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# Full Length Research Paper

# Traditional knowledge of edible plants among the Temuan villagers in Kampung Guntor, Negeri Sembilan, Malaysia

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A total of 62 species of edible plants were reported to be used by the villagers in Kampung Guntor. The edible parts were obtained from 17 species of wild plants, 23 species of cultivated plants and 22 species of plants that exist as both wild and planted. More species (26) were eaten cooked compared to the raw species (17). Fruits and seeds were the most common parts used with a total of 38 species followed by the leafy parts with 15 species. It is important not only to record such traditional knowledge and conduct further studies but also to take steps to conserve the genetic diversity of edible plants before they are lost to humankind forever. The knowledge, as well as usage, of certain edible plants is on the decrease due to various factors such as changes in culture, personal preferences, the tedious process of preparing certain food items, and the changes in habitat, thereby causing certain edible plants to be unavailable or less available.

Key words: Temuan, traditional knowledge, edible plants.

### INTRODUCTION

The indigenous people (Orang Asli) of Peninsular Malaysia are grouped into 3 different ethnic groups which are; the Negritos (Semang), the Senoi and the Proto-Malays. The Temuan tribe is in the Proto-Malay ethnic group. The Temuans are a comparatively large tribe and well-known for their knowledge and usage of a wide variety of edible plants but much of this knowledge are yet to be recorded and published by the scientific community (Carey, 1976; Ong, 1994; Ong et al., 2010). The Temuans are agriculturists as well as hunters and gatherers. Thus, they make use of the biological diversity available to them for fulfilling various needs (Carey, 1976; Ong, 1991). Plants are their major source of food but they also hunt and catch various animals such as fishes, birds, amphibians, reptiles and mammals for food.

As modernization creeps or rushes towards the doorsteps of the indigenous tribes, biodiversity of traditional species within their range decreases leading towards a decrease in traditional knowledge and usage of

Malaysia. The latitude was 2<sup>0</sup> 52' N while the longitude was 102<sup>0</sup> 10' E. The altitude was about 100 m above sea level. The temperatures ranged from 21.8 to 32.2°C. Average annual rainfall was about 1500 mm and relative humidity ranged from 79 to 98.5%. This is a traditional native village with houses built in clearings, surrounded by vegetation and with a stream nearby. There were 40 households with a total of approximately 350 persons living in an area of about 0.8 km sq. Most of the houses were built in the native style using materials obtained from the surrounding forests. A few houses were more modern, being built using sawn planks, sawn wood, bricks and mortar. A total of 5 trips were made to the village,

each time staying for 4 days. Information was obtained through

general conversation, observation and participation with the adult

villagers guided by a predetermined set of questions during each

biodiversity and eventually such knowledge and usage become adulterated or lost to humanity. Since indigenous knowledge is unwritten and much of it remains unrecorded, it is imperative that the scientific community records and publishes this knowledge (Schultes and von Reis, 1995).

This study was conducted in a Temuan village named Kampung

(Malay word for village) Guntor, in the state of Negeri Sembilan,

# **MATERIALS AND METHODS**

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**Table 1.** List of edible plants used by Temuan villagers in Kampung Guntor.

1 Acrypteris irregularis (Prest.) Holtt. Paku papan Wild Soft young leaves eaten cooked. Tuber is afamine food eaten after proper processing famine food eaten after proper processing famile food eaten after proper processing famine food eaten after proper processing famine food eaten after proper processing famine food eaten after proper processing famile food after proper fruits eaten raw. Unripe fruits eaten cooked. Pleanted, wild Shoot eaten cooked. Pleanted, wild Shoot eaten cooked fruits eaten raw. Seeds eaten cooked Pleanted, wild Shoot eaten cooked Pleanted, wild Shoot eaten cooked Pleanted, wild Pleanted Shoot eaten cooked Pleanted, wild Pleanted Shoot eaten cooked Pleanted, wild Pleanted Shoot eaten cooked Pleanted Shoot eate	S/N	Botanical name	Native name	Status	Method of usage
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Aranas comosus (L.) Merr.  Nenas  Planted  Ripe fruits eaten raw. Unripe fruits eaten cooked.  Areca catechu L.  Areaga westerhoutii Griff.  Artabotrys suaveolens (B.I.) Bl.  Akar cinchon  Wild  Drinkable water from cut stem  Artocarpus heterophyllus Lamik.  Nangka  Planted  Planted  Planted  Planted, wild  Bambusa tuldoides Munro.  Buluh gabai  Bambusa tuldoides Munro.  Buluh gabai  Planted, wild  Calamus manan Miq.  Calamus manan Miq.  Rota manan  Planted, wild  Carica papaya L.  Caryota mitis Lour.  Cayrota papaya L.  Cocos nucilera L.  Kelapo  Planted, wild  Young leaves eaten cooked  Limau nipis  Planted, wild  Young leaves eaten cooked  Cocos nucilera L.  Kelapo  Planted, wild  Young leaves eaten cooked  Lad, petiole and rhizome eaten cooked  Young leaves eaten rooked  Ripe fruits eaten raw. Seeds eaten on five five to five froid trust eaten raw or cooked  Nid Young leaves eaten cooked  Nid, planted  Ripe fruits eaten raw.  Lad api  Planted, wild  Planted, wild  Ripe fruits eaten raw.  Lad api  Planted, wild  Young leaves eaten cooked  Nid Jenned  Ripe fruits eaten raw.	2	Alocasia macrorhiza Schott.	Keladi tualang	Wild, planted	·
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Artocarpus heterophyllus Lamk.  Nangka Planted Planted, wild Planted Plant	6	Arenga westerhoutii Griff.	Langkap	Wild	Shoot eaten cooked
Artocarpus integer (Thunb.) Merr.  Cempedak Planted Flesh of ripe fruits eaten cooked. Flesh of ripe fruits eaten raw. Seeds or unripe fruits eaten cooked.  Bambusa tuldoides Munro. Buluh gabai Bouea macrophylla Griff. Buah becen Planted, wild Calamus manan Miq. Rotan manan Planted, wild Ripe fruit eaten raw. Flesh of ripe fruits eaten raw. Flesh o	7	Artabotrys suaveolens (Bl.) Bl.	Akar cinchon	Wild	Drinkable water from cut stem
fruits eaten cooked.    Planted	8	Artocarpus heterophyllus Lamk.	Nangka	Planted	
11 Bouea macrophylla Griff. 12 Calamus manan Miq. 13 Capsicum frutescens L. 14 Carica papaya L. 15 Caryota mitis Lour. 16 Cassia tora L. 17 Cayatia japonica 18 Champereia manillana (BI.) Merr. 19 Citrus aurantifolia (Christm and Panted) 19 Planted, wild Shoot eaten cooked 19 Cocos nucifera L. 10 Codaeium variegatum L. 11 Colocasia esculenta (L.) Schott 12 Colocasia esculenta (L.) Schott 13 Cosmos bipinnatus Cav. 14 Cosmos caudatus Kunth. 15 Courcum a longa L. 16 Courcuma longa L. 17 Couran initis Lour. 18 Champereia manillana (BI.) Merr. 19 Citrus aurantifolia (Christm and Panzer) Swing. 20 Cocos nucifera L. 21 Codaeium variegatum L. 22 Colocasia esculenta (L.) Schott 23 Cosmos bipinnatus Cav. 24 Cosmos caudatus Kunth. 25 Cucumis sativus L 26 Curcuma longa L. 27 Durio zibethinus Murray 28 Etlingera elatior (Jack) Smith Kantan Planted, wild Planted 29 Garcinia mangostana L. 30 Kantan Planted 31 Gigantochloa keterostachya Munro 32 Gigantochloa keterostachya Munro 34 Ipomoea aquatica Forskal 36 Kangkong 37 Planted, wild Planted Shoot eaten cooked 38 Planted Riparente eaten cooked 39 Planted Planted Riper fruits eaten raw 39 Planted Planted Riper or green fruits eaten raw 30 Ripe fruits eaten raw 31 Figantochloa heterostachya Munro 32 Gigantochloa keterostachya Munro 34 Ipomoea aquatica Forskal 36 Fermented seed, young leaves eaten cooked 39 Planted Wild, planted Shoot eaten cooked 30 Fermented seed, young leaves eaten cooked 30 Fermented seed, young leaves eaten cooked 30 Fermented seed, young leaves eaten cooked 31 Figantochola heterostachya Munro 32 Gigantochola heterostachya Munro 34 Ipomoea aquatica Forskal 36 Kangkong 37 Planted 38 Hevea brasiliensis Muell. Arg. 39 Pokok getah Planted, wild Planted Leaf and stem eaten cooked	9	Artocarpus integer (Thunb.) Merr.	Cempedak	Planted	
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13 Capsicum frutescens L.  Lada api Planted, wild Green or ripe fruits used to flavor food.  Ripe fruits eaten raw. Green fruits eaten cooked.  Shoot eaten cooked.  Young leaves eaten cooked.  Planted, wild Young leaf eaten cooked.  Planted, wild Young leaves eaten cooked.  Planted, wild Young leaves eaten cooked.  Planted Juice used to flavor food.  Planted, wild Young leaves eaten cooked.  Planted, wild Young leaves eaten cooked.  Planted Juice used to flavor food.  Planted, wild Young leaves eaten cooked.  Planted Young leaves eaten cooked.  Planted Wild, planted Young leaves eaten cooked.  Planted Young leaves eaten cooked.  Planted Young leaves eaten cooked.  Planted, wild Young leaves eaten cooked.  Cosmos bipinnatus Cav. Bunga cetung Planted, wild Young leaves eaten raw or cooked.  Cosmos caudatus Kunth. Ulam raja Planted, wild Young leaves eaten raw or cooked.  Curcuma longa L. Kunyit Planted Ripe or green fruits eaten raw or cooked.  Etlingera elatior (Jack) Smith Kantan Planted Ripe fruits eaten raw.  Etlingera elatior (Jack) Smith Kantan Planted Ripe fruit eaten raw.  Etlingera elatior (Jack) Smith Kantan Planted Ripe fruit eaten raw.  Etlingera elatior (Jack) Smith Kantan Planted Ripe fruit eaten raw.  Buluh telur Wild, planted Shoot eaten cooked.  Hevea brasiliensis Muell. Arg. Pokok getah Planted, wild Fermented seed, young leaves eaten cooked.  Hevea brasiliensis Muell. Arg. Pokok getah Planted, wild Fermented seed, young leaves eaten cooked.	11	Bouea macrophylla Griff.	Buah becen	Planted, wild	Ripe fruit eaten raw
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lima  Cayratia japonica  lima  Champereia manillana (BI.) Merr.  Citrus aurantifolia (Christm and Panzer) Swing.  Cocos nucifera L.  Cotaeium variegatum L.  Puding  Planted, wild  Planted, wild young leaves eaten cooked  Young coconut water as a drink. Coconut milk and oil used to cook food.  Young leaf used to flavor food  Cocos nucifera L.  Puding  Planted, wild  Young leaf used to flavor food  Planted, wild Young leaves eaten cooked.  Young leaf used to flavor food  Young leaf used to flavor food  Planted, wild Young leaves eaten cooked.  Planted, wild Young leaves eaten cooked  Planted, wild Young leaves eaten raw or cooked  Ripe or green fruits eaten raw or cooked  Ripe fruits eaten raw or cooked  Ripe fruits eaten raw  Planted, wild Ripe fruits eaten raw  Planted Ripe fruit used to flavor food  Ripe fruit eaten raw  Planted Ripe fruit eaten raw	16	Cassia tora L.	Pucuk senting	Wild	Young leaves eaten cooked
Citrus aurantifolia (Christm and Panzer) Swing.  Limau nipis  Planted  Juice used to flavor food  Young coconut water as a drink. Coconut milk and oil used to cook food.  Young leaf used to flavor food  Codaeium variegatum L.  Puding  Planted  Young leaf used to flavor food  Voung leaf used to flavor food  Leaf, petiole and rhizome eaten cooked.  Young leaves eaten cooked.  Young leaves eaten rooked.  Young leaves eaten rooked.  Planted, wild young leaves eaten raw or cooked  Cosmos caudatus Kunth.  Ulam raja  Planted, wild Young leaves eaten raw or cooked  Elucumis sativus L  Timun  Planted  Ripe or green fruits eaten raw or cooked  Ripe fruits eaten raw  Planted, wild Ripe fruits eaten raw  Planted, wild Ripe fruits eaten raw  Ellingera elatior (Jack) Smith  Kantan  Planted  Flower used to flavor food  Garcinia globulosa Ridl.  Kandis  Wild, planted  Young leaf and fruit used to flavor food  Young leaf and fruit used to flavor food  Wild, planted  Young leaf and fruit used to flavor food  Young leaf and fruit used to flavor food  Wild, planted  Nongis Planted  Ripe fruits eaten raw  Shoot eaten cooked  Hevea brasiliensis Muell. Arg.  Pokok getah  Planted, wild  Planted, wild  Permented seed, young leaves eaten cooked  Wild, planted  Wild, planted  Permented seed, young leaves eaten cooked  Wild, planted  Permented seed, young leaves eaten cooked	17	Cayratia japonica	0	Planted, wild	Young leaf eaten cooked
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Colocasia esculenta (L.) Schott Keladi minyak Wild, planted Young leaf used to cook food.  Colocasia esculenta (L.) Schott Keladi minyak Wild, planted Leaf, petiole and rhizome eaten cooked.  Cosmos bipinnatus Cav. Bunga cetung Planted, wild Young leaves eaten cooked  Cosmos caudatus Kunth. Ulam raja Planted, wild Young leaves eaten raw or cooked  Cucumis sativus L Timun Planted Ripe or green fruits eaten raw or cooked  Curcuma longa L. Kunyit Planted Rhizome used to flovor and color food.  Durio zibethinus Murray Durian Planted, wild Ripe fruits eaten raw  Etlingera elatior (Jack) Smith Kantan Planted Flower used to flavor food  Garcinia globulosa Ridl. Kandis Wild, planted Young leaf and fruit used to flavor food  Garcinia mangostana L. Manggis Planted Ripe fruit eaten raw  Gigantochloa heterostachya Munro Buluh telang Wild, planted Shoot eaten cooked  Hevea brasiliensis Muell. Arg. Pokok getah Planted, wild Fermented seed, young leaves eaten cooked  Kangkong Wild, planted Leaf and stem eaten cooked	19	•	Limau nipis	Planted	Juice used to flavor food
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23 Cosmos bipinnatus Cav.  24 Cosmos caudatus Kunth.  25 Cucumis sativus L  26 Curcuma longa L.  27 Durio zibethinus Murray  28 Etlingera elatior (Jack) Smith  29 Garcinia globulosa Ridl.  30 Garcinia mangostana L.  31 Gigantochloa heterostachya Munro  32 Gigantochloa kurzii Gamble  33 Hevea brasiliensis Muell. Arg.  34 Ipomoea aquatica Forskal  Bunga cetung  Planted, wild  Planted  Planted  Plower used to flavor food  Flower used to flavor food  Young leaf and fruit used to flavor food  Ripe fruit eaten raw  Shoot eaten cooked  Planted  Shoot eaten cooked  Planted, wild  Planted	21	Codaeium variegatum L.	Puding	Planted	Young leaf used to flavor food
24Cosmos caudatus Kunth.Ulam rajaPlanted, wildYoung leaves eaten raw or cooked25Cucumis sativus LTimunPlantedRipe or green fruits eaten raw or cooked26Curcuma longa L.KunyitPlantedRhizome used to flovor and color food.27Durio zibethinus MurrayDurianPlanted, wildRipe fruits eaten raw28Etlingera elatior (Jack) SmithKantanPlantedFlower used to flavor food29Garcinia globulosa Ridl.KandisWild, plantedYoung leaf and fruit used to flavor food30Garcinia mangostana L.ManggisPlantedRipe fruit eaten raw31Gigantochloa heterostachya MunroBuluh telangWild, plantedShoot eaten cooked32Gigantochloa kurzii GambleBuluh telurWild, plantedShoot eaten cooked33Hevea brasiliensis Muell. Arg.Pokok getahPlanted, wildFermented seed, young leaves eaten cooked34Ipomoea aquatica ForskalKangkongWild, plantedLeaf and stem eaten cooked	22	Colocasia esculenta (L.) Schott	Keladi minyak	Wild, planted	Leaf, petiole and rhizome eaten cooked.
<ul> <li>Cucumis sativus L</li> <li>Curcuma longa L.</li> <li>Durio zibethinus Murray</li> <li>Etlingera elatior (Jack) Smith</li> <li>Garcinia globulosa Ridl.</li> <li>Manggis</li> <li>Gigantochloa heterostachya Munro</li> <li>Gigantochloa kurzii Gamble</li> <li>Hevea brasiliensis Muell. Arg.</li> <li>Ipomoea aquatica Forskal</li> <li>Kunyit</li> <li>Planted</li> <li>Planted</li> <li>Planted</li> <li>Plower used to flavor food</li> <li>Young leaf and fruit used to flavor food</li> <li>Ripe fruit eaten raw</li> <li>Wild, planted</li> <li>Shoot eaten cooked</li> <li>Shoot eaten cooked</li> <li>Fermented seed, young leaves eaten cooked</li> <li>Fermented seed, young leaves eaten cooked</li> <li>Wild, planted</li> <li>Fermented seed, young leaves eaten cooked</li> <li>Wild, planted</li> <li>Leaf and stem eaten cooked</li> </ul>	23	Cosmos bipinnatus Cav.	Bunga cetung	Planted, wild	Young leaves eaten cooked
Curcuma longa L. Durio zibethinus Murray  Etlingera elatior (Jack) Smith Garcinia globulosa Ridl.  Kandis Gigantochloa heterostachya Munro Gigantochloa kurzii Gamble  Kunyit Planted Planted Planted Rhizome used to flovor and color food. Ripe fruits eaten raw  Planted Flower used to flavor food Young leaf and fruit used to flavor food Ripe fruit eaten raw  Wild, planted Ripe fruit eaten raw  Wild, planted Shoot eaten cooked  Shoot eaten cooked  Hevea brasiliensis Muell. Arg. Pokok getah Ipomoea aquatica Forskal  Planted Rhizome used to flovor and color food. Ripe fruits eaten raw  Wild, planted Forskal  Fermented seed, young leaves eaten cooked  Fermented seed, young leaves eaten cooked  Wild, planted Leaf and stem eaten cooked	24	Cosmos caudatus Kunth.	Ulam raja	Planted, wild	Young leaves eaten raw or cooked
Durian Planted, wild Ripe fruits eaten raw  Etlingera elatior (Jack) Smith Kantan Planted Flower used to flavor food Garcinia globulosa Ridl. Kandis Wild, planted Young leaf and fruit used to flavor food Manggis Planted Ripe fruit eaten raw Gigantochloa heterostachya Munro Buluh telang Wild, planted Shoot eaten cooked Gigantochloa kurzii Gamble Buluh telur Wild, planted Shoot eaten cooked  Hevea brasiliensis Muell. Arg. Pokok getah Planted, wild Fermented seed, young leaves eaten cooked  Hevea brasiliensis Muell. Arg. Pokok getah Planted, wild Fermented seed, young leaves eaten cooked  Kangkong Wild, planted Leaf and stem eaten cooked	25	Cucumis sativus L	Timun	Planted	Ripe or green fruits eaten raw or cooked
28 Etlingera elatior (Jack) Smith Kantan Planted Flower used to flavor food 29 Garcinia globulosa Ridl. Kandis Wild, planted Young leaf and fruit used to flavor food 30 Garcinia mangostana L. Manggis Planted Ripe fruit eaten raw 31 Gigantochloa heterostachya Munro Buluh telang Wild, planted Shoot eaten cooked 32 Gigantochloa kurzii Gamble Buluh telur Wild, planted Shoot eaten cooked 33 Hevea brasiliensis Muell. Arg. Pokok getah Planted, wild Fermented seed, young leaves eaten cooked 34 Ipomoea aquatica Forskal Kangkong Wild, planted Leaf and stem eaten cooked	26	Curcuma longa L.	Kunyit	Planted	Rhizome used to flovor and color food.
29 Garcinia globulosa Ridl. Kandis Wild, planted Young leaf and fruit used to flavor food 30 Garcinia mangostana L. Manggis Planted Ripe fruit eaten raw 31 Gigantochloa heterostachya Munro Buluh telang Wild, planted Shoot eaten cooked 32 Gigantochloa kurzii Gamble Buluh telur Wild, planted Shoot eaten cooked 33 Hevea brasiliensis Muell. Arg. Pokok getah Planted, wild Fermented seed, young leaves eaten cooked 34 Ipomoea aquatica Forskal Kangkong Wild, planted Leaf and stem eaten cooked	27	Durio zibethinus Murray	Durian	Planted, wild	Ripe fruits eaten raw
30 Garcinia mangostana L. Manggis Planted Ripe fruit eaten raw 31 Gigantochloa heterostachya Munro Buluh telang Wild, planted Shoot eaten cooked 32 Gigantochloa kurzii Gamble Buluh telur Wild, planted Shoot eaten cooked 33 Hevea brasiliensis Muell. Arg. Pokok getah Planted, wild Fermented seed, young leaves eaten cooked 34 Ipomoea aquatica Forskal Kangkong Wild, planted Leaf and stem eaten cooked	28	Etlingera elatior (Jack) Smith	Kantan	Planted	Flower used to flavor food
31 Gigantochloa heterostachya Munro 32 Gigantochloa kurzii Gamble 33 Hevea brasiliensis Muell. Arg. 34 Ipomoea aquatica Forskal  Buluh telang Buluh telang Buluh telang Wild, planted Wild, planted Shoot eaten cooked Shoot eaten cooked Fermented seed, young leaves eaten cooked Wild, planted Leaf and stem eaten cooked	29	Garcinia globulosa Ridl.	Kandis	Wild, planted	Young leaf and fruit used to flavor food
32 Gigantochloa kurzii Gamble Buluh telur Wild, planted Shoot eaten cooked 33 Hevea brasiliensis Muell. Arg. Pokok getah Planted, wild Fermented seed, young leaves eaten cooked 34 Ipomoea aquatica Forskal Kangkong Wild, planted Leaf and stem eaten cooked	30	Garcinia mangostana L.	Manggis	Planted	Ripe fruit eaten raw
32 Gigantochloa kurzii Gamble Buluh telur Wild, planted Shoot eaten cooked 33 Hevea brasiliensis Muell. Arg. Pokok getah Planted, wild Fermented seed, young leaves eaten cooked 34 Ipomoea aquatica Forskal Kangkong Wild, planted Leaf and stem eaten cooked	31	Gigantochloa heterostachya Munro	Buluh telang	Wild, planted	Shoot eaten cooked
34 Ipomoea aquatica Forskal Kangkong Wild, planted Leaf and stem eaten cooked	32		Buluh telur	Wild, planted	Shoot eaten cooked
34 Ipomoea aquatica Forskal Kangkong Wild, planted Leaf and stem eaten cooked	33	Hevea brasiliensis Muell. Ara.	Pokok getah	Planted wild	Fermented seed, young leaves eaten cooked
		_	=		
	35	Ipomoea batatas (L.) Lamk.	Keledek	Planted	Tuber and leaves eaten cooked

Table 1. Contd.

36	Knema laurina Warb.	Batang berdarah	Wild	Ripe fruits eaten raw or cooked
37	Lansium domesticum Correa	Langsat	Planted	Ripe fruit eaten raw
38	Limnocharis flava (L.) Buch.	Ginjer	Wild	Leaf, flower and their stalks eaten cooked
39	Mangifera odorata Griff.	Kuini	Planted	Ripe fruit eaten raw
40	Manihot esculenta Crantz.	Galo telur	Planted	Young leaf and tuber eaten cooked
41	Momordica cochinchinensis (Lour.) Spreng	Peria	Planted	Green fruits eaten raw
42	Muntingia calabura L.	Ceri	Wild, planted	Ripe fruits eaten raw
43	Musa acuminata Colla	Pisang	Planted	Ripe fruit eaten raw. Inflorescence and shoot eaten cooked
44	Musa violacea Hort. ex Baker	Pisang cadak	Wild	Ripe fruit eaten raw. Green fruit, inflorescence, shoot eaten cooked
45	Nephelium lappaceum L.	Rambutan	Planted	Ripe fruit eaten raw.
46	Nephelium ramboutan-ake (Labill.) Leenh.	Pulasan	Planted	Ripe fruit eaten raw.
47	Nicotiana tabaccum L.	Tembakau	Planted	Dried leaf chewed with betel quid
48	Pandanus atrocarpus Griff.	Mengkuang	Wild	Young leaf used to flavor food
49	Parkia speciosa Hassk.	Petai	Wild, planted	Mature fruit eaten raw or cooked
50	Passiflora foetida L.	Lelekah	Wild	Young leaf and green fruit eaten cooked. Ripe fruit eaten raw.
51	Phyllanthus oxyphyllus Miq.	Bantal kijang	Wild	Leaves and fruits eaten cooked.
52	Piper betle L.	Sireh	Planted, wild	Leaf chewed in betel quid
53	Psychotria stipulacea Wall.	Sekentut kijang	Wild	Young leaf eaten cooked
54	Saccharum officinarum L.	Batang puah	Planted	Juice taken raw
55	Sauropus androgynus (L.) Merr.	Pucuk manis	Planted, wild	Leaf and shoot eaten cooked
56	Solanum melongena L.	Terong	Planted	Unripe fruit eaten cooked
57	Solanum torvum Swartz.	Tongbimang	Wild	Unripe fruit eaten cooked
58	Stenochlaena palustris (Burm.) Bedd.	Paku larut	Wild	Young leaf and petiole eaten cooked
59	Streblus asper Lour.	Ranjih	Wild	Young leaves eaten cooked
60	Syzygium jambos (L.) Alston	Jambu putih	Planted	Fruit eaten raw or pickled
61	Uncaria gambir Roxb.	Gambir	Planted, wild	Dried ripe fruit chewed in betel quid
62	Willughbeia firma Bl.	Akar gerit	Wild	Ripe fruit eaten raw

visit using the method of ethnobotanical enquiry (Chin, 1981; Martin, 1995). The sessions were recorded and transcribed later. Plant specimens were collected using standard taxonomical procedures, taking specimens with flowers and fruits whenever possible (Womersley, 1981). Photographs of all specimens were also taken and used together with the plant specimens for identification and record. Identification was carried out by referring to various references such as Henderson (1974a, b) for wild flowers; Ng (1989) and Whitmore (1983) for trees; Piggott (1988) for ferns; Keng (1969) and Ridley (1967) for general flora.

### **RESULTS**

This study recorded a total of 62 species of edible plants used in the Temuan village. This village used edible

plants from their home gardens, agricultural plots, wild plants surrounding their village and also the forest plants. Some species occurred as both wild and planted for two reasons. One reason was that, the natives collected edible parts from the forest plants and also from those of the same species that they planted. The other reason was that, when planted species were dispersed from cultivation and occurred also as wild plants; both sources were used. The species in Table 1 in these three categories have totals of 17 wild species (27.4%), 23 planted species (37.1%) and 22 species being both wild and planted (35.5%). In terms of usage, 26 species (41.9%) were eaten cooked, 17 species (27.4%) were eaten raw, 15 species (24.4%) were eaten both raw and

cooked, while 4 species (6.3%) were eaten raw and pickled or after fermentation. Fruits and seeds were the most common parts used with a total of 26 species (41.9%) followed by leafy parts with 13 species (21.0%). Others with much lower numbers were shoots, underground parts, stems, combinations of leafy and underground parts, fruits and shoots, fruits and leafy portion.

# **DISCUSSION**

The results showed that, the Temuan in Kampung Guntor used 17 wild species, 23 planted species and 22 species both planted and wild edible plants. This showed that, the Temuans in this study made full use of their ability as agriculturists and hunters/gatherers. They were also able to adapt to changes in availability of wild sources of edible plants by growing some of these in their home gardens and agricultural plots. The results obtained from a different Temuan village recorded 24 species of wild edible plants, 24 species of planted edible plants and 21 species of edible plants that were both planted and wild (Ong et al., 2010). This study recorded a significantly lower number of wild edible plant species but not significantly different totals for planted edible species and edible plants that were both planted and wild. With respect to the total number of edible plant species, this study recorded 62 species compared to 69 species for the previous study (please insert a reference here). Habitat degradation will result in many wild species becoming less available or not available within walking distance. The knowledge and usage of edible plants changes as new plants become available to them. Unavailability of certain wild plants can cause the loss of knowledge on the usage of these species over the generations if these species are not planted or cannot be planted by the natives. The young natives are less keen to learn and use certain traditional edible plants due to changes in culture, personal preferences, the tedious process of preparing certain food items, and changes in habitat thereby causing certain edible plants to be unavailable or less available. It is important not only to record such native knowledge and conduct further studies but also to take steps to conserve the genetic diversity of edible plants before they are lost to humankind forever. A living collection or gene bank can serve further scientific studies on edible plants with potential for wider usage, pest and disease resistance, ability to grow and produce in different weather and soil conditions.

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