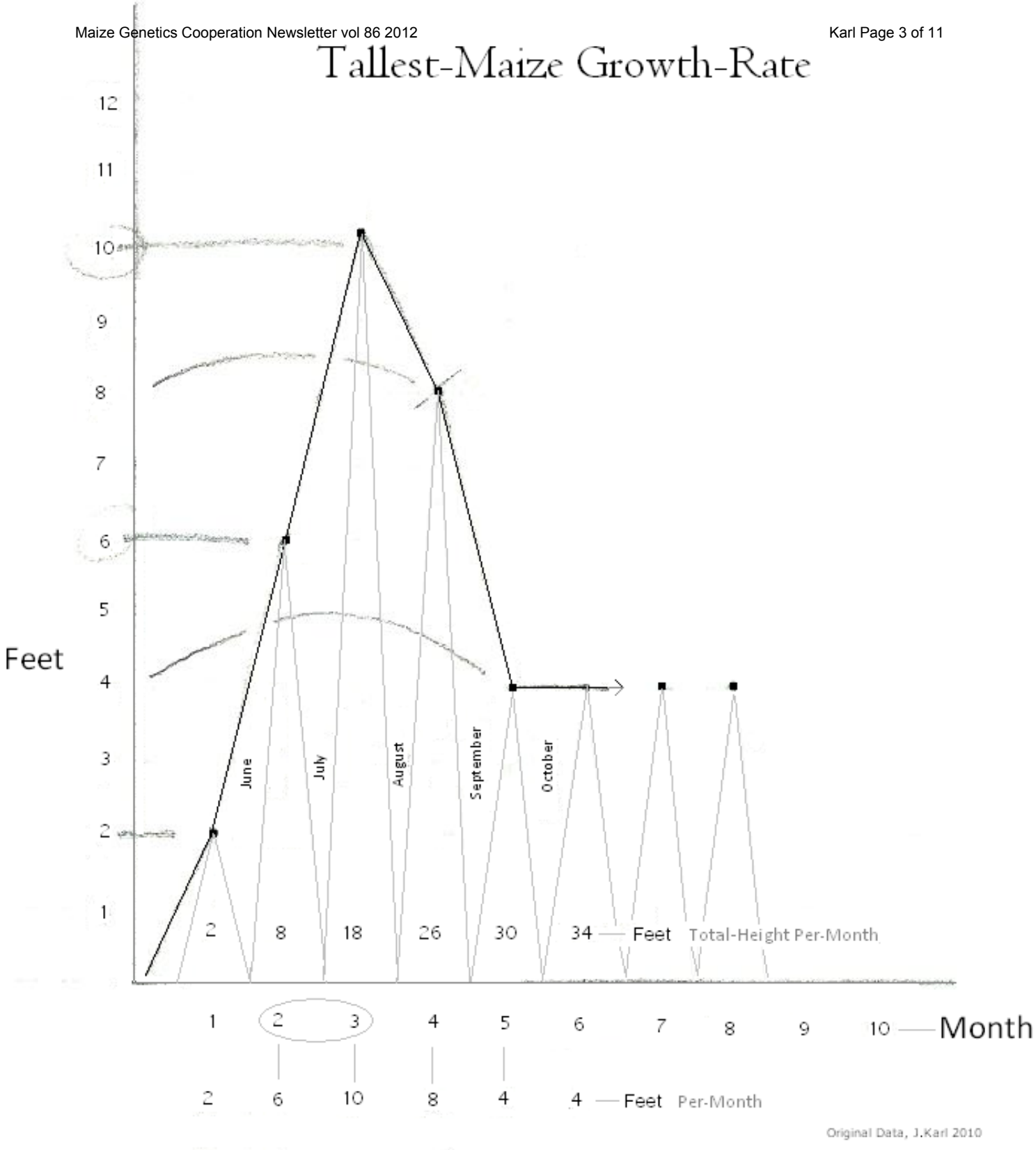

Figure 4. This is the author's graph.

Internode-Length Profile (Inches)
Two Plants from Each Extreme

Internode #	Short-Internode Plant A	Long-Internode Plant A	Short-Internode Plant B	Long-Internode Plant B
5	1	1.5	.5	1
6	1.3	2.7	1	4
7	1.7	5	1.2	5.7
8	2.3	7.5	1.7	8.5
9	3.2	10.3	5.2	10.7
10	4.5	13.5	4.6	13
11	5	15	5.6	14
12	6	15.5	6	10.7
13	7.7	14	8	11.2
14	9	15.5	7.5	14
15	10	15	10.5	14.5
16	10.3	12.5	11.5	15.5
17	8.5	11.5	8.5	15.5
18	7.5	13	7.2	15
19	7	17.5	8.5	15
20	7.5	15.5	10.7	16
21	8.5	14.5	12.3	13.2
22	9.5	16.5	11.5	12
23	9.5	13.5	13.5	13.5
24	10.2	14.5	13.5	12.7
25	10.5	13.2	13.5	10
26	11	11.5	10.3	8.5
27	10.5	9.7	10.7	8.5
28	11	7.7	13	
29	11		11.6	
30	11.7		11.5	
31	11.2		11.5	
32	11		10.7	
33	11		11	
34	10.5		11	
35	10.5		10	
36	9.5		9.6	
37	8			
38	7.5			

Original Data, J.Karl 2010

Figure 5. This is the author's table.

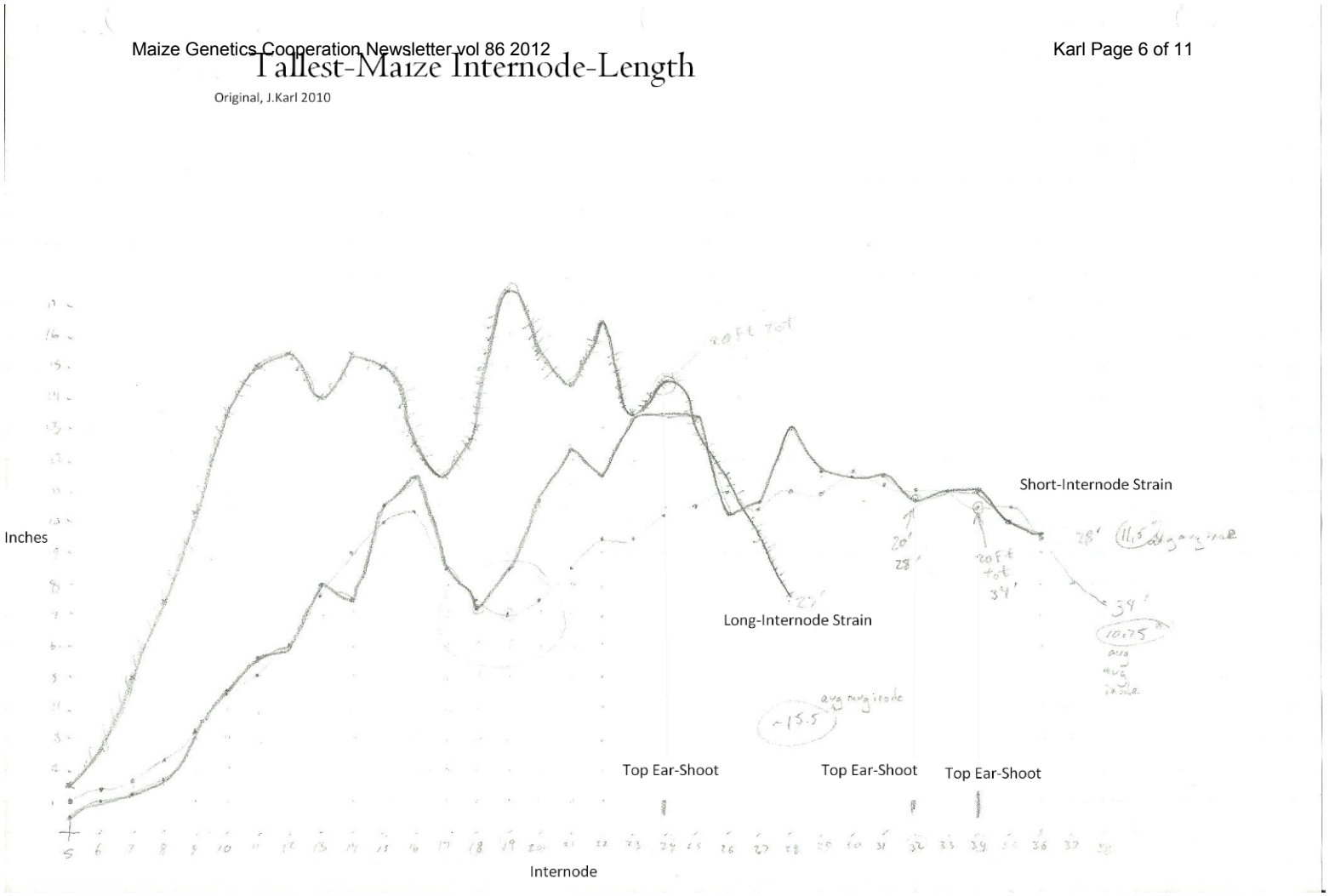

Figure 6. This is the author's graph.

Figure 7. This is the author's photo. Internode at 15-foot height.

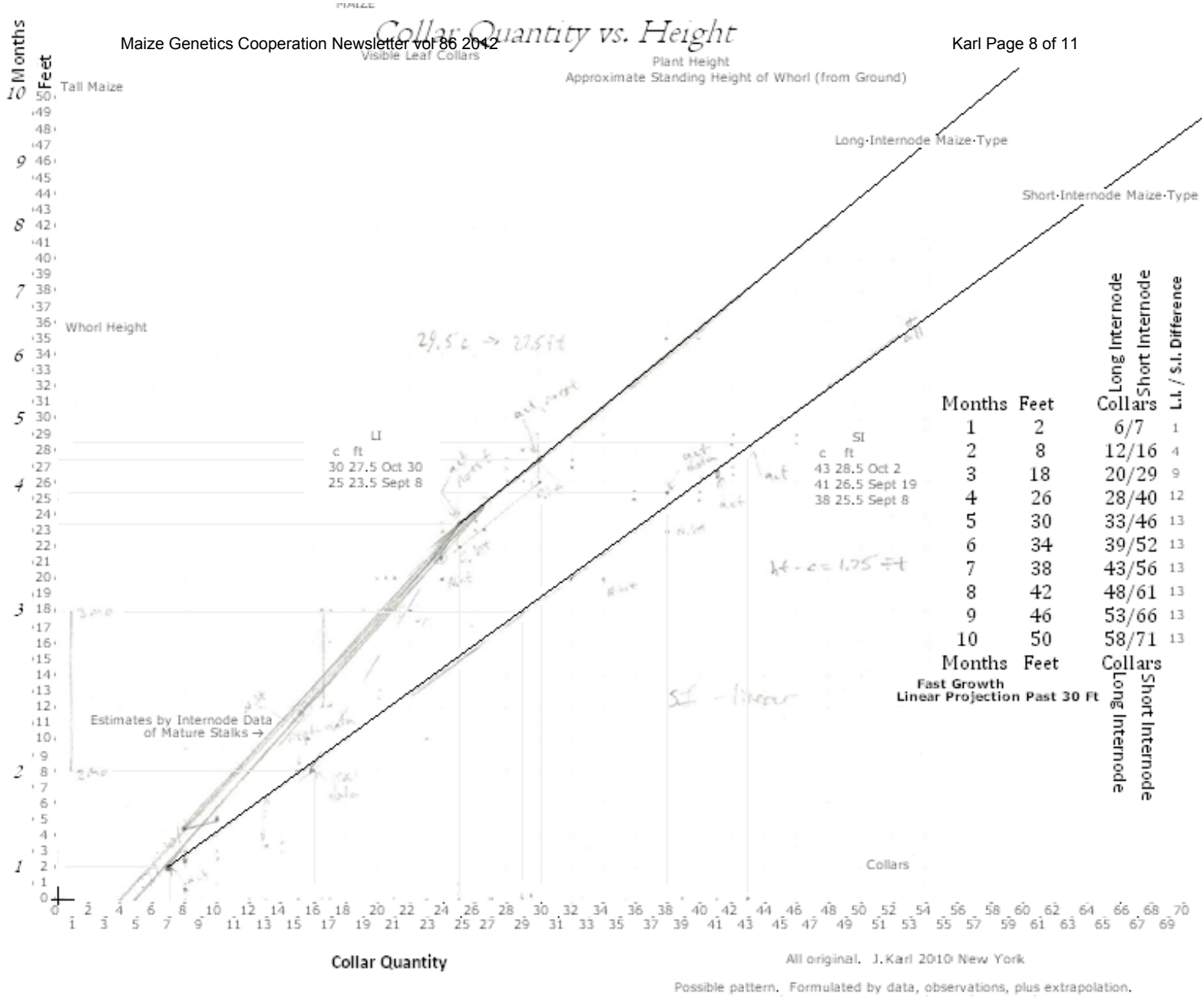

Figure 8. This is the author's graph.

The two photos below are the author's:

Figure 9. Chiapas 234; fresh and mature cob on plant.

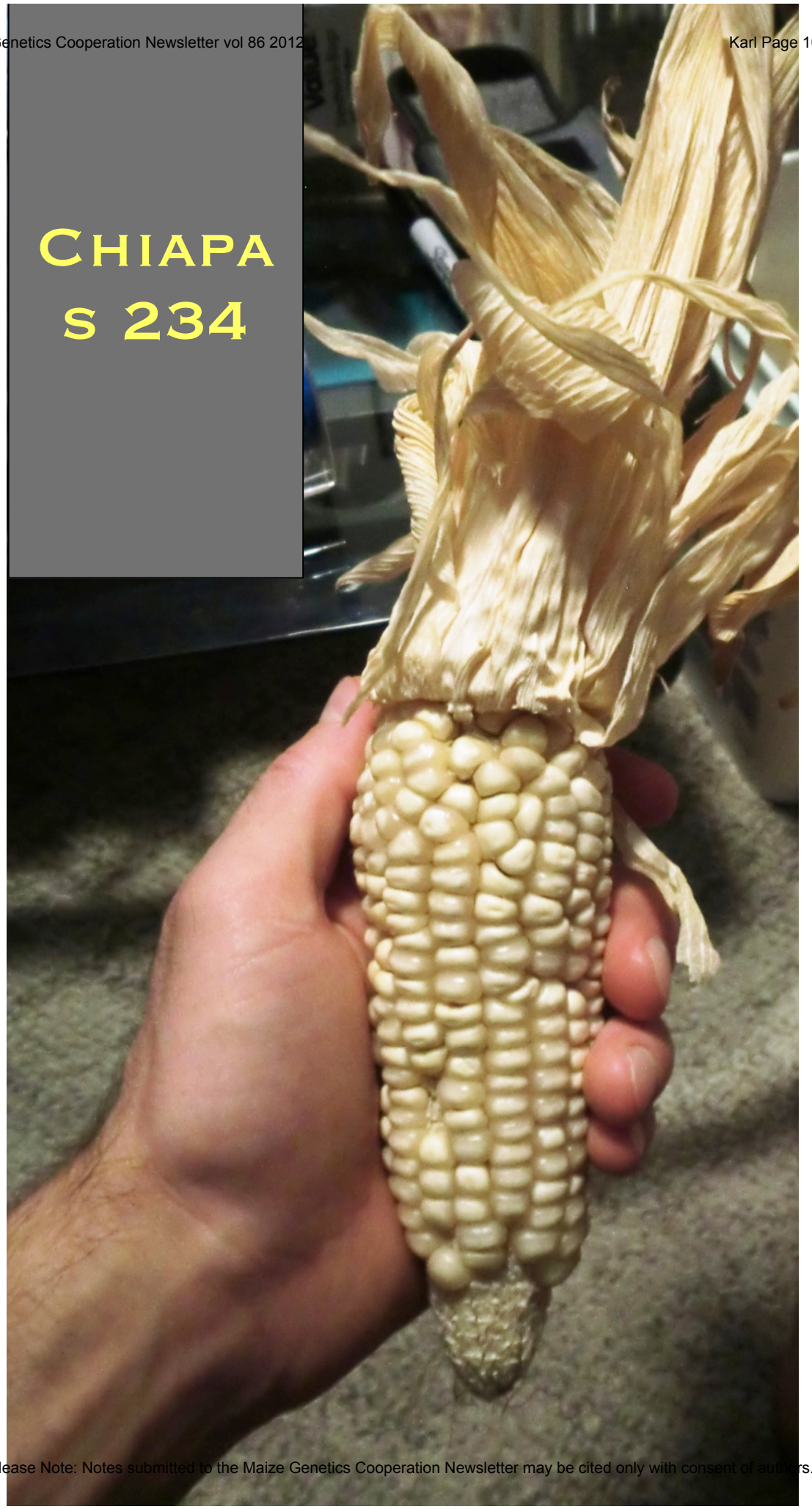

Figure 10. Scale of Chiapas 234 cob.