

Four new acalyptrate dipterous species from Spain (Diptera: Camillidae, Carnidae and Sciomyzidae)

M. CARLES-TOLRÁ

Avda. Príncipe de Asturias 30, ático 1; E-08012 Barcelona; Spain; E-mail: mcarlestolra@terra.es

Abstract

Four new species of acalyptrate Diptera, namely *Camilla kynodontia* sp. n. (Camillidae), *Meoneura sublongisetosa* sp. n., *Meoneura tschorsnigi* sp. n. (Carnidae) and *Colobaea acuticercia* sp. n. (Sciomyzidae), are described from Spain.

Key words: Diptera, Camillidae, Carnidae, Sciomyzidae, new species, Spain.

Resumen

Cuatro especies nuevas de dípteros acalípteros de España (Diptera: Camillidae, Carnidae y Sciomyzidae)

Se describen cuatro especies nuevas de dípteros acalípteros, a saber *Camilla kynodontia* sp. n. (Camillidae), *Meoneura sublongisetosa* sp. n., *Meoneura tschorsnigi* sp. n. (Carnidae) y *Colobaea acuticercia* sp. n. (Sciomyzidae), de España.

Palabras clave: Diptera, Camillidae, Carnidae, Sciomyzidae, especies nuevas, España.

Laburpena

Diptero akalípteroen lau espezie berri Espainiakoak (Diptera: Camillidae, Carnidae eta Sciomyzidae)

Diptero akalípteroen hurrengo lau espezie berri deskribatzen dira Espainiatik: *Camilla kynodontia* sp. n. (Camillidae), *Meoneura sublongisetosa* sp. n., *Meoneura tschorsnigi* sp. n. (Carnidae) eta *Colobaea acuticercia* sp. n. (Sciomyzidae).

Gako-hitzak: Diptera, Camillidae, Carnidae, Sciomyzidae, espezie berriak, Espainia.

Introduction

Recently, Carles-Tolrá (2004, 2006) published two papers on some dipterans collected in Spain, concretely in the province of Salamanca. The material was collected by Dr. Tschorsnig by means of three collecting methods: sweeping on flowers, Malaise trap and yellow dishes (for more details see Carles-Tolrá, 2004, 2006).

After the study of this material many species were identified. Nevertheless, some specimens belonging to possible new species of some families appeared.

In those two papers only those species that were identified at the moment were included, leaving for a later paper the possible undescribed species. Now, after checking that these specimens effectively belong to new species, a paper with the description of them is presented here.

Altogether, they are 4 species and belong to 3 families of acalyptrate Diptera: *Camilla kynodontia* sp. n. (Camillidae), *Meoneura sublongisetosa* sp. n., *Meoneura tschorsnigi* sp. n. (Carnidae) and *Colobaea acuticercia* sp. n. (Sciomyzidae).

Systematics

CAMILLIDAE

Camilla kynodontia sp. n. (Figs. 1a-d)

Head. Frons and face yellow. Vertex, ocellar triangle and occiput brown. Gena yellow, narrow, with a row of short hairs ventrally. 2 vibrissae, genal bristle long. Antennae completely yellow, dorsal rays of arista long, ventral ones absent. Taster yellow, with one minute apical hair and minute ventral hairs. Chaetotaxy: 2 ors (anterior proclinate, posterior reclinate), vt, vt₂, oc, short poc.

Thorax brown, shiny. Mesonotum covered with very short hairs. Anepisternum posteriorly and katepisternum with very few, very short hairs. Chaetotaxy: 1 hu, 0+2 dc, 1 prst, 2 np, 1 sa, 2 pa (inner one very short), 1 anepst, 1-2 kepst (anterior one very short), 2 sc.

Wing. Anal vein absent. Haltere yellowish-whitish.

Legs yellow. Fore femur with 1 anteroventral short spine; ventral and posteriorly with a row of long hairs. Mid coxa with a distinct long anterolateral hair. Dorsal preapical bristle present only on mid tibia.

Abdomen brownish, shiny, short haired, posterior margin of tergites long haired. Tergite 4 long, 1.5 times tergite 3, tergite 5 very short, 0.2 times tergite 3. Sternite 5 with long hairs grouped in two posterolateral groups.

Genitalia (Fig. 1a) brownish. Epandrium (Figs. 1a-b) very short, bare. Surstylus (Figs. 1a-b) long, tapered, pointed, slightly curved forwards, with very minute hairs. Postgonite (Fig. 1c-d) blunt, concave dorsally, ventrally with 3 minute hairs. Aedeagus rounded apically. Cerci short, brownish, small, long haired.

Total body length: 2.3 mm.

Female unknown.

Type material: (Total: 1 ♂)

Holotype ♂: Spain: Salamanca: Villar de Ciervo (6 km N), 28.5-2.6.1999, Malaise trap, H.-P. Tschornig leg.

Type material (holotype) preserved in alcohol (70°) and deposited in the author's private collection.

Discussion: *Camilla kynodontia* sp. n. keys out to couplet 16/17 (*C. sabroskyi* Papp, 1982 / *C. mathisi* Papp, 1985) in Papp's (1985) key. The new species clearly differs from these two species by the colour of the taster (dark in *C. sabroskyi* and *C. mathisi*) and by the genitalia (cf. Figs. 27-28 in Papp, 1982 and Figs. 11-12 in Papp, 1985).

Biology: Unknown. The only known specimen was collected by Malaise trap.

Etymology: The specific name comes from Greek and refers to the canine tooth-shaped surstylus.

Distribution: Hitherto only known from central Spain.

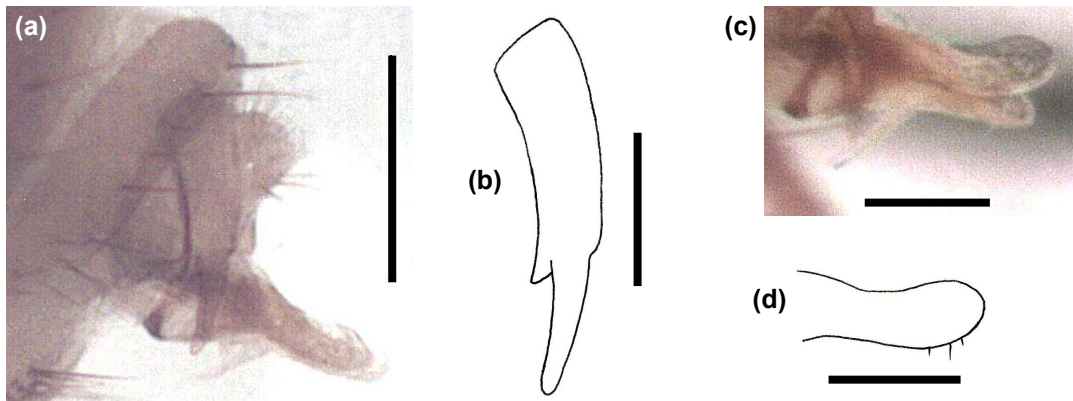
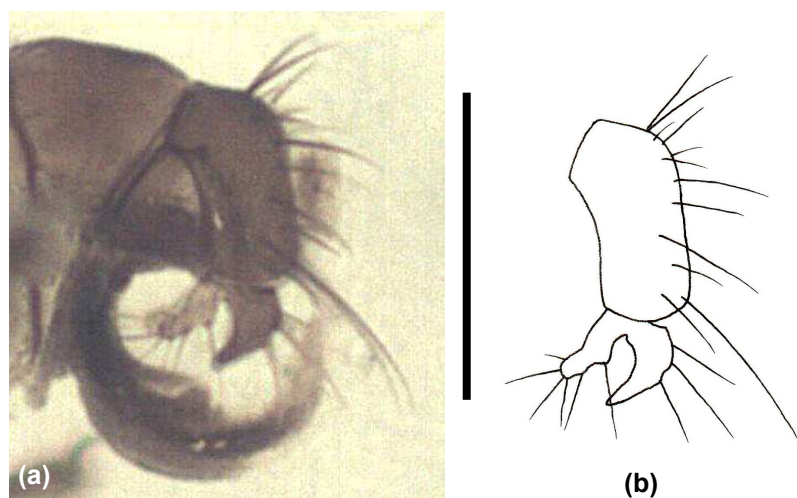


FIGURE 1. *Camilla kynodontia* sp. n.: (a) Genitalia in lateral view; (b) Epandrium and surstylus in lateral view; (c) Postgonites in lateroventral view; (d) Postgonite in lateroventral view (Scale bars: (a) = 0.2 mm; (b)-(d) = 0.1 mm).

FIGURE 2. *Meoneura sublongisetosa* sp. n.: (a) Genitalia in lateral view; (b) Epandrium, lamella and surstylus in lateral view (Scale bar = 0.2 mm).



CARNIDAE

Meoneura sublongisetosa sp. n. (Figs. 2a-b)

Head dark brown, frons somewhat clearer. Frontal triangle brown, subshining, reaching only middle of frons. Eye : gena = 3. Gena with a row of bristles, anterior ones longer. Genal edge with 2 strong vibrissae, between them with a short hair. Chaetotaxy: 2 ors, 2 ori, vte, vti, oc, poc, 2 if (anterior one much longer, forward directed; posterior one minute, inwards directed).

Thorax dark brown. 3 dc.

Wing clear. Haltere whitish.

Legs all dark brown. Fore femur with some long hairs.

Abdomen dark brown.

Genitalia (Fig. 2a) brown. Epandrium (Figs. 2a-b) short, concave anteriorly in lateral view, with long hairs (but lacking a distinct longer dorsolateral one) and a distinctly longer posteroventral hair. Lamella (Figs. 2a-b) fused with surstylus, with long hairs. Surstylus (Figs. 2a-b) darker than lamella, tapered, with long posterobasal hairs. Aedeagus (Fig. 2a) long, dilated in the middle.

Total body length: 1.6–1.9 mm.

Female unknown.

Type material: (Total: 7 ♂♂)

Holotype ♂: Spain: Salamanca: Villar de Ciervo, Puente Quebrada, 30.5.1999, sweeping on white flowers of Umbelliferae, H.-P. Tschorsnig leg.

Paratypes: 2 ♂♂ same data as holotype; Villar de Ciervo, Las Coronas, 6-23.6.1994 1 ♂; Villar de Ciervo (6-8 km N), 28.5.1999 1 ♂ (sweeping on flowers of *Thapsia villosa*), 30.5.1999 2 ♂♂ (sweeping on flowers of *Thapsia villosa*). All H.-P. Tschorsnig leg.

Type material preserved in alcohol (70°). Holotype and 4 paratypes deposited in the author's private collection and 2 paratypes deposited in the Staatliches Museum für Naturkunde (Stuttgart).

Discussion: *Meoneura sublongisetosa* sp. n. is closely related to *M. belvetica* Papp, 1997, but it clearly differs from it by the genitalia (cf. Figs. 5-7 in Papp, 1997).

Biology: Unknown. Most of the specimens were collected on flowers of Umbelliferae and *Thapsia villosa*.

Etymology: The specific name comes from Latin and refers to the long posteroventral hair of the epandrium.

Distribution: Hitherto only known from central Spain.

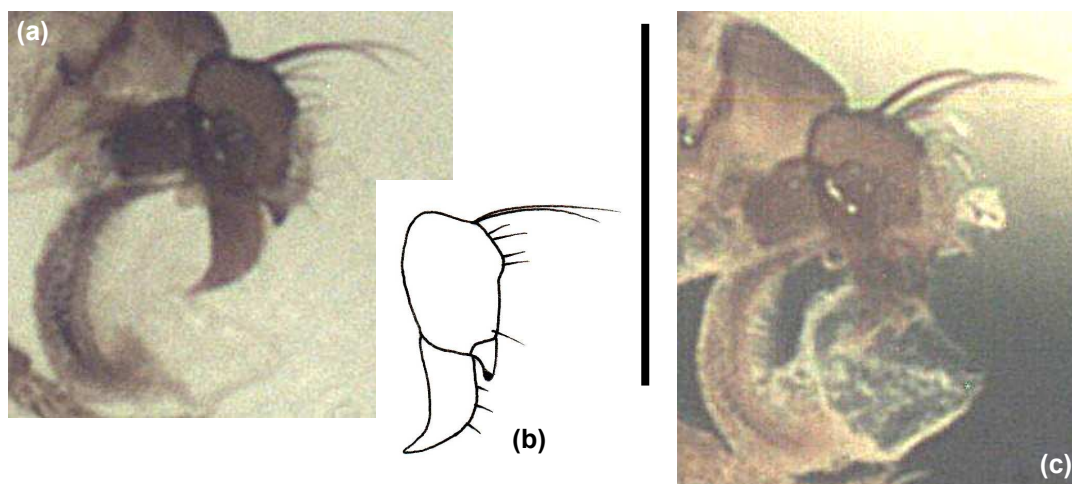


FIGURE 3. *Meoneura tschorsnigi* sp. n.: (a) Genitalia in lateral view; (b) Epandrium and surstylus in lateral view; (c) Aedeagus in lateral view (Scale bar = 0.2 mm).

***Meoneura tschorsnigi* sp. n.** (Figs. 3a-c)

Head dark brown, frons clearer, brown. Frontal triangle broad, subshining, reaching anterior margin of frons. Eye : gena = 3. Gena with a row of bristles, anterior ones longer. Genal edge with 2 strong vibrissae. Chaetotaxy: 2 ors, 2 ori, vte, vti, oc, poc, 2 if (anterior one in the anterior margin of the frons, long, forward directed; posterior one in the middle of the frons, shorter, inwards directed).

Thorax dark brown. 1 dc.

Wing clear. Haltere whitish.

Legs dark brown. Fore femur with long hairs. Tarsi yellowish.

Abdomen dark brown.

Genitalia (Fig. 3a) brown. Epandrium (Figs. 3a-b) brown, haired, with a long dorsolateral bristle and ventrally with a short pointed inner projection. Lamella absent. Surstylus (Figs. 3a-b) wide basally with an anteroapical pointed projection, with few, minute posterobasal hairs. Aedeagus (Fig. 3c) narrow, long, ending in a cup-shaped, membranous, translucent, evaginable structure.

Total body length: 1.2–1.6 mm.

Female unknown.

Type material: (Total: 13 ♂♂)

Holotype ♂: Spain: Salamanca: Villar de Ciervo (environs), 13-15.8.2000, on flowers of *Foeniculum*, H.-P. Tschorsnig leg.

Paratypes: 11 ♂♂ same data as holotype; Villar de la Yegua, Vado de la Viña, 24.6.1995 1 ♂ (sweeping on Umbelliferae), H.-P. Tschorsnig leg.

Type material preserved in alcohol (70°). Holotype and 8 paratypes deposited in the author's private collection and 4 paratypes deposited in the Staatliches Museum für Naturkunde (Stuttgart).

Discussion: *Meoneura tschorsnigi* sp. n. is related to *M. graeca* Hennig, 1972 and *M. kaszabi* Papp, 1976, but it clearly differs from them by the genitalia (cf. Figs. 11-12 in Hennig, 1972 and Fig. 8 in Papp, 1976).

Biology: Unknown. Most of the specimens were collected on flowers of *Foeniculum*.

Etimology: The species is named in honour of the collector, Hans-Peter Tschorsnig, an eminent dipterist.

Distribution: Hitherto only known from central Spain.

SCIOMYZIDAE

***Colobaea acuticerca* sp. n.** (Figs. 4a-f)

Head brown. Face and anterior margin of frons yellow. Gena whitish. Antenna: pedicel and scape yellow; joint 3 brown, base yellow excepting ventral part. Arista (right arista lacking) yellow, with short hairs, dorsobasal rays very long. Proboscis and taster yellow. Chaetotaxy: 2 ors, vte, vti, oc, poc.

Thorax brown. Pleurae brown, only propleura and anterior part of anepisternum (between fore coxa and anterior spiracle) yellowish. Chaetotaxy: 1 hu, 2 np, 1 prst, 0+2 dc, 1 sa, 1 pa, 0 prsc ac, 1 ppl (minute), anepimeron with short hairs, 1 kepst, 2 sc, dorsum of scutellum with few short hairs.

Wing slightly brownish, without transverse dark bands, cross-veins not infumated. Haltere whitish.

Legs. Fore leg: coxa, trochanter and last tarsal joint yellow; femur, tibia and three first tarsal joints brown, fourth tarsal joint brownish. Mid and hind legs yellow, only knee of hind leg slightly brownish. Fore femur with a dorsal row of strong bristles; mid femur with 1 anteroventral bristle; hind femur with 1 anterodorsal bristle and 2 ventral rows of strong bristles.

Abdomen brownish, short haired.

Genitalia (Figs. 4a-d) brown. Epandrium (Figs. 4a-b) haired, with 1 long dorsal and 1 long dorsolateral hairs. Genitalia in ventral view: Figs. 4c-d. Anterior gonostyli curved longitudinally and concave transversally, so it has two edges. Left anterior gonostylus (Fig. 4e): upper edge with 2 inner, basal, peglike setae; lower edge with an inner row of peglike setae, more grouped basal and apically. Right anterior gonostylus (Fig. 4d): upper edge with only 1 inner, basal, peglike seta; lower edge with only 1 apical peglike seta (the other peglike setae very probably broken during mating). Posterior gonostyli S-shaped (Fig. 4f), apex twisted, pointed apically, with inner short hairs. Inner genitalia not studied. Cerci yellowish, fused basally to each other. Cercus (Figs. 4a-b) short haired, long, curved, ventrally strongly sclerotized and ending into an acute, long prolongation with long dorsal hairs, and reaching base of anterior gonostylus.

Total body length: 3.0 mm.

Female unknown.

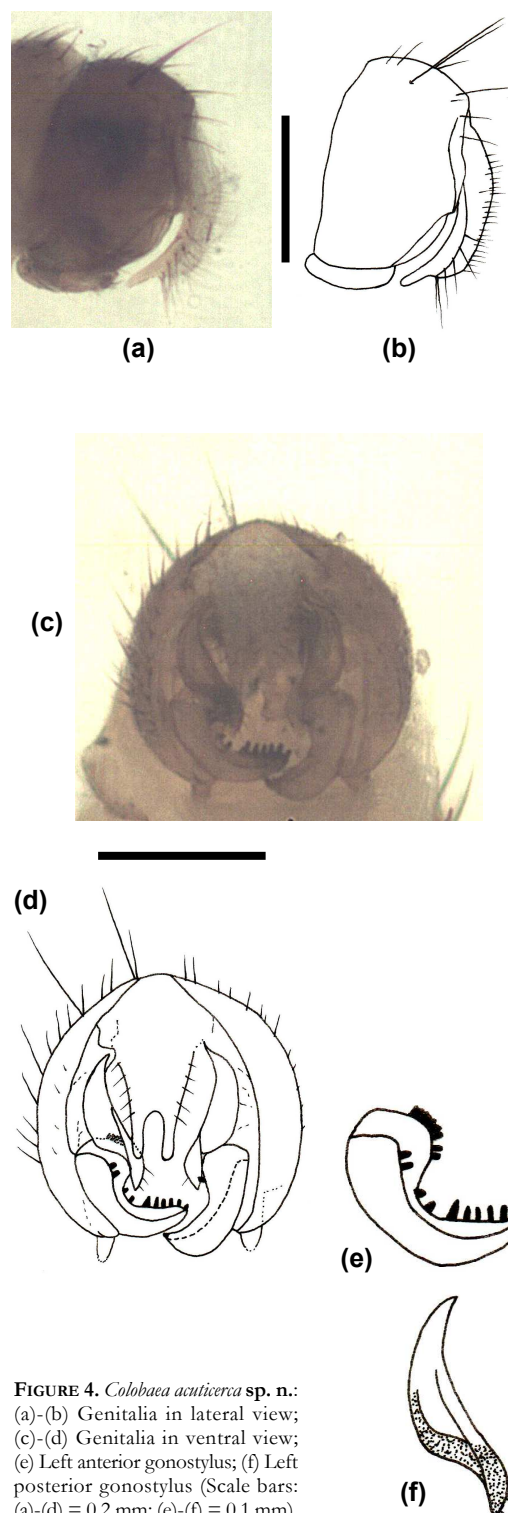


FIGURE 4. *Colobaea acuticerca* sp. n.: (a)-(b) Genitalia in lateral view; (c)-(d) Genitalia in ventral view; (e) Left anterior gonostylus; (f) Left posterior gonostylus (Scale bars: (a)-(d) = 0.2 mm; (e)-(f) = 0.1 mm).

Type material: (Total: 1 ♂)

Holotype ♂: Spain: Salamanca: Villar de la Yegua, Vado de la Viña, 24.6.1995, sweeping on Umbelliferae, H.-P. Tschorsnig *leg.*

Type material (holotype) preserved in alcohol (70°) and deposited in the author's private collection.

Discussion: *Colobaea acuticercus* **sp. n.** keys out to couplet 4(3) (*C. pectoralis* (Zetterstedt) / *C. punctata* (Lundbeck)) in Rozkošný's (1987) and to *C. americana* Steyskal in Rozkošný and Elberg's (1991) keys, but according to the gonostyli it is similar to *C. pectoralis*. *Colobaea acuticercus* **sp. n.** is easily distinguishable from these three species by the anepisternum, the gonostyli and the cerci (cf. Knutson *et al.*, 1990; Fig. 24 in Rivošecchi, 1992; Figs. 81-83, 88 and 89-91, 95 in Rozkošný, 1984; Fig. 1 in Steyskal, 1954; and Fig. 22 in Vala, 1989).

Biology: Unknown. The only known specimen was collected on Umbelliferae.

Etymology: The specific name comes from Latin and refers to the acute apical prolongation of the cercus.

Distribution: Hitherto only known from central Spain.

Acknowledgements

My most sincere thanks to Dr. Hans-Peter Tschorsnig (Stuttgart) for the shipment of dipterological material, among it these very interesting specimens were found. Many thanks also to Dr. Rudolf Rozkošný (Brno) for the shipment of papers on the genus *Colobaea* Zetterstedt. Finally, I want to thank Joana Danés (Barcelona) and Lourdes Gils (Barcelona) for their help in classic languages (Latin and Greek) and to Jane Pérez (Barcelona) for her English revision of the manuscript.

References

CARLES-TOLRÁ M. 2004. Dípteros nuevos para la Península Ibérica capturados en la provincia de Sala-

manca (España) (Insecta, Diptera). *Bol. S.E.A.* **35**: 187-194.

CARLES-TOLRÁ M. 2006. Algunos dípteros capturados en la provincia de Salamanca (España) (Insecta, Diptera). *Bol. S.E.A.* **38**: 353-355.

HENNIG W. 1972. Beiträge zur Kenntnis der rezenten und fossilen Carnidae, mit besonderer Berücksichtigung einer neuen Gattung aus Chile (Diptera: Cyclorrhapha). *Stutt. Beitr. Natur. Stuttgart* **240**: 1-20.

KNUTSON LV, ORTH RE, ROZKOŠNÝ R. 1990. New North American *Colobaea*, with a preliminary analysis of related genera (Diptera: Sciomyzidae). *Proc. entomol. Soc. Wash.* **92(3)**: 483-492.

PAPP L. 1976. Milichiidae and Carnidae (Diptera) from Mongolia. *Acta zool. Acad. Sci. hung.* **22(3-4)**: 369-387.

PAPP L. 1982. A revision of the species of *Camilla* Haliday described by J.E. Collin (Diptera: Camillidae). *Mem. Entomol. Soc. Wash.* **10**: 125-135.

PAPP L. 1985. A key of the world species of Camillidae (Diptera). *Acta Zool. Hung.* **31(1-3)**: 217-227.

PAPP L. 1997. Three new species and a new subspecies of *Meoneura* from the Alps (Diptera, Carnidae). *Annls hist. nat. Mus. natn. hung.* **89**: 151-156.

RIVOŠECCHI L. 1992. *Fauna d'Italia 30. Diptera Sciomyzidae*. Edizioni Calderini Bologna.

ROZKOŠNÝ R. 1984. The Sciomyzidae (Diptera) of Fennoscandia and Denmark. *Fauna ent. scand.* **14**: 1-224.

ROZKOŠNÝ R. 1987. A review of the Palaearctic Sciomyzidae (Diptera). *Folia Fac. Sci. Natur. Univ. Purkyn. Brun., Biol.* **86**: 1-99 + 56 pls.

ROZKOŠNÝ R, ELBERG K. 1991. Two new species of *Colobaea* Zetterstedt (Diptera, Sciomyzidae) from Palaearctic Asia. *Aquatic Insects* **13(1)**: 55-63.

STEYSKAL GC. 1954. *Colobaea* and *Hedria*, two new genera of Sciomyzidae new to America (Diptera: Acalyptratae). *Can. Ent.* **86**: 60-65.

VALA J-C. 1989. Diptères Sciomyzidae euro-méditerranéens. *Faune de France* **72**: 1-302.

Received / Recibido / Hartua: 2/07/2008

Accepted / Aceptado / Onartua: 8/09/2008

Published / Publicado / Argitaratua: 21/12/2008