



## HERBACEOUS FLORA OF WEEDS GROWING AT ARAI HILL, PUNE

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### Abstract:

Weeds are wildly growing plants grows along the roadsides, hills, mountains, grasslands and forests. This work was conducted to study the different weed species composition growing at ARAI Hill, Pune. The dominant weeds are from the family Asteraceae, Caesalpiniaceae, Amaranthaceae, Lamiaceae. The dominating species of grasses are *Heteropogon contortus* (L.) P. Beauv, *Melanocenchrus jacquemontii* Jaub. & Spach *Themeda triandra* and *Apluda mutica* L. Herbaceous flora of weeds was recorded for three years. Luxuriously growing species are *Alternanathera sessilis* (L.) DC, *Crotalaria hebecarpa* (DC.), *Justicia simplex* D. Don.Rudd, *Hyptis suaveolens* (L.) ,*Parthenium hysterophorus* L., *Rungia repens* (L.) Nees Poit, *Sopubia delphinifolia* (L.) Don, *Spermacoce articulatis*, *Spermacoce stricta* L.F., *Striga densiflora* (Benth.), *Synedrella nodiflora* (L.) Gaertn, and *Cassia uniflora* Mill. Weeds have ecological role in the environment. They play important role in biogeochemical cycle.

**Keywords:** Herbaceous flora, weeds, dominating species, ARAI hill Pune.

### Introduction

The weeds are the unwanted troublesome plants. They are troublesome for wanted crops, but have ecological significance. They grow in crop field, waste land, roadside, forest in or on the water bodies. Weeds when grow in the crop field, the act as a competitor for light, space, nutrients and water, but when they grow on hills, maintain prevent soil erosion. (Cocannouer, J. A. 1964). They reduce the yield. Pathogens in the form of micro-organisms take support of the weeds as a host. They can complete their life cycle in adverse conditions very effectively than the cultivated crop. Weeds support many ecosystem services. (Marshall et. al. 2003, Eraud. et. al. 2015, Requier et.al. 2015, Rollin t. al. 2016). Weeds acts as an indicators of the presence and quality of ground water (Chikishev, 1965). The present study was conducted to know the herbaceous flora of weeds growing on ARAI hill. ARAI known as the Automotive Research Association of India. Arai Tekdi is the highest point in the city of Pune, from where the entire horizon of the city can be enjoyed. Forest department has done some plantations work on hill. There is one quarry in which aquatic weeds grow. Water gets trapped in the small trenches and pits in this quarry. Due to quarry, small wetland ecosystem is created, serve the purpose of bird diversity. Many bushes and trees give shelter to the birds and insects.

### Materials and Methods

ARAI hill is located in Pune district, Maharashtra. The study of herbaceous weed species was carried out for three years. The frequent visit was carried out to record the important characters of weed flora and their families were recorded. The digital herbarium of all the fresh plant specimens prepared. The plants are identified by using flora (Cook,

1958, Yadav and Sardesai ( ), Ingahallikar, 2001, Naidu (2012).

### Result:

Weeds have a vital role in ecosystem. They protect and restore soil that has been left exposed. Weeds growing on hill have their role in carbon sequestration. They absorbs carbon dioxide from the air and converts it into plant tissue. After completing life cycle plants dies, or shed its leaves and undergoes degradation in biogeochemical cycle. During this process part of carbon dioxide is returned to the atmosphere and part of it remains in the soil as stabilised organic matter.

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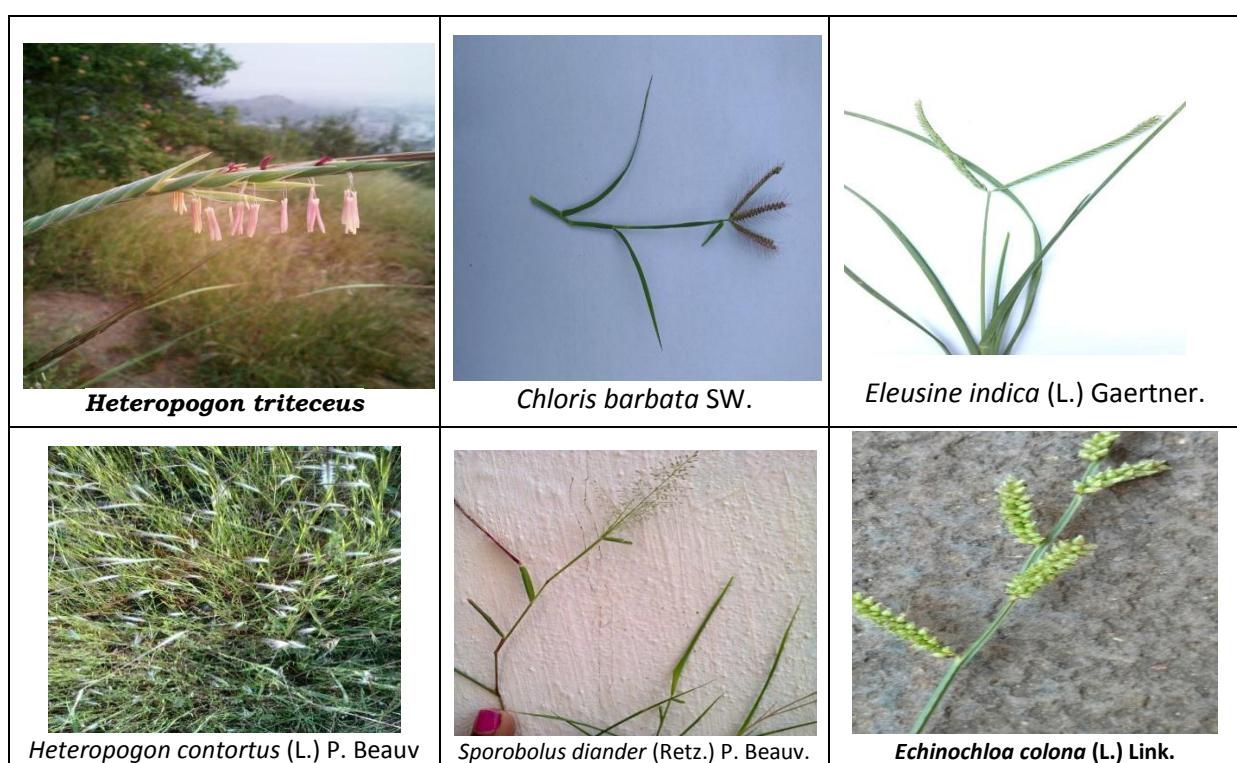
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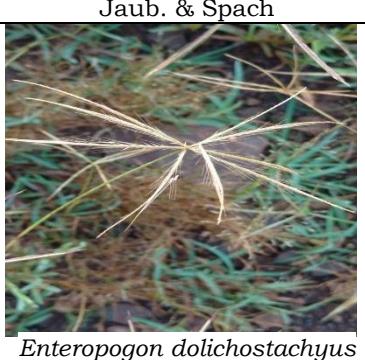
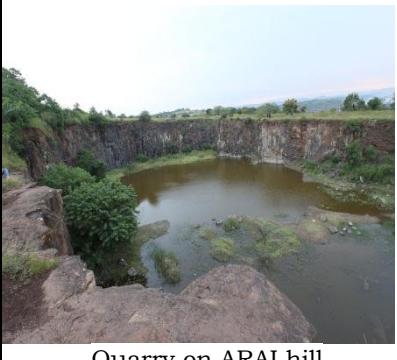
Table No.1: Ethnobotanical survey in Pinguli area.

Sr. No.	Name of the plant species	Family	(L.) L.
1	<i>Abutilon indicum</i> (L.) Sweet.	Malvaceae	<i>Exacum pedunculatum</i> L.
2	<i>Acalypha indica</i> L.	Euphorbiaceae	<i>Exacum pumillum</i> Griseb.
3	<i>Acanthospermum hispidum</i> DC.	Asteraceae	<i>Gomphrena decumbens</i> Jacq.
4	<i>Achyranthes aspera</i> L.	Amaranthaceae	<i>Hyptis suaveolens</i> (L.) Poit
5	<i>Ageratum conyzoides</i> L.	Asteraceae	<i>Indigofera cordifolia</i> Heyne. ex Roth
6	<i>Ageratum houstonianum</i> Mill	Asteraceae	<i>Indigofera linifolia</i> (L.f.) Retz.
7	<i>Alternanthera sessilis</i> (L.) DC.	Amaranthaceae	<i>Ipomea eriocarpa</i> R. Br.
8	<i>Alternanthera triandra</i> Lam.	Amaranthaceae	<i>Ipomea parasitica</i> (Kunth) G. Don
9	<i>Amaranthus spinosus</i> L.	Amaranthaceae	<i>Ipomoea cairica</i> (L.) Sweet
10	<i>Amaranthus viridis</i> Hook. F.	Amaranthaceae	<i>Ipomoea hederacea</i> (L.) Jacq.
11	<i>Antigonon leptopus</i> Hook. & Arn.	Polygonaceae	<i>Justicia simplex</i> D. Don.
12	<i>Bidens pumilla</i>	Asteraceae	<i>Lagasca molis</i> Cav
13	<i>Boerhaavia diffusa</i> L.	Nyctaginaceae	<i>Lantana camera</i> L.
15	<i>Cassia tora</i> L.	Caesalpiniaceae	<i>Launaea nudicaulis</i> (Linn.) Hook. f.
14	<i>Cassia uniflora</i> Mill.	Caesalpiniaceae	<i>Lavandula bipinnata</i> (Roth) Kuntze
16	<i>Celosia argentea</i> L.	Amaranthaceae	<i>Lepidogathis cristata</i> Willd.
17	<i>Cleome simplicifolia</i> Hook.f. & Thomson	Capparidaceae	<i>Leucas aspera</i> Link
18	<i>Coccinea grandis</i> (L.) Voigt	Cucurbitaceae	<i>Linum mysoorensis</i>
19	<i>Commelinabenghalensis</i> L.	Commelinaceae	<i>Ludwigia octovalvis</i> (Jacq.)
20	<i>Commelinaforskaolii</i> Vahl.	Commelinaceae	<i>Mimosa pudica</i> L.
21	<i>Crotalaria hebecarpa</i> (DC.) Rudd	Fabaceae	<i>Neanotis montholonii</i> (Hook.f.) W.H.Lewis
22	<i>Cynotis cristata</i> (Linn.) D. Don.	Commelinaceae	<i>Oldenlandia corymbosa</i> L.
23	<i>Cynotis prostrata</i> (L.) Blume	Commelinaceae	<i>Oxalis corniculata</i> L.
24	<i>Cyperus rotundus</i> L.	Cyperaceae	<i>Parthenium hysterophorus</i> L.
25	<i>Desmodium gangeticum</i> (L.) DC.	Fabaceae	<i>Passiflora foetida</i> L.
26	<i>Desmodium triflorum</i> (L.) DC	Fabaceae	<i>Phyllanthus niruri</i> L.
27	<i>Eclipta alba</i> (L.) Hassk	Asteraceae	<i>Physalis minima</i> L.
28	<i>Euphorbia geniculata</i> Orteg	Euphorbiaceae	<i>Pluchea tomentosa</i> DC. in Wight,
29	<i>Euphorbia hirta</i> L.	Euphorbiaceae	<i>Portulaca oleracea</i> L.
30	<i>Euphorbia microphylla</i> Heyne ex. Roth.	Euphorbiaceae	<i>Portulaca quadrifida</i> L.
31	<i>Evolvulus alsinoides</i>	Convolvulaceae	<i>Pulicaria wightiana</i>
			<i>Rhamphicarpa longiflora</i>
			<i>Rostellularia procumbens</i> (L) Nees

<b>64</b>	<i>Ruellia humilis</i> Pohl ex Nees	Acanthaceae
<b>65</b>	<i>Rungia repens</i> (L.) Nees	Acanthaceae
<b>66</b>	<i>Sesamum indicum</i> L.	Pedaliaceae
<b>67</b>	<i>Sida acuta</i> Burm. f	Malvaceae
<b>68</b>	<i>Sopubia delphinifolia</i> (L.) Don	Scrophulariaceae
<b>69</b>	<i>Spermacocce</i> <i>articularis</i>	Rubiaceae
<b>70</b>	<i>Spermacocce stricta</i> L.F.	Rubiaceae
<b>71</b>	<i>Sphaeranthus</i> <i>indicus</i> L.	Asteraceae
<b>72</b>	<i>Spilanthes acmella</i> auct. non L.	Asteraceae
<b>73</b>	<i>Striga densiflora</i> (Benth.)	Orobanchaceae
<b>74</b>	<i>Synedrella nodiflora</i> (L.) Gaertn.	Asteraceae
<b>75</b>	<i>Tephrosia purpurea</i> (L.) Pers.	Fabaceae
<b>76</b>	<i>Trichodesma indicum</i> L.	Boraginaceae
<b>77</b>	<i>Tricolepis glaberrima</i>	Asteraceae
<b>78</b>	<i>Tridax procumbens</i> L.	Asteraceae
<b>79</b>	<i>Triumfetta</i> <i>rhomboidea</i> Jacq	Tiliaceae
<b>80</b>	<i>Urena sinuata</i> L.	Malvaceae
<b>81</b>	<i>Vicoa indica</i> L. (DC).	Asteraceae
<b>82</b>	<i>Vigna radiata</i> (L.) R. Wilczek	Fabaceae
<b>83</b>	<i>Xanthium</i> <i>strumarium</i> L.	Asteraceae
<b>Grasses-</b>		
<b>84</b>		Poaceae

<b>85</b>	<i>Anthraxon hispidus</i> (Thunb.) Makino	Poaceae
<b>86</b>	<i>Chloris barbata</i> SW.	Poaceae
<b>87</b>	<i>Chrysopogon fulvus</i> (Spreng.) Chiov	Poaceae
<b>88</b>	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae
<b>99</b>	<i>Dicanthium</i> sp	Poaceae
<b>90</b>	<i>Echinochloa colona</i> (L.) Link.	Poaceae
<b>91</b>	<i>Eleusine indica</i> (L.) Gaertner.	Poaceae
<b>92</b>	<i>Enteropogon</i> <i>dolichostachyus</i> (Lagasca) Keng ex Lazarides	Poaceae
<b>93</b>	<i>Eragrostis bifaria</i> (Vahl) Wight	Poaceae
<b>94</b>	<i>Heteropogon contortus</i> (L.) P. Beauv	Poaceae
<b>95</b>	<i>Heteropogon triteceus</i>	Poaceae
<b>96</b>	<i>Melanocenchrис</i> <i>jacquemontii</i> Jaub. & Spach	Poaceae
<b>97</b>	<i>Paspalum dialatum</i> Poir.	Poaceae
<b>98</b>	<i>Paspalum distichum</i> auct. nm L.	Poaceae
<b>99</b>	<i>Setaria glauca</i> (L.) P. Beauv.	Poaceae
<b>100</b>	<i>Sporobolus diander</i> (Retz.) P. Beauv.	Poaceae
<b>101</b>	<i>Themeda triandra</i>	Poaceae



		
<i>Setaria glauca (L.) P. Beauv.</i>	<i>Apluda mutica L.</i>	<i>Chrysopogon fulvus (Spreng.) Chiov in bud condition</i>
		
<i>Chrysopogon fulvus (Spreng.) Chiov flowering</i>	<i>Melanocenchrus jacquemontii Jaub. &amp; Spach</i>	<i>Themeda triandra</i>
		
<i>Anthraxon hispidus (Thunb.) Makino</i>	<i>Enteropogon dolichostachyus (Lagasca) Keng ex Lazarides</i>	<i>Quarry on ARAI hill</i>
		
<i>Grassland Heteropogon contortus (L.) P. Beauv donating species of grass</i>	<i>Grassland give support to many birds (Kingfisher)</i>	