

Correction

Correction: Valerio et al. The Role of Canopy Cover Dynamics over a Decade of Changes in the Understory of an Atlantic Beech-Oak Forest. *Forests* 2021, 12, 938

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1. Error in Table

The authors wish to make the following corrections to their paper [1]. In the original publication, there was a mistake in Table 1 as published. First line of the first column (Gap closure vs. no gap): there was a number lacking there. The number should be: “0.108”. And second line of the third column (Gap persistence vs. no gap): the number “−0.129” should be marked in bold. The corrected Table 1 appears below.

Table 1. Results of the DTK test showing the differences between the four categories of plots studied in Bertiz (with gap closure, opening, gap persistence or no gaps) in terms of understory taxonomical and functional changes from 2006 to 2016. The taxonomical variables studied were changes between 2006 and 2016 (dif.) in: the scores of the first (NMDS1) and second (NMDS2) axis of the NMDS ordination, species abundance (abundance), species richness (richness) and Shannon index of species diversity (shannon). The functional variables studied were changes between 2006 and 2016 (dif.) in: the functional composition (measured as the community weighted mean: CWM), functional richness (FRic) and functional diversity (Rao) of leaf dry matter content (LDMC), specific leaf area (SLA), leaf size in its logarithmic form (LSlog), plant height in its logarithmic form (PHlog) and seed mass in its logarithmic form (SMlog). Both functional richness and functional diversity were standardised using the standardised effect size (SES) to avoid spurious results due to changes in species richness. Significant differences are marked in bold ($p < 0.05$).

Variable	Gap Closure vs. No Gap	Gap Opening vs. No Gap	Gap Persistence vs. No Gap	Gap Closure vs. Gap Opening	Gap Persistence vs. Gap Closure	Gap Persistence vs. Gap Opening
dif.NMDS1	0.108	−0.503	0.153	0.611	0.045	0.657
dif.NMDS2	0.104	−0.036	−0.129	0.140	−0.233	−0.093
dif.abundance	0.863	5.380	5.213	−4.517	4.35	−0.167
dif.richness	−2.010	5.224	−1.610	−7.233	0.4	−6.833
dif.shannon	−0.014	0.511	−0.158	−0.525	−0.144	−0.669
dif.CWMLDMC	5.757	12.018	28.618	−6.261	22.861	16.600
dif.CWMSLA	0.667	1.461	0.899	−0.794	0.232	−0.562
dif.CWMSlog	0.069	0.039	0.105	0.030	0.036	0.066
dif.CWMPHlog	0.082	0.091	0.119	−0.009	0.036	0.028
dif.CWMSMlog	0.292	0.047	0.412	0.245	0.120	0.365
dif.SESFRicLDMC	−0.025	−0.219	−0.489	0.193	−0.464	−0.270
dif.SESFRicSLA	−0.175	−0.381	−0.179	0.205	−0.004	0.202
dif.SESFRicLSlog	−0.058	−0.134	−0.073	0.076	−0.015	0.060
dif.SESFRicPHlog	−0.403	−0.540	1.002	0.138	1.404	1.542
dif.SESFRicSMlog	−1.058	−0.287	−0.132	−0.771	0.926	0.156
dif.SESRaoLDMC	−0.003	0.158	0.837	−0.162	0.840	0.679
dif.SESRaoSLA	−0.417	0.063	−0.444	−0.480	−0.027	−0.507
dif.SESRaoLSlog	−0.463	−0.134	−0.649	−0.330	−0.186	−0.516
dif.SESRaoPHlog	0.467	0.577	−0.400	−0.110	−0.867	−0.977
dif.SESRaoSMlog	0.376	0.152	−0.068	0.225	−0.444	−0.220



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2. Text Correction 1

In page 11, within the text, citation “40” should be substituted by “38”.

A correction has been made to the second paragraph of the **Discussion**:

“However, what especially influences and modulates the species composition and diversity of the forest understory is not the presence of gaps but rather their temporal evolution. Regarding gap dynamics, we found that in the first years after gap creation, new species establish in the gap, according to the higher levels of species richness found at the end of the decade in plots with gap opening compared to plots without gaps. In this sense, the lack of significant differences between categories in terms of temporal changes in richness from 2006 to 2016, could be due to the high variability of richness values in several closed-canopy plots promoted by the environmental heterogeneity of the forest [15,70]. The reason for the higher species richness in plots with gap openings at the end of the decade can be the greater values of light and lower values of leaf litter found in these plots than in nearby plots with a closed canopy [12,24]. Our results indicate that the occurrence of canopy gaps creates temporal windows that promote the establishment of particular species in the understory. More specifically, plots with recently opened gaps were associated with species such as *Eupatorium cannabinum*, *Taraxacum* gr. *officinale* and *Luzula multiflora* subsp. *multiflora*. These are species related to well-lit sites [71], and their lower values of plant height are consistent with certain studies showing that in the absence of light competition and of a dense herbaceous cover, which are the conditions found in recently opened gaps, shorter species are favoured [72]. In addition, *Eupatorium cannabinum* and *Taraxacum* gr. *officinale* have diaspores (achenes) with a pappus with long hairs that can be easily dispersed by wind [38], which might make these species good early-colonisers of gaps. Species dispersal is an important factor, explaining the distribution of the vegetation in the understory of the studied forests [15], and thus the arrival of diaspores of these light-demanding species from nearby sites can increase the number of species and species coexistence at least in the first years after gap creation. Moreover, the lower seed mass found in all the species selected as indicators with respect to the rest of the species in the understory, although not being significant, is consistent with previous studies showing that a low seed mass also facilitates species dispersal [73,74] and promotes higher longevity in the seed bank [46,47], in such a way that the increase in light and decrease in leaf litter cover promoted by gap formation can enhance the germination of the species from the seed bank [18]. By contrast, plots in which gaps were opened less than ten years ago (gap opening plots) did not significantly differ from plots without gaps in terms of species composition in NMDS1. This might indicate that, while new species arrive at the gap in the first years after gap creation (increasing species richness), the shade-tolerant species originally present before gap opening (i.e., not associated with gaps) still remain in the gap and thus, the understory species composition does not yet change significantly”.

3. Text Correction 2

In page 12, within the text, citation “39” should be substituted by “37”.

A correction has been made to the third paragraph of the **Discussion**:

“In persistent gaps that remained open for at least ten years, the lack of differences in richness with other plot categories is consistent with previous studies, showing that in old-growth forests, the highest species richness is found in recently opened gaps, but as gap age and herbaceous cover increase, forest productivity starts to decrease, leading to resource competition and reducing richness in the understory [12,16,72,75–77]. At this stage, taller plants will have a competitive advantage over shorter plants, replacing them [72]. This is the case of *Urtica dioica*, which has been found to replace *Taraxacum* gr. *officinale* over time [12,72], as seen in our study. In general, the species selected as indicators of gap persistence are related to sites with high light availability (as is the case for *Juncus* gr. *effusus*, *Urtica dioica*, *Veronica officinalis* and *Pilosella* sp.; [71]) and have other dispersal strategies (i.e., achenes without pappus in *Urtica dioica*; [37]) that seem to be less effective than those of early-colonisers or gap opening species. In addition, some of these species are also

related to fertile sites with high nitrogen levels (i.e., *Urtica dioica*, *Dryopteris dilatata* (Hoffm.) A. Gray; [71]), which can also be related to gaps, as tree fall leads to an increase in organic matter in the understory and higher light levels promote a high rate of litter decomposition in the soil. Regarding traits, these species tend to have low SLA and LS, which are adaptive responses to high-radiation levels [46,47]. The different values of plant height can be consistent with the higher functional diversity found at sites with intermediate levels of competition [78]. As a result of this process, the understory species composition in NMDS1 in persistent gaps will finally be significantly different from that in plots without gaps. This suggests that changes in understory species composition occur more slowly than changes in the studied environmental conditions, needing more than ten years to really be significant. This is consistent with other studies showing low variation in understory composition between plots with and without gaps [75].

4. References Correction 1

In the **References** section, there was an error in the order of the references. The references 37 and 38, which were Zeibig and Nagel, should be moved to the position 41 and 43, respectively.

5. Reference Correction 2

In the **References** section, the author of reference 44 should be “Gobierno de Navarra”, not “De Navarra, G.”, as it is the name of an institution. The corrected reference 44 appears below.

44. Gobierno de Navarra. *Mapa Topográfico 1:5.000*; Departamento de Obras Públicas, Transporte y Comunicaciones, Servicio de Publicaciones del Gobierno de Navarra: Navarra, Spain, 2004.

The authors apologize for any inconvenience caused and state that the scientific conclusions are unaffected. This correction was approved by the Academic Editor. The original publication has also been updated.

Reference

1. Valerio, M.; Ibáñez, R.; Gazol, A. The Role of Canopy Cover Dynamics over a Decade of Changes in the Understory of an Atlantic Beech-Oak Forest. *Forests* **2021**, *12*, 938. [[CrossRef](#)]