that the 3′-regions of genes may have specialized chromatin structure more amenable to tagging.

In conclusion, our finding holds promise for efficient gene tagging even with shorter oligos, thus reducing the cost. This factor could be especially useful when planning large-scale gene tagging in *S. pombe*. After successful tagging, the *ku80Δ* mutation can be easily outcrossed. Further improvements can be attempted by combining *ku80Δ* with mutations in *ku70* and other genes involved in the NHEJ pathway.

Conflict of interest: The authors declare no conflict of interest.

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A new population of *Santalum album* L. (sandalwood) from Agali Forest Range, Kerala, India

Santalum album (sandalwood) is indigenous to peninsular India and is naturally distributed over 9600 sq. km (ref. 1) from Kerala in the south to Uttar Pradesh in the north, in regions with varying eco-climatic conditions and edaphic factors[2]. In Kerala, natural sandal populations have been reported from Marayur (Idukki district), Meppadi (Wayanad district), Wadakkanchery (Thrissur district), Ottapalam (Palakkad district), Kannavam (Kannur district) and some fragments of Kollam and Kasargod districts[3,4]. In India, most of the existing sandal populations are not dense. They are devoid of large girth class trees due to illicit felling, hacking, forest fire and encroachments[5]. The sandal area is declining drastically due to over-exploitation, poor seed germination, poor regeneration and failure of artificial regeneration[6]. Extensive extraction of heartwood has severely decimated the natural stands of the trees in forests and has rendered many populations fragmented[7]. Since much of sandal wealth and natural sandal-bearing areas have been lost, the remaining sandal trees are to be effectively protected and their natural habitats to be preserved[8]. In addition to the conservation of the

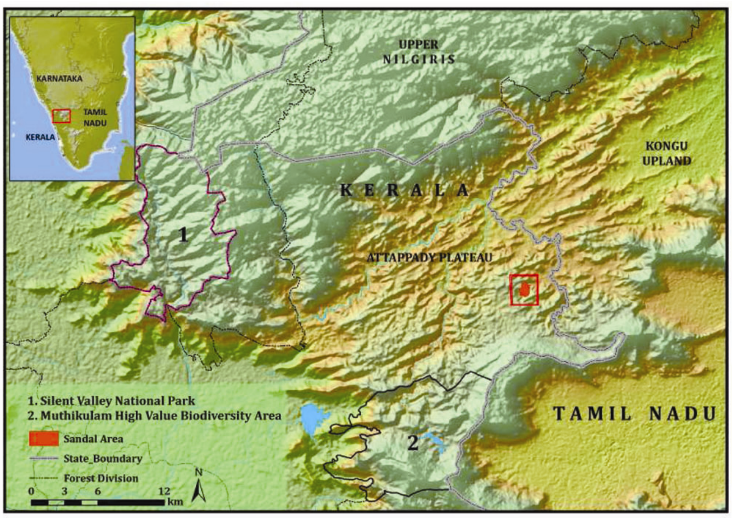

Figure 1. Map showing sandal population in Marappalam, Agali Forest Range, Kerala, India.

Table 1. Plant species and their relative contribution to the population dominated by sandalwood in Agali, Kerala, India

Species	Basal area (m^2/ha)	Density (individuals/ha)	Percentage frequency	IVI	Relative IVI
Albizia amara (Roxb.) Boivin	1.48	10	10	5.58	1.86
Bauhinia racemosa Lam.	0.23	12	10	3.42	1.14
Breynia retusa (Dennst.) Alston	2.3	20	10	7.98	2.66
Breynia vitis-idaea (Burm. f.) C.E.C. Fisch.	0.41	28	30	9.77	3.26
Carissa hirsuta Roth	1.96	26	30	12.47	4.16
Carissa spinarum L. var. *spinarum* Hook. f.	0.63	8	10	4.11	1.37
Carmona retusa (Vahl) Masamune	0.18	12	10	3.33	1.11
Cassine albens (Retz.) Kosterm.	1.69	10	10	5.95	1.98
Cipadessa baccifera (Roth) Miq.	0.75	40	40	13.38	4.46
Diospyros cordifolia Roxb.	0.28	8	10	3.52	1.17
Grewia hirsuta Vahl	0.39	14	10	3.69	1.23
Ixora pavetta Andr.	0.12	6	10	3.22	1.07
Mundulea sericea (Willd.) Cheval.	0.13	48	20	11.17	3.72
Naringi crenulata (Roxb.) Nicolson	16.15	258	70	66.75	22.25
Pongamia pinnata (L.) Pierre	0.5	8	10	3.89	1.3
Premna tomentosa Willd.	0.1	10	10	3.19	1.06
Psychotria macrocarpa Hook. f.	0.9	58	50	17.63	5.87
Santalum album L.	21.05	390	100	95.08	31.69
Strychnos potatorum L.f.	0.65	20	20	7.15	2.38
Tectona grandis L. f.	6.75	34	20	18.7	6.23
Total	56.65	1020			

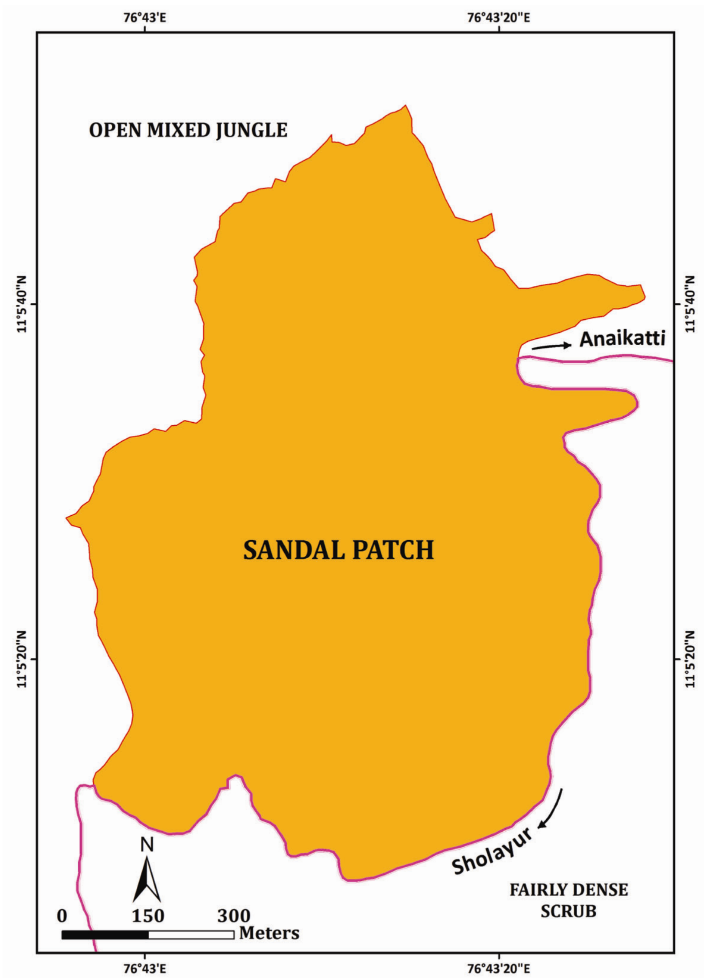

Figure 2. Enlarged view of the study area with boundaries.

existing populations, an extensive survey needs to be conducted in the probable habitats to identify new populations in the wild, which may increase the resource base and reduce the overexploitation of existing populations. Morever, the scientific documentation of lesser known populations of sandal is important for comparing genetic diversity parameters, wood analysis and tree improvement programmes. During our field survey, we could locate a new population of sandalwood from Kerala, which was explored to collect baseline information such as location, extent, boundary and phytosociological parameters.

The population is located between 76°42′55.56″E–76°43′28.24″E lat. and 11°5′7.4″–11°5′51.173″N long. in Marappalam forest area in the Agali Range of the Mannarkkad Forest Division, Palakkad district, Kerala, India (Figure 1). The elevation ranges from 650 m to 870 m amsl and the population covers a total area of 83.492 ha, probably the largest sandal population in Kerala after Marayoor. Figures 1 and 2 show the location of the population and its boundaries.

A preliminary study on the vegetation was done by establishing 50 random quadrates of 10 × 10 m size. Vegetation analysis shows that out of the 20 species recorded, vegetation is over-dominated by two species, namely *Santalum album* and *Naringi crenulata*, which represent 53.94% of the total importance value index (IVI) (Table 1). The third species based on IVI value was *Tectona grandis*, which contributes only 6% of total IVI. The population includes a total of 20 species in which 13 were poorly represented with less than 2% in relative IVI. In addition, sandal excels all other species in phytosociological data with 31% of IVI, more than 36% of total basal area, more than 38% of total density (390 individuals/ha); it is the only species with 100% frequency of distribution in the study area (Table 1). This indicates that the edaphic and climatic factors in the study area are highly suitable for *S. album* and hence provides an opportunity for thorough exploration in adjacent areas for new sandal populations. Detailed studies are also required to understand the regeneration pattern, population dynamics and total number of sandal trees in the entire population. Phenotypic characterization, genetic diversity assessment and wood characterization for comparing with other populations are also suggested for developing tree improvement and *ex situ* conservation programmes. Based on our observations, the existing staff pattern of the Forest Department is to be revised for ensuring proper protection of the described sandal population. Officials of the Forest Department are making efforts to conserve the population with their limited human resource. A detailed study on this population with the following objectives is suggested to develop strategies for conservation and sustainable utilization of sandalwood resources of this particular population:

- Generate baseline information on total number of trees in different girth classes and up-to-date assessment of sandalwood volume.
- Assess the quality of heartwood.
- Analyse the regeneration pattern and population dynamics to understand and assess the threats to the population.
- Determine genetic structure of the population, especially genetic variability within and between populations, and significant level of gene flow between and among populations.
- Assess current conservation and management activities to develop improved strategies.

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Thermal anomaly from NOAA data for the Nepal earthquake

The Himalaya originated as a result of the collision of the northward-moving Indian continent with the Eurasian continent. Due to the continued impingement of the Indian plate, sufficient strain got accumulated, and the recent earthquake of 25 April 2015 took place in near Kathmandu, Nepal (epicenter 28.3°N, 84.5°E with magnitude 7.8 on the Richter scale and focal depth approximately 8 km)[1,2] due to thrust faulting. The study area comprises a large part of central and far-western Nepal (Figure 1) for monitoring the thermal anomalies associated with this earthquake. The tectonic features in Figure 1 have been taken from GSI[3].

Nepal is located in the central sector of the southwardly convex Himalayan mountain arc. Nepal Himalaya, occupying the central 800 km part, can be divided into five distinct geotectonic zones from south to north as follows: (1) Terai Plain, (2) Sub-Himalaya (Siwalik Range), (3) Lesser Himalaya, (4) Higher Himalaya and (5) Inner Himalaya (Tibetan Tethys). Each of these zones can be identified by its distinct tectonic, morphologic and geologic features[4]. The main seismotectonic boundaries characterized as thrusts from south to north are the Main Frontal Thrust (MFT), Main Boundary Thrust (MBT) and Main Central Thrust (MCT), which are the boundary lines between the two consecutive units of Lesser Himalaya and Higher Himalaya[5]. Figure 2 presents a schematic representation of these features with respect to the Himalayan topography, basement slab and Himalayan