

Thelo is a type family that emerged from a consideration of the publishing conditions in the digital era.

Designed by Tassiana Nuñez Costa between 2014 and 2020, the typeface aims to answer contemporary editorial questions of coherence and legibility across medias and reading formats. In order to adapt to different reading contexts, on screen as well as on paper, and to allow for an efficient hierarchization of content, Thelo has three variations of optical sizes (Display, Text and Micro) that refer to the optical settings typically used by punchcutters of the lead type era. Applied to digital typography, this principle allows the optimization of reading comfort on screen.

The constraints of digital media have driven Tassiana Nuñez Costa to make some striking formal choices:

Thelo Text (Regular, Italic, Bold) is adapted to the composition of running text. Its clean and functional design brings it closer to modernist style typefaces but its pointed connections and terminations evoke certain characteristics of flared glyphic typefaces.

Thelo Display (Light, Regular, Bold) has been designed for composing large sized texts such as titles. Its design is enhanced by lively and sharp lines.

Finally, Thelo Micro (Regular, Italic, Bold) is tailored to the composition of smaller sized texts such as footnotes and captions. Its quite solid rectangular serifs provide it with the aesthetic of a slab serif.

Thelo is named after the Thelocactus, a variety of cactus native to Mexico: linking the harsh aspect of on screen display and the arid lands of desert zones.



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120 PTS

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Thelo *Thelo* **Thelo** Thelo *Thelo* **Thelo** Thelo *Th*

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Thelo *Thelo* **Thelo** Thelo *Thelo* **Thelo** Thelo *Thelo* **Thelo** Thelo **Thelo**

INTRODUCTION

OWNERSHIP AND LICENCE

A typeface is created by a designer whose art is to transform an original typographic artwork into a computer file or files. As a consequence a typeface is – as a work – protected by laws pertaining to intellectual property rights and – as software – can not be copied and/or installed without first acquiring a nominative licence.

In no way, shape or form may a typeface be transmitted to a third party or modified. The desired modifications in the context of the development of a visual identity, can only be effected by the designer himself and only after acquisition of a written authorisation from 205TF.

The user of a 205TF typeface must first acquire of a licence that is adapted to his needs (desktop, web, application/epub, TV/film/videos web).

A licence is nominative (a physical person or business) and is non-transferable. The licensee can not transmit the typeface files to other people or organisations, including but not limited to partners and/or subcontractors who must acquire a separate and distinct licence or licences. The full text of the licence and terms of use can be downloaded here: any person or entity found in breach of one or more terms of the licence may be prosecuted.

THE OPENTYPE FORMAT

The OpenType format is compatible with both Macintosh and Windows platforms. Based on Unicode encoding it can contain up to 65,000 signs* including a number of writing systems (Latin, Greek, Cyrillic, Hebrew, etc.) and numerous signs that allow users to create accurate and sleek typographic compositions

(small capitals, aligned and oldstyle numerals, proportionals and tabulars, ligatures, alternative letters, etc.). The OpenType format is supported by a wide range of software. The dynamic functions are accessed differently depending on the software used.

*A Postscript or Truetype typeface can contain no more than 256 signs.

SUPPORTED LANGUAGES

Afar	French	Malagasy	Silesian
Afrikaans	Gaelic	Malay	Slovak
Albanian	Gagauz	Maltese	Slovenian
Azerbaijani	German	Manx	Somali
Basque	Gikuyu	Maori	Sorbian
Belarusian	Gilbertese	Marquesan	Sotho
Bislama	Greenlandic	Moldavian	Spanish
Bosnian	Guarani	Montenegrin	Setswana
Breton	Haitian	Nauruan	Swati
Catalan	Haitian Creole	Ndebele	Swahili
Chamorro	Hawaiian	Norwegian	Swedish
Chichewa	Hungarian	Occitan	Tahitian
Comorian	Icelandic	Oromo	Tetum
Croatian	Igbo	Palauan	Tok Pisin
Czech	Indonesian	Polish	Tongan
Danish	Irish	Portuguese	Tsonga
Dutch	Italian	Quechua	Tswana
English	Javanese	Romanian	Turkish
Estonian	Kashubian	Romansh	Turkmen
Esperanto	Kinyarwanda	Sami	Tuvaluan
Faroeese	Kirundi	Samoan	Uzbek
Fijian	Luba	Sango	Wallisian
Filipino	Latin	Scottish	Walloon
Finnish	Latvian	Serbian	Welsh
Flemish	Lithuanian	Sesotho	Xhosa
Frison	Luxembourgish	Seychellois	Zulu

ELEMENTARY PRINCIPLES OF USE

To buy or... By buying a typeface you support typeface designers who can dedicate the time necessary for the development of new typefaces (and you are of course enthusiastic at the idea of discovering and using them!)

Copy? By copying and illegally using typefaces, you jeopardise designers and kill their art. In the long term the result will be that you will only have Arial available to use in your compositions (and it would be well deserved!)

Test! 205TF makes test typefaces available. Before downloading them from www.205.tf you must first register. These test versions are not complete and can only be used in models/mock ups. Their use in a commercial context is strictly prohibited.

RESPONSIBILITY

205TF and the typeface designers represented by 205TF pay particular attention to the quality of the typographic design and the technical development of typefaces.

Each typeface has been tested on Macintosh and Windows, the most popular browsers (for webfonts) and on Adobe applications (InDesign, Illustrator, Photoshop) and Office (Word, Excel, PowerPoint).

205TF can not guarantee their correct functioning when used with other operating system or software. 205TF can not be considered responsible for an eventual “crash” following the installation of a typeface obtained through the www.205.tf website.

STYLES

DISPLAY LIGHT

Thelo Display Light

DISPLAY REGULAR

Thelo Display Regular

DISPLAY BOLD

Thelo Display Bold

TEXT REGULAR

Thelo Text Regular

TEXT ITALIC

Thelo Text Italic

TEXT BOLD

Thelo Text Bold

MICRO REGULAR

Thelo Micro Regular

MICRO ITALIC

Thelo Micro Italic

MICRO BOLD

Thelo Micro Bold

CHARACTER MAP (THELO DISPLAY & TEXT)

UPPERCASES	ABCDEFGHIJKLMNOPQRSTUVWXYZ
LOWERCASES	abcdefghijklmnopqrstuvwxyz
SMALL CAPS	X
STANDARD PUNCTUATION	H¿?!;,:...·'"" , "" _- «»<> ·---— ()[]{} / \ ¡ ¢ £ ¥ % & @ ® © ℙ™º%‰*
CAPS PUNCTUATION	H¿¡«»<>·---—()[]{}
SMALL CAPS PUNCTUATION	X
PROPORTIONAL LINING FIGURES	00123456789 €\$f¢£¥
PROPORTIONAL OLD STYLE FIGURES	ø0123456789 €\$f¢£¥
TABULAR LINING FIGURES	00123456789 €\$f¢£¥
TABULAR OLD STYLE FIGURES	ø0123456789 €\$f¢£¥
SMALL CAPS FIGURES	X
PREBUILD FRACTIONS	½¼¾
SUPERIORS/INFERIORS	H ⁰¹²³⁴⁵⁶⁷⁸⁹ H ₀₁₂₃₄₅₆₇₈₉ Hadeɡlmorſt
ORDINALS	N ^o N ^{os} n ^o n ^{os} 1 ^a 1 ^o
SYMBOLS & MATHEMATICAL SIGNS	-+×÷=≠±√∧<>≤≥≈¬∞¤ΔΩðƒΣΠμπ°◊
STANDARD LIGATURES	f fb fĥ fi ffk fl ft fh fi fj fk fl ft tf tt
DISCRETIONARY LIGATURES	X
CONTEXTUAL ALTERNATES	X
ACCENTED UPPERCASES	À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ĵ Ķ Ĺ Ł Ń Ň Ņ Ñ Ò Ó Ô Õ Ö Ø Ò Ě Š š Ś ś Š Ṫ Ṭ Ṧ Ṹ Ṱ Ú Ü Ů Ũ ů Ű ű Ų ų ŵ ŷ Ÿ Ž ž Þ
ACCENTED LOWERCASES	à á â ã ä å æ ç è é ê ë ã ē ĝ ğ ħ h i í î ï j k l ł ľ n ñ ò ó ô õ ö ø œ ř ŀ ŗ ș ș ş ș ț ț ț ț ț u ú û ü ũ ŭ ū w x y ý z ź ż þ
ACCENTED SMALL CAPS	X
STYLISTIC ALTERNATES	X
HISTORICAL FORMS	f
ARROWS	↔→↑↓↖↗↘↙
ORNAMENTS	■▲▼◆●♥

OPENTYPE FEATURES (THELO DISPLAY & TEXT)

1. Automatically spaced capitals.
2. Punctuation is optically repositionning
- 3, 4. Specific small capitals whereas optically reduced capitals.
5. Specific glyphs in several languages.
- 6, 7, 8, 9. Specific superior and inferior glyphs.
- 10, 11. Proportional figures.
- 12, 13. Tabular figures, practical when the user needs alignment in columns.
14. Slashed zero to distinguish with letter O.
15. Standard ligatures automatically correct collision between two characters.
16. Smart ligatures.
17. Specific contextual glyphs.
18. Specific titling capitals.

	FEATURE OFF	FEATURE ON
1. FULL CAPS	Lacassagne	LACASSAGNE
2. CASE SENSITIVE FORMS	(Hôtel-Dieu)	(HÔTEL-DIEU)
3. SMALL CAPS	×	×
4. CAPS TO SMALL CAPS	×	×
5. LOCALIZED FORMS		
ROMANIAN	Chişinău Galaţi	Chişinău Galaţi
CATALAN	Paral·lel	Paral·lel
FRENCH	Il dit: « Ah ! »	Il dit: « Ah ! »
6. ORDINALS	No Nos 1A 1O	N ^o N ^{os} 1 ^a 1 ^o
7. PREBUILD FRACTIONS	1/4 1/2 3/4	¼ ½ ¾
8. SUPERIORS	Mr Mlle 1er	Mr M ^{lle} 1 ^{er}
9. INFERIORS	H ₂ O Fe ₃ O ₄	H ₂ O Fe ₃ O ₄
10. PROPORTIONAL LINING FIGURES	0123456789	0123456789
11. PROPORTIONAL OLD STYLE FIG.	0123456789	0123456789
12. TABULAR LINING FIGURES	0123456789	0123456789
13. TABULAR OLD STYLE FIG.	0123456789	0123456789
14. SLASHED ZERO	0 o 0 o	0 0 0 0
15. LIGATURES	Off after	Off after
16. DISCRETIONARY LIGATURES	×	×
17. CONTEXTUAL ALTERNATES	08x32mm 10x65mm	08×32mm 10×65mm
18. CONTEXTUAL TITLING	×	×

OPENTYPE FEATURES (THELO DISPLAY & TEXT)

The stylistic set function allows to access to specific signs which replace glyphs in the standard set.
A typeface can contain 20 stylistic sets.

	FEATURE OFF	FEATURE ON
ARROWS (SS01)	--W	←
	--E	→
	--S	↓
	--N	↑
	--NW	↖
	--NE	↗
	--SE	↘
	--SW	↙

CHARACTER MAP (THELO MICRO)

UPPERCASES	ABCDEFGHIJKLMNOPQRSTUVWXYZ
LOWERCASES	abcdefghijklmnopqrstuvwxyz
SMALL CAPS	×
STANDARD PUNCTUATION	! " # \$ % & ' () * + , - . / : ; < = > ? [\] ^ _ ` { } ~ ¡ ¢ £ ¤ ¥ ¦ § ¨ © ª « ¬ ® ¯ ° ± ² ³ ´ µ ¶ · ¸ ¹ º » ¼ ½ ¾
CAPS PUNCTUATION	×
SMALL CAPS PUNCTUATION	×
PROPORTIONAL LINING FIGURES	00123456789 € \$ f ¢ £ ¥
PROPORTIONAL OLD STYLE FIGURES	×
TABULAR LINING FIGURES	00123456789 € \$ f ¢ £ ¥
TABULAR OLD STYLE FIGURES	×
SMALL CAPS FIGURES	×
PREBUILD FRACTIONS	1/2 1/4 3/4
SUPERIORS/INFERIORS	H ⁰ 123456789 H ₀ 123456789 H ^a deglmorst
ORDINALS	N ^o N ^{os} n ^o n ^{os} 1 ^a 1 ^o
SYMBOLS & MATHEMATICAL SIGNS	- + × ÷ = ≠ ± √ ∙ ∠ < > ≤ ≥ ≈ ∞ ∓ Δ Ω ∂ ∫ ∑ ∏ μ π ° ∂
STANDARD LIGATURES	ff b ff h ff i ff j ff k ff l ff t ff b ff ff h ff i ff j ff k ff l ff t ff b ff ff h ff i ff j ff k ff l ff t ff b ff
DISCRETIONARY LIGATURES	×
CONTEXTUAL ALTERNATES	×
ACCENTED UPPERCASES	À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö Ø Ù Ú Û Ü Ý Þ ß à á â ã
ACCENTED LOWERCASES	à á â ã ä å æ ç è é ê ë ì í î ï ñ ò ó ô õ ö ø ù ú û ü ý þ ß à á â ã ä å æ ç è é ê ë ì í î ï ñ ò ó ô õ ö ø ù ú û ü ý þ
ACCENTED SMALL CAPS	×
STYLISTIC ALTERNATES	×
HISTORICAL FORMS	f
ARROWS	↔ ↑ ↓ ↖ ↗ ↘ ↙
ORNAMENTS	■ ▲ ▼ ◆ ●

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3. SMALL CAPS	×	×
4. CAPS TO SMALL CAPS	×	×
5. LOCALIZED FORMS		
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CATALAN	Paral·lel	Parallel
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10. PROPORTIONAL LINING FIGURES	0123456789	0123456789
11. PROPORTIONAL OLD STYLE FIG.	×	×
12. TABULAR LINING FIGURES	0123456789	0123456789
13. TABULAR OLD STYLE FIG.	×	×
14. SLASHED ZERO	0 0 0 0	0 0 0 0
15. LIGATURES	Off after	Off after
16. DISCRETIONARY LIGATURES	×	×
17. CONTEXTUAL ALTERNATES	08x32mm 10x65mm	08×32 mm 10×65 mm
18. CONTEXTUAL TITLING	×	×

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	FEATURE OFF	FEATURE ON
ARROWS (SS01)	--W	←
	--E	→
	--S	↓
	--N	↑
	--NW	↖
	--NE	↗
	--SE	↘
	--SW	↙

56 PTS

Perhaps the most
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and grotesque forms

32 PTS

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24 PTS

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16 PTS

Perhaps the most extraordinary and grotesque forms in the vegetable world are to be met with in various species of Cactus, of which are seven tribes containing no less than sixty different kinds. Cactaceæ are exclusively confined to the tropics of America extend a little way north and south. When met with elsewhere they have been introduced—are not natives of the soil. The Pitahaya or Gigantic Cactus is the very Grand Master of the order. It is found in the rocky valleys and slopes of New Mexico, Arizona, and California, and is called by different names according to the language or dialect of each country. For the first few years of its existence it is globular, then it shoots up

56 PTS

For the first few
years of its existence
it is globular, then

32 PTS

For the first few years of its existence
it is globular, then it shoots up for
ten or twelve feet and blossoms, then
the trunk or stem shoots out again,

24 PTS

For the first few years of its existence it is globular,
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and frequently rises to the height of sixty feet.
It has few branches, but these are generally
covered with flowers, which are clustered together.

16 PTS

For the first few years of its existence it is globular, then it shoots up for ten
or twelve feet and blossoms, then the trunk or stem shoots out again,
and frequently rises to the height of sixty feet. It has few branches, but these
are generally covered with flowers, which are clustered together. The seed-
vessel or fruit, which falls to the ground in clusters in July and August,
is in the shape of a reddish green pear; inside is a rich crimson pulp, which
tastes like a fresh fig, is nutritious and much valued by natives and others.
The Night Blooming Cereus has a singular different from all others of its
family. During the summer months it begins to open flowers between seven

56 PTS

**During the
summer months
it begins to open**

32 PTS

**During the summer months
it begins to open flowers between
seven and eight o'clock in the
evening. At eleven they are fully**

24 PTS

**During the summer months it begins to
open flowers between seven and eight o'clock
in the evening. At eleven they are fully
expanded, and while thus they emit the most
fragrance, which in their native home
perfumes the air to a considerable distance.**

16 PTS

**During the summer months it begins to open flowers between seven
and eight o'clock in the evening. At eleven they are fully expanded,
and while thus they emit the most fragrance, which in their native
home perfumes the air to a considerable distance. Each flower
when open is nine inches in diameter, the inside is a splendid yellow
colour, resembling the rays of a star, the stamens are a pure white,
which adds to the illusion. The outside of the flower is brown.
The flowers close between three and four o'clock in the morning,
and rapidly decay. This cactus is represented in the centre of the**

56 PTS

The first Thelocactus to appear in Europe was

32 PTS

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24 PTS

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16 PTS

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12 PTS

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10 PTS

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8 PTS

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6 PTS

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56 PTS

Thelocactus. Stem single or clustering, depressed, globose,

32 PTS

Thelocactus. Stem single or clustering, depressed, globose, ovoidal or cylindrical, 2-20 cm in diameter, 3-40 cm high. Ribs

24 PTS

Thelocactus. Stem single or clustering, depressed, globose, ovoidal or cylindrical, 2-20 cm in diameter, 3-40 cm high. Ribs present or indistinct. Tubercles present, rounded or conical. Areoles at the apex of tubercles, sometimes elongated into a short groove,

16 PTS

Thelocactus. Stem single or clustering, depressed, globose, ovoidal or cylindrical, 2-20 cm in diameter, 3-40 cm high. Ribs present or indistinct. Tubercles present, rounded or conical. Areoles at the apex of tubercles, sometimes elongated into a short groove, with or without glands. Spines generally straight, with variable diameter, length and color, usually radial and central ones are distinguishable. Flowers apical, funnel-shaped, with scaled ovary and tube, white, yellow or magenta. Fruits green to reddish, with perianth remnants present, dehiscent at maturity through a basal pore. Seeds pyriform, with a basal hilum, black, testa cells tabular, convex

12 PTS

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Thelocactus conothelos and related entities

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56 PTS

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6 PTS

The Chihuahuan Desert hosts several protected areas, both at federal and state level, and most *Thelocactus* species can be found in some of them, although the percentage of localities occurring in protected areas is generally low (Hernández & Gómez-Hinostrosa, 2011a). The situation is worse for microendemic taxa that occur in very small areas, e.g. some *T. bicolor* and *T. conothelos* subspecies and *T. hastifer*, which do not occur in any protected area and for which the creation of small reserve areas was already proposed in view of its efficacy and as a complement to largest protected areas (Fos et al., 2017; Hernández & Gómez-Hinostrosa, 2011a). SDMs are the main tool to predict species distributions based on environmental suitability, and are very effective to render spatial models from sparse observations available from biological surveys and natural history collections (Franklin, 2010). They have the potential to support conservation actions and contribute to the decision-making process. SDMs may be used to identify and protect critical habitats that are necessary for the persistence of threatened species; to select areas for the establishment of reserves; to identify suitable sites for reintroduction or translocation as an aid to lessen the threat of climate changes or the impact of change of land use (Guisan et al., 2013). Most *Thelocactus* species can be considered vulnerable to global warming as a result of many factors like a low seed dispersal efficiency, a limited plant recruitment caused by seedling sensitivity to high temperatures (Aragón Gastélum et al., 2016), a direct effect on their physiology (Nobel, 1996),

or a change in the biotic interactions, as climate change could affect also the presence of pollinators and the animals required for seed dispersal or have an effect on the vegetation community and the nurse plants belonging to it (Ibisch & Mutke, 2015). The necessity of increasing protected areas in the CDR has been already underlined and the results presented in this study could be relevant for improving preservation actions and guiding reintroduction programs for a better conservation of *Thelocactus* species, taking into account the ecological requirements of focal species. Niche overlap values between *Thelocactus* species are mostly low, reflecting the difference in the environmental suits each species is adapted to. Except for the pair *hastifer**leucacanthus*, the niche equivalency test was rejected for all other species, showing that environmental spaces of *Thelocactus* species are significantly different from each other (Warren et al., 2010). The results of the niche similarity tests were quite varied, for some species pairs the niche similarities were higher than expected by chance, for others the null hypothesis was rejected, while in other species the significant results of the similarity test in only one direction, and not significant in the counter-direction, probably depend on the differences in the environmental background for the species pairs (Table 4) (Nakazato et al., 2010). The niches of the pair *T. hastifer* and *T. leucacanthus* were more similar than expected by chance, which was expected as their niches are equivalent, while when compared to the other species the similarity was not significative. Considering that these two species

56 PTS

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32 PTS

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24 PTS

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16 PTS

Considering that these two species have also an overlapping geographical distribution, the obtained results support the hypothesis of niche conservatism. Niche similarity higher than expected by chance was also found in most of the other pair-wise comparisons, suggesting that habitat conservatism is common among *Thelocactus* species. *Thelocactus bicolor* has the widest niche breadth, therefore being capable to exploit a larger set of environmental conditions, which is in agreement with its large geographic distribution that overlaps with the

12 PTS

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10 PTS

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similarity test being significantly more similar when compared to the other species (Table 4). The reverse was not always true. For *T. buekii*, *T. conothelos*, and *T. hexaedrophorus* the results were not significantly similar, suggesting that these species are not suited to the habitat conditions in which *T. bicolor* can grow. For what concerns *T. rinconensis*, the similarity test was rejected when paired to *T. hexaedrophorus*, but the reverse comparison showed that the similarity test was accepted. These results suggest that *T. rinconensis* has rather different environmental requirements of *T. hexaedrophorus*, which exploits a more heterogeneous habitat and

8 PTS

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grow. For what concerns *T. rinconensis*, the similarity test was rejected when paired to *T. hexaedrophorus*, but the reverse comparison showed that the similarity test was accepted. These results suggest that *T. rinconensis* has rather different environmental requirements of *T. hexaedrophorus*, which exploits a more heterogeneous habitat and therefore its niche overlaps that of *T. rinconensis*. Five species, *T. buekii*, *T. conothelos*, *T. hexaedrophorus*, *T. multicephalus*, and *T. tulensis*, showed a similarity greater than expected by chance. All of them are geographically distributed in part or only in the Galeana, Mier y Noriega, and Huizache subregions of the CDR (Hernández & Bárcenas, 1996), areas rich in species number and endemism of cacti, whose diversification is related to increased aridity in response to the uplift of the Sierra Madre Oriental and the development of the TransMexican Volcanic Belt (Vázquez-Sánchez et al., 2013)

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CONTACT

205 Corp.
24, rue Commandant-Faurax
69006 Lyon
France

T. +33 (0)4 37 47 85 69
contact@205.tf

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SIRET 522 580 430 00026
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