to be a result of the water shortage that occurs in the "cerrado", but rather of the progressive shortening of the photoperiod and lowering in temperature.

The metabolism of the underground organs of *C. regium* seems to be directed towards the synthesis of starch. It was observed that the soluble sugar content relative to the total dry matter declined with the increase in size of the underground organ and during the dormant stage, and that this process was accompanied by an increase in starch content.

The free water-soluble sugars found in the underground organs of *C. regium* were glucose, fructose, sucrose and raffinose. In organs from plants in their first year of development, as well as those more highly developed, the relative content of glucose and fructose decreased as the size of the underground organ increased, and during dormancy. When the plants sprouted, these sugars increased, probably as the result of starch hydrolysis. The water-soluble polysaccharides found after hydrolysis were glucuronic acid, galactose, glucose, arabinose and xylose, all of which varied in amount according to the stage of growth of the plant.

During dormancy, pectic substances increased in the more highly developed underground organs; whereas, they decreased in those plants which were in their first year of development.

Similarly, the hemicellulose content of *C. regium* decreased as the underground organ developed and during dormancy, but increased again when the plant sprouted. A and B hemicelluloses were composed of the following sugars: glucuronic acid, rhamnose, arabinose, xylose, mannose, galactose and glucose. Of these, the xylose was the principal component. Xylose content in the A hemicellulose increased during dormancy and decreased at the start of sprouting in the underground organs of plants in the first year of development. Xylose content in the B hemicellulose decreased during dormancy and increased at the start of sprouting.

Amylase activity was found only in small underground organs. At sprouting, there was an increase in amylolytic activity in plants in their first year of development. This coincided with a decrease of starch content.

Starch phosphorylase isoenzymes were found only in the less developed underground organs. Thus in *C. regium* underground organs, starch phosphorylase seems to be correlated with the synthesis of starch but only in the early stage of development of the storage organs. During dormancy, there was a decrease in the number of starch phosphorylase isoenzymes, which disappeared from underground organs when the plant sprouted.

Alkaline invertase activity was not found. Acid invertase activity decreased with the growth of the underground organ as well as during dormancy. This activity increased at the start of sprouting in plants which were in their first year of development.

Total protein content of the dry matter increased as the underground organ increased in size. In the larger underground organs, the amount of total protein decreased during the dormant stage. In plants in their first year of development, the amount of total protein increased at this same phenologic stage.

It was suggested that plant age and environmental conditions seem to have some influence on carbohydrate metabolism in *C. regium* underground organs.

TITLE: Fitogeografia, uso do espaço e proteção ambiental — o caso de uma relíquia paleoambiental ameaçada de extinção

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RESUMO — A área abrangida pelo estudo situa-se na porção sudeste do Piauí, na divisa com o Estado da Bahia. Ela é recoberta por uma vegetação do tipo florestal, apesar do clima semi-árido reinante na atualidade.

Do resultado da análise dos indicadores: clima, paleoclima, litologia, paleobotânica, morfopedogênese, flora e forma de vida das plantas, constatou-se que a referida área representa uma relíquia paleoambiental originária de uma fase paleoclimática diametralmente oposta à que se verifica na atualidade, ou seja, clima tropical quente e úmido com ausência de prolongada estação biologicamente seca no curso de cada ano. Não obstante, a paleoflora de que se compõe, juntamente com a rica e rara fauna que também refugia, estão sendo ameaçadas por um acelerado desmatamento destinado à implantação de projetos agropecuários incentivados.

O estudo, desenvolvido a partir de uma metodologia fitogeográfica direcionada para o ordenamento dos espaços nas conotações ambientais destes, visa em primeiro lugar à comprovação dessa condição relictual tida pela área. E em segundo lugar, e devido mesmo ao desflorestamento em expansão, sugerir a preservação permanente de pelo menos uma terça parte dos seus pouco mais de 12.000km^2, admitindo-se, aleatoriamente porém, que essa parcela seja suficiente para abrigar, sem riscos de estiolamento, amostras representativas de todo aquele valioso patrimônio genético.

TITLE: Regeneração de calos de arroz selecionados para resistência ao NaCl

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ABSTRACT — High calli percentage were induced from mature embryos of BR-IRGA 410, BR-IRGA 411 and Bluebelle rice cultivars. The basic culture medium, MS-62, was supplemented with three combinations of growth regulators: (1) 1mg/l 2,4-D + 0.2mg/l K + 0.2mg/l AIA; (2) 0.5mg/l 2,4-D + 0.2mg/l K + 0.2mg/l AIA; (3) 1mg/l 2,4-D + 0.2mg/l K. Bluebelle had the lowest calli induction rate. The medium 3 was the most efficient for calli induction and growth in all the cultivars. The calli were subcultured into the same media sup-